Habermas, Human Agency, and Human Genetic Enhancement

The Grown, the Made, and Responsibility for Actions

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"A Mixed-Up Set of Intuitions": Pretheoretical Objections to Human Genetic Enhancement

Recent developments in genomic science hold out the tantalizing prospect of soon being able to treat and prevent a wide variety of medical conditions through gene therapy. In time, it may be possible to use similar techniques not simply to combat disease but also to enhance, or improve on, normal human functioning. Despite the benefits such enhancement would bring—allowing, for example, perhaps vastly improved cognitive skills, athletic ability, and so on—the prospect of its being carried out is often held to be in some way intuitively undesirable or ethically dubious.

The difficulty that faces those who have such concerns is that of sharpening this often rather fuzzy intuition, to the point at which it starts to look worthy of being taken seriously. This is a task that cannot be shirked; without it, the intuition can all too easily be dismissed as the knee-jerk response of a timid and conservative sensibility confronted with the vision of a new and exciting chapter in human development. But the task is undeniably difficult. Many of us *feel* that there would be something wrong with human genetic enhancement, that its practice would remove something of great importance in human life. But when we try to articulate the considerations that underlie our misgivings, they all too frequently prove maddeningly difficult to state.

In his 2003 book *The Future of Human Nature*, Jürgen Habermas makes a valiant attempt to shed light on common intuitions about the wrongs of enhancement, and just what it is that engaging in enhancement practices would threaten. The account he gives is self-confessedly tentative. He writes at the outset of the book:

> This essay is an *attempt*, seeking to attain more transparence for a rather mixed-up set of intuitions. I am personally far from believing that I have succeeded, be it halfway, in this pursuit. But neither do I see any analyses of a more convincing nature. . . . My perspective in this examination of the current debate over the need to regulate genetic engineering is therefore guided by the question of the meaning, for our own life prospects and for our self-understanding as moral beings, of the proposition that the genetic foundations of our existence should not be disposed over.[1]

This last claim—that the genetic foundations of our existence should not be disposed over—expresses what Habermas takes to be the most fundamental

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pretheoretical objection to human genetic enhancement. According to it, the human genotype is somehow not ours to manipulate as we please but possesses some sort of moral inviolability. Of course, this intuition needs to be explained: we are owed an account of what grounds the inviolability. Habermas's central claim here appears to be that enhancement practices would represent a failure, as he puts it, to "moralize human nature," resulting in a diminution of autonomy on the part of the enhanced human, accompanied by an inability on her part to participate as an equal member in a community of moral agents.

It is worth noting that Habermas focuses exclusively on possible cases of third-personal enhancement: the preimplantation or prenatal manipulation of the genome of a future person. One thing I hope to show in this article is that the first, and I think most important, part of his claim—that enhancement practices would have a negative impact on the enhanced person's autonomy or agency—can easily be transferred to, and is perhaps most forcefully illustrated by, cases of first-personal, self-sanctioned enhancement. Indeed, I strongly suspect, as will become clear later, that Habermas's reflections on the unacceptability of genetic enhancement work much better for cases of self-sanctioned enhancement than they do for the third-personal cases he considers.

What Habermas has to say on the topic of genetic enhancement is not only tentative but frequently rather cryptic. For those of us most at home in the Anglo-American tradition of philosophy, it is apt on occasion to seem intolerably so. Indeed, John Harris, one of the most prominent proenhancement bioethicists working in that tradition, writes that Habermas's book is "excruciatingly complex," in addition to being "crushingly conservative."[2] Elsewhere, he accuses Habermas of mere "mystical sermonising."[3]

I agree that Habermas's writings in this area are difficult to understand, and his intended meaning is hard to pin down. Nonetheless, I suspect that he is genuinely onto something of some significance, and I am not sure that the opacity of his work is altogether blameworthy. As I have already remarked, our intuitions about the unacceptability of human genetic enhancement, although they can seem to express something enormously important, do not admit of easy articulation. Nor, a fortiori, is it a straightforward matter to say, or even to identify, what underlies them.

The intuition that there is something unacceptable about human genetic enhancement is one that I share, although I remain less than sure either *that* it can be justified, or *how* one might go about justifying it. That being the case, I am for the most part every bit as tentative in what I have to say as is Habermas, if not more so. My main aim in what follows also mirrors his; I want to uncover and make as clear as possible what it is that underlies the discomfiture that many of us feel when faced with the prospect of enhancement technologies. And I think that because, for all his obscurity, Habermas seems to be pointing in the direction of something important, the best place to start is with a consideration of his position. However, I am more concerned to take his writings as a map indicating the general area in which we ought to be looking than to offer a careful and faithful reading of them.

Habermas's Claims

As we have already seen, Habermas recommends that we regard human nature—including the nature of the human genome—as something that is possessed of

a certain moral inviolability. To claim such inviolability is to hold that human nature is not to be thought of as something that can legitimately be manipulated or controlled at will, in order to achieve certain goals.

To claim that human nature cannot legitimately be manipulated or controlled in accordance with our wills is equivalent, for Habermas, to "the assertion of an ethical self-understanding of the species which is crucial for our capacity to see ourselves as the authors of our own life histories, and to recognize one another as autonomous persons."[4] The central message here seems reasonably plain: genetically enhanced humans would have a sense of themselves as diminished in autonomy or agency as a result of their having been enhanced, and they consequently would be in some measure incapable of feeling responsible for the way in which their lives develop. There also appears to be a claim that proper interpersonal relations are dependent on our not seeing ourselves as so much material to be molded in accord with human wills. The implication is that the enhanced being would be unable to think of herself as one autonomous moral agent among others, nor would others be able to think of her in this way.

Habermas returns to both these claims—about the threat to autonomy and to our membership of a community of moral equals—repeatedly throughout the book. He states and restates them in varying ways, apparently concerned to indicate and shed light on them from as many different angles as possible. Frustratingly, though, the reader can gain the sense that a comprehensive explanation of them is endlessly deferred. Again, this is not necessarily a shortcoming in Habermas's book, insofar as it may well be his intention merely to highlight or to show something, rather than to argue for it. However that may be, my concern is to suggest ways in which the former—and I think more interesting and important—claim about autonomy and agency might be supported.

How can we set about justifying the claim that human enhancement technologies would have a deleterious effect on the agency of the enhanced? Given that, as mentioned earlier, Habermas talks only about third-personal enhancement, we might try to reason as follows. When an enhancer A carries out enhancements on an embryo that will develop into a person B, A prevents B from becoming the author of her own life history, by making himself, A, that author.

This attempted justification is as it stands seriously inadequate, for a number of reasons. First, it seems to rely on a crude and untenable genetic determinism, assuming as it does that once a genotype is in place, a life history is fixed. Second, we should remember that enhancements are not global: an enhanced human will be enhanced only in certain respects. If an embryo were genetically manipulated so that the person who developed from it would have the potential to be enormously athletically gifted, this may well have quite a large impact on her life. But it would not determine her entire life history. Nor, we can assume, would it automatically lead her to choose to develop her athletic abilities.

What is more, as Harris points out, the influence of others on our life histories is in the normal run of things considerable. Our parents and teachers shape our education, make choices about our diet, encourage the development of particular talents, bring us up with certain values, and so on. These factors have an incalculable effect on our life histories, yet, at least when the choices our parents and teachers make are wise ones, we do not take their operation in our lives to be evidence of unethical behavior. As Harris notes, if such influence is destructive of

autonomy, then there has never existed any autonomy to destroy, because there has never been a human being free of such influence.[5]

Even leaving these considerations aside, there is another important point to be made about our attempted justification of Habermas's claim. The justification suggests that A's authorship of B's life history would prevent B from exercising her own authorship. The authorship of B's life would, so to speak, have been preempted by A. But, as Michael Sandel comments, "It is not as if, absent eugenic manipulation, we can choose our genetic inheritance for ourselves."[6] This, transposed to the realm of genetics, is the familiar point that, except within certain limits that are themselves determined by the materials conferred on us by fortune, we cannot choose who we are. Thus, if somebody else makes that choice, our capacity to make it has not been usurped. We never had that capacity.

This gives rise to another thought. If it were the case that A preempts authorship of B's life history in designing B's genotype, would B thereby assume authorship by designing her own genotype? Given the apparent desirability of authorship of one's own life history, is self-sanctioned genetic enhancement not only morally acceptable but something that it would be advisable to pursue? I do not think so. And, despite his silence on the issue of first-personal enhancements, I suspect that Habermas does not think so either. The reasons why will become clear shortly. First, and by means of a way into that discussion, I want to return to Sandel's assessment of Habermas.

Sandel on Giftedness; Habermas on the Grown and the Made

Unlike Harris, Sandel opposes human genetic enhancement. And yet he finds unconvincing Habermas's claim about the impact of enhancement on human agency and autonomy. He rejects that claim for the reason just given (that we never choose our congenital genetic constitution), in tandem with the fact that, as we have seen Harris note, our lives are already irreversibly and profoundly influenced by the decisions of others without any apparent diminution of autonomy. Indeed, Sandel seems to regard the autonomy claim as no more than a doomed attempt on Habermas's part to undergird an intuition about the unacceptability of enhancement, while remaining within a liberal framework that refuses to adhere to any particular conception of the good life. Habermas's position is that if agents are to be free, in a postmetaphysical age, to pursue their own individual conception of the good, the only thing that can debar human genetic enhancement from figuring in such a conception will be its undermining the autonomy necessary for that pursuit.

Nonetheless, it is not the case that Sandel finds nothing of value in what Habermas has to say. He focuses on Habermas's claim that it is vital for us to regard ourselves as "grown" rather than "made," as able to ascribe our origins "to a beginning which eludes human disposal."[7] This aspect of Habermas's work is congenial to Sandel for two reasons. First, it harmonizes with his own claim about the profound importance in human life of a quality that he labels "giftedness": that a life of value will contain a fair measure of "openness to the unbidden," and a correlative relinquishment of a drive toward mastery and domination. Second, according to Sandel, in its recognition of the central importance of giftedness to *any* human life, "it points beyond the limits of liberal, or 'postmetaphysical' considerations."[8]

At times, Sandel appears to attribute an intrinsic value to giftedness. Even so, he also has a range of arguments for its having instrumental worth. A full assessment of those arguments would lie outside the scope of this article. However, it is worth noting that one of them demonstrates that Sandel would take Habermas's claim that we need to regard ourselves as grown rather than made to be positively incompatible with his view that enhancement diminishes autonomy and responsibility. That is, for Sandel, part of the problem in our turning our backs on giftedness, and wholeheartedly embracing enhancement technologies, would be not the falling away of responsibility but its catastrophic expansion. He writes,

> The more we become masters of our genetic endowments, the greater the burden we bear for the talents we have and the way we perform. Today when a basketball player misses a rebound, his coach can blame him for being out of position. Tomorrow the coach may blame him for being too short.[9]

I think Sandel makes a grave mistake in supposing that Habermas's claim that we need to view ourselves as grown rather than made—as the outcome of God, nature, or chance rather than a human will—is able to come apart from his belief that being subject to genetic enhancement would negatively affect our autonomy or agency. As far as I can see, these are not separate points. And if as a matter of fact they are, they ought not to be; insofar as Habermas's reflections can be thought of as gesturing toward an important truth, it is I think the combination of the two points that Sandel separates that has the most work to do. The thought I want to explore is this: for autonomy or agency to be a possibility for us, we must regard our natures as simply given, rather than manufactured.

I would like to call this the responsibility claim, and to restate it as follows. If we are to regard our actions as fully our own, they must issue from capacities that neither we ourselves nor any other human being have wholly chosen. If an action were to issue from a wholly chosen capacity, we would be unable to regard that action as our own.

There is a strong appearance of paradox to the responsibility claim. It entails that we are not responsible for actions involving the exercise of capacities for the origin of which we *are* responsible, whereas we are responsible for actions involving the exercise of capacities for the origin of which we are *not* responsible. Clearly, justifying the responsibility claim will require some effort. Rather than launch straight into an attempt at the claim's justification, however, I first need to make what might initially seem to be some unrelated observations about a certain important class of actions, and the distinctive type of agency that accompanies them.

Reflexive Agency

There are many actions, among which are the majority if not all of those that have the most importance for us, such that an essential part of the point of our performance of them is not simply that their consequences be realized, nor even that they themselves are performed, but that *we* perform them, and in so doing *we* bring about their consequences. For want of a better term, I will call the sort of

agency operative in such actions *reflexive agency*, because it is as if, in performing them, the agent has one eye on the fact that it is she herself who is performing them. And, again, that it is she herself who is performing them is part of the very point of the actions; it *matters*.

Because this claim about reflexive agency is a crucial part of what I want to say, it is worth illustrating it with a couple of examples. Actions likely to involve the exercise of reflexive agency are, for example, the running of a four-minute mile, or the gaining of a degree. What typically matters about these actions, part of their very point, is not simply that they get performed, or that their consequences are realized, but that the agent who performs them is the one responsible for them.

If I run the four-minute mile by using some sort of motorized casings on my legs, there is a sense in which the mile has been run. I have covered the required distance in the required time, and it is the speed at which my legs have moved that has made that the case. And yet the point of the action has been lost, assuming that the point was to run a four-minute mile rather than, say, to demonstrate the efficacy of the motorized casings. (We may, indeed, want to say that the mile has not been run at all, because the agent was not responsible for its being run. This would show, I think, that the requirement for reflexive agency here is built into the very description of the act, and of what the agent wants to do.)

Take now the gaining of a degree. The point of working toward a degree is not simply the achievement of that end, or the gaining of a certificate, or what have you. It surely matters that the agent bears the responsibility for gaining the degree. (It is a mystifying fact that students who engage in plagiarism fail to appreciate this.)

Incidentally, it seems plausible to hold that reflexive agency is essentially involved in moral action. When an agent carries out some act that is morally required of her, it matters to her not simply that the act is performed, nor that its consequences are realized (although these things typically will matter to her); it is also part of the point of the action that she, the agent of whom the action is required, is the one who performs it.

Reflexive Agency and the Responsibility Claim

Let us bring what I have just said about reflexive agency together with the responsibility claim. That claim, recall, holds that any action for which we are responsible must proceed from capacities that neither we ourselves nor any other human agent have wholly chosen. To put the responsibility claim in more Habermasian language, actions for which we are fully responsible must proceed from capacities that are grown, rather than made. If I am right about this, at least part of the point of actions in which reflexive agency is involved will be lost when those actions proceed from capacities that are the result of genetic enhancements.

Again, let me appeal to some examples to clarify this point. I want to start by considering some cases of the sort that Habermas does not address; namely, cases of self-sanctioned genetic enhancement. Suppose that I would very much like to produce high-quality philosophical work. Now imagine that, in order to achieve that aim, I opt to have my intelligence enhanced (or, if intelligence is not the whole story here, suppose that I choose to have the full range of capacities responsible for

high-quality philosophical work enhanced). In picturing this scenario, I find I cannot escape the sense that, if the enhancement procedure were a success, my undergoing it would be peculiarly pointless. It feels as if any philosophical activity that resulted from the enhancement of my capacities would not be mine and as if, because philosophical activity plausibly involves reflexive agency, the fact that it would not be mine would matter.

Of course, I still need to give some reason to suppose that the activity in question would indeed not be mine, and so to offer some reason to accept the responsibility claim. That is a task for the next section. As yet, I am simply reporting how the thought of exercising enhanced capacities strikes me.

Next, suppose that I want very much to run a four-minute mile and that, in order to achieve my end, I go in for some genetic enhancement that will give me the potential to do this. (I will, after enhancement, still need to do training to realize that potential; the purpose of the enhancement will have been to give me a potential that I previously lacked, and that no amount of training would have made up for.) When I consider this scenario, it seems to me, rightly or wrongly, that the upshot of the enhancement will be that the four-minute mile is run, but that, in an important sense, it is not run by me. There will be little difference, from my perspective, between my enhanced self running the mile and its being run by someone else entirely. This may seem a peculiar way of describing the situation, but if it is legitimate, then we can easily see why it removes the value from an action that involves reflexive agency: it makes me no longer responsible for an action, part of the very point of which is that I should be responsible for it.

It is as if, having used myself as a means to my end of running the four-minute mile by purposely having my genetic constitution altered in certain respects, my agency has been diminished in just the arena that it was most important for me to retain it. I wanted to produce a better-equipped agent, but what I got was just a better-equipped body, which is now to some degree alienated from me as agent.

Let us take stock of the route that we have traveled so far. I have suggested that many, if not all, of the actions that matter to us involve the exercise of reflexive agency. That is, part of the point of their being performed is not simply that they should be performed by *someone*, nor that their consequences be realized, but that they should be carried out by the agent who performs them. I have also reported my intuition—an intuition that is, I suspect, not uncommon—that if an action were to issue from a genetically enhanced capacity, the agent who owned that capacity would not be fully responsible for that action. I say that she would not be *fully* responsible for it, rather than that she would not be at all responsible for it, for the following reason. Suppose that the enhanced capacity is one that, among other things, enables her to complete the *Times* crossword in five minutes. She may be responsible for the action of completing the crossword in that time, in the sense that she alone decides to *exercise* her newly acquired capacity. And yet I still want to say that, once the crossword is completed, there is another sense in which she is not responsible for its having been finished so quickly. I am tempted to say something like this: an alien capacity is responsible.

My intuitions here accord with the responsibility claim. Because the agent has wholly chosen the capacity that issues in her act of completing the crossword in five minutes, she is not fully responsible for that act. Because the capacity is made rather than grown, its exercise has a negative impact on her agency. And because filling out the *Times* crossword in five minutes is likely to be an act involving

reflexive agency—seeing as part of the very point of its being performed is that the agent who performs it is responsible for it—the point of that action is undermined by the enhancement.

Up until now, I have presented the responsibility claim as something that, for all its air of paradox, appears intuitively to be true. If it is to be put on a stronger footing, there is clearly a need to offer some argument in support of it. It is to this task that I turn now.

Justifying the Responsibility Claim

Let us continue, for the moment, to consider the case of self-sanctioned enhancements. This gives us two questions to address. First, how is it that I can be responsible for actions that proceed from capacities that are simply given, capacities that I did not wholly choose? Second, how is it that I can *only* be responsible for such actions? Why would I not be responsible for actions that proceed from a capacity that I had wholly chosen?

The first thing we can say here, I think, is that we had *better* be responsible for actions that issue from capacities that we have not wholly chosen, because, as a matter of fact, none of us unenhanced humans wholly chose the selves that we are, where those selves include the capacities that we have. Of course, certain determinists may hold that this situation entails that we are *not* responsible for our actions, but it has seemed to some that anyone who makes this claim is working with a concept of responsibility that clashes with the one that we employ in our day-to-day dealings with the world.[10]

We can, I think, say this. Normally, we think it is possible for us to be responsible for features of ourselves, for whose origin we are not responsible. Such responsibility is achieved by our taking responsibility for what we find in ourselves, for what we encounter as given. It is as if we say, "Well, this is what I am." This taking responsibility is not an uncritical or fatalistic yea-saying to any and every facet of ourselves. The proper way of taking responsibility for a vicious trait that we find in ourselves, for example, is not whole-heartedly to embrace it but to oppose it. In taking responsibility for our given selves in this way, along with their capacities, we make ourselves responsible for the actions that issue from them.

Now, if we can take responsibility for a given self, thereby making ourselves responsible for its actions, why can we not take responsibility for aspects of our enhanced selves—for enhanced capacities that we have chosen—and thus for the actions that proceed from them? We might say this. In order for the choice of an unenhanced agent to enhance herself to be *her* choice, it must proceed from a given self for which she has taken responsibility. Now, because the enhanced capacity does not grow out of that given self—because it is not something for which the given self has the potential but is, so to speak, alien to it—its presence will be experienced as discontinuous with the self for which we have taken responsibility. Having taken responsibility for the given self, having identified that self and its capacities as how we are, we cannot, as it were, simply shift our allegiance to a capacity whose origin lies outside the given self.

This marks a contrast with capacities that we might develop without the aid of enhancement, such as the capacity to read music or to engage in a reasonably high level of philosophical thought. These are capacities that grow out of the given self for which we have taken responsibility—they are not alien to it but are

realizations of its potential. These capacities may in some sense be chosen, but they are not *wholly* chosen; their presence in us indicates a given capacity to develop them.

We might also, if we want to pursue a Kantian course, offer the following argument for our lack of responsibility for actions that proceed from wholly chosen capacities. It seems to be a slightly weaker argument than the previous one, but it is worth noting, because it contains echoes of some of what Habermas himself says. If we are to sanction our own enhancement in order to achieve some end of ours, we need to take up a new perspective on ourselves. We need to come to view ourselves not simply as agents, as beings who pursue ends, but as so much material to be manipulated as a means to our ends. Or, at least, we need to view in this way those aspects of ourselves that are to be enhanced. But once we have taken up that theoretical stance toward some aspect of ourselves, we may find it difficult subsequently to inhabit that aspect as an agent, as an originator of action. Once it has been viewed as something objective, as the type of thing that it is appropriate to deal with technologically, it will be hard, if not impossible, to reincorporate it into our subjectivity.

When we stop thinking simply about self-sanctioned genetic enhancement and turn instead to a consideration of third-personal enhancements, some of what I have said about first-personal cases presents us with a problem. That is, I have held that we can only fully take responsibility for actions that proceed from the exercise of capacities that are given, or that grow out of the given. But suppose that you have developed from an embryo that has been genetically enhanced to supply you with, say, prodigious musical ability. This ability is, from your perspective, given: you did not choose it, any more than you chose any of your unenhanced capacities. Surely, then, you can take responsibility for it, and so be responsible for the musical activities that issue from it.

Suppose we have the intuition that you could not take responsibility for such activities. How might we go about justifying that intuition? We might say that, even though the musical ability is, from your standpoint, simply given, you cannot take responsibility for it, just because somebody else has already done so. There is a prior claim on responsibility for the capacity, a claim made by your enhancer.

It seems to me that there is perhaps something wrong with this argument. If your enhancer's responsibility for your musical ability is to preempt and so preclude yours, it plausibly must be responsibility of the same sort as you would take for the ability had it occurred naturally. And it seems it is not. What my enhancer has is responsibility for the *origin* of the capacity. But when, in the normal run of things, I take responsibility for a capacity, or indeed any other aspect of myself, I take responsibility not for its origin but for its *presence*. There seems to be no obvious reason why I could not do this for a capacity whose presence in me is the result of somebody else's choice. It would perhaps be difficult to take responsibility for a capacity that is, so to speak, installed in me without my consent when I am an adult, simply because that capacity's presence would jar with the self for which I had already taken responsibility. But that is not the sort of situation we are imagining. Because the enhancement we are picturing is carried out on the embryo from which I develop, we are to suppose that, for so long as I have a self, I have the capacity in question.

Habermas has an argument that may be better suited to upholding the intuition that I cannot be responsible for actions that proceed from a capacity

chosen by someone else before my birth. It is an argument that is the twin of the Kantian-flavored one employed earlier to support the claim that my agency is diminished by self-sanctioned enhancement. Habermas holds that, in order to carry out enhancements on the embryo from which we will develop, our enhancer must regard it simply as so much material to be manipulated, and his taking up this perspective disallows his at the same time regarding it as a potential agent. Now, Habermas seems to think that, once we learn that we have been subjected to such enhancement, the enhancer's perspective on us as objective stuff fit for technological alteration will infect our own perspective on ourselves, replacing our view of ourselves as agents (at least, I would want to add, in the arena of the exercise of our enhanced capacities). As Habermas writes,

> *Post factum* knowledge of [the enhancer's action] may intervene in the self-relation of the person, the relation to her bodily or mental existence. The change would take place in the mind. Awareness would shift, as a consequence of this change of perspective, from the performative attitude of a first person living her own life to the observer perspective which governed the intervention one's own body was subjected to before birth.[11]

A response to this argument might be to say that the enhanced person indeed may internalize the ''observer perspective'' of her enhancer, but we have been given no compelling reason to suppose that she will, or to suppose that she must. On the other hand, we might more reasonably say that the agent who goes in for self-sanctioned enhancement will retain an observer perspective on her enhanced self, simply because she has been compelled to take up that perspective in order to sanction the enhancement in the first place.

Summary

I think that Habermas's combination of the point that we need to regard ourselves as grown rather than made with his notion that genetic enhancement in some way threatens our agency can be usefully developed into an explanation of common misgivings about the possibility of enhancement technologies. The central thought here is that our exercise of enhanced capacities would undermine the point of the actions we use those capacities to perform, wherever those actions involve reflexive agency; that is, wherever it matters to us that we are responsible for those actions or their outcome. However, despite Habermas's exclusive focus on the unacceptability of third-personal enhancements, it seems to me that the development of his thoughts that I have undertaken is much more able to explain the unease many of us feel at the prospect of self-sanctioned, or first-personal, enhancements.

Notes

1. Habermas J. *The Future of Human Nature*. Cambridge: Polity Press; 2003, at 22.
2. Harris J. *Enhancing Evolution*. Princeton, NJ: Princeton University Press; 2007, at 137.
3. Harris J. No sex selection please, we're British. *Journal of Medical Ethics* 2005;31:286.
4. See note 1, Habermas 2003, at 25.

5. See note 2, Harris 2007, at 140.
6. Sandel MJ. *The Case Against Perfection: Ethics in the Age of Genetic Engineering*. Cambridge, MA: Belknap Press; 2007, at 81.
7. See note 1, Habermas 2003:58.
8. See note 6, Sandel 2007, at 81.
9. Sandel MJ. The case against perfection: What's wrong with designer children, bionic athletes, and genetic engineering. In: Savulescu J, Bostrom N, eds. *Human Enhancement*. Oxford: Oxford University Press; 2009, at 86.
10. See Wolf S. Sanity and the metaphysics of responsibility. In: Schoeman FD, ed. *Responsibility, Character and the Emotions: New Essays in Moral Psychology*. New York: Oxford University Press; 1988:46–62.
11. See note 1, Habermas 2003, at 53.