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To cite this article: Michal Klincewicz & Lily Frank (2019) Genomic Obsolescence: What Constitutes an Ontological Threat to Human Nature?, The American Journal of Bioethics, 19:7, 39-40, DOI: [10.1080/15265161.2019.1618960](https://doi.org/10.1080/15265161.2019.1618960)

To link to this article: <https://doi.org/10.1080/15265161.2019.1618960>



Published online: 25 Jun 2019.



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Genomic Obsolescence: What Constitutes an Ontological Threat to Human Nature?

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Sparrow (2019) makes an argument concerning what he calls the “ontological” consequences of genomic obsolescence through human genomic enhancement. The key consequence is a substantial (and negative, from a moral perspective) change to “our understanding of human nature” that includes a blurring of “the distinction between people and products.” This consequence provides a moral consideration that weighs against the use of genetic enhancement leading to obsolescence.

There is an ambiguity in the ontological consequences argument. Some of the consequences discussed focus on human beings’ own understanding of their nature: for example, “enhancement ... *imputes* a teleology to ... human beings” (12, emphasis added). This consequence could be problematic if it constitutes a misunderstanding of human nature, or if this way of thinking about human nature leads to other negative impacts. The other sort of consequence Sparrow discusses is directly tied to human nature itself: for example, “genetic enhancement would reduce the gap between people and products” (12). Not every change to human nature is morally bad, but the change that Sparrow has in mind is. This is because it would be a type of change that would alter our fundamental moral status, our ability to act as moral agents and make demands as moral patients. Our target in this commentary is the latter type of consequence, the truly ontological consequence, rather than the consequence for our self-conception or our understanding of human nature.

We grant for the sake of argument two claims endorsed Sparrow: (1) Human beings do not have a teleological nature—in other words, human beings are ends in themselves, rather than things; (2) enhancement will create generational genomic obsolescence. However, even if both (1) and (2) are true, this does not create a moral objection to genetic enhancement. A further premise is required, (3), which states that introducing obsolescence will change or undermine our ontological status as ends in ourselves—that is, it will undermine the fundamental moral status of human beings. In the following

we introduce two ways that one might understand (3) and argue that Sparrow does not make a convincing case for either understanding.

The first way to understand (3) is the essentialist version. Human beings derive their fundamental moral status from their genome. The second way to understand (3), the relationalist version, is that human beings derive their fundamental moral status from their embeddedness in relationships and communities, that is, the way that they are treated and treat others. There are passages in Sparrow’s article that suggest both the essentialist and the relationalist version of premise (3). Regardless of which version Sparrow actually endorses, we do not have evidence for thinking either version of moral status would be undermined by genetic enhancement and obsolescence. This means that without further argument, the move from (1) and (2) to the conclusion that humans should not be enhanced genetically is invalid.

Let us look at the essentialist version first. There are theorists who argue for the claim that having a genome of the right natural kind makes one worthy of moral consideration on par with all members “of the kingdom of ends.” Francis Fukuyama, for example, argues that human beings possess “factor X,” which grounds human dignity and is unique to genetic humans: “Every member of the human species possesses a genetic endowment that allows him or her to become a whole human being, an endowment that distinguishes a human in essence from other types of creatures” (Fukuyama 2003, 171). One could point out that, unlike H₂O and water, there is not a sufficiently sharp class of genetic sequences that delineate a natural kind for any species. There are spanrels, differences in expressivity of the same gene, atavism, the possible existence of “junk DNA,” and parallel evolution. Given this, biological taxonomies are the result of a negotiation between functional and anatomical differences at the level of the phenotype and those found at the level of the genotype. All this strongly suggests that it is not clear which particular part of the genome and

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what sort of change to that part or other parts are ontologically relevant to moral status.

Arguably, the more convincing way to argue for the essentialist version of the missing premise is to say that it concerns the part of the genome that is relevant to the fundamental capacities on which moral status is based, such as sentience, reason, or autonomy. We also take capacities to be ideal targets for interventions for moral enhancement, since that approach allows to take individual differences into account (Klincewicz, Frank, and Sokólska 2018). In similar vein, the particular sequences of DNA that play a part in an organism having the morally relevant capacities may be different across species and individuals. If we change whichever part of the genome helps realize the fundamental capacities on which moral status is based, then we indirectly affect moral status. However, enhancing the relevant capacity should not negatively affect moral status, especially on the Kantian tradition within which Habermas's arguments against enhancement are rooted (Habermas 2014). If this is how Sparrow understands moral status, then he must also accept that it is not a continuous variable that can be manipulated up or down. Instead, once one has moral status, one's relationship to norms is fixed, even if the relevant capacity is enhanced. By analogy, enhancing the engine in one's car does not change whether that car or any other car can or cannot break the speed limit on a highway or whether it can or cannot be stolen. This applies similarly for interventions that by accident or design may damage the relevant capacity. It is clear that this would be a morally undesirable outcome, but it is difficult to see how this outcome would have any effect on moral status. Having one's ability to reason, be autonomous, and so on diminish through disability or disease does not affect moral status, so it is not clear why it should in the case of a genomic intervention gone awry. In sum, the essentialist reading needs more argument than is provided in the article to be convincing.

The other way to support premise (3) is relationally, that is, as the claim that human beings derive their moral status from the way they are treated, how they are integrated into communities, and how they function in relationships. This is the kind of position that, for example, Mark Coeckelbergh and David Gunkel take when investigating the idea of moral status of robots (Coeckelbergh 2010; Gunkel 2012, 2018). This approach is suggested by Sparrow's concern with the way in which the project of enhancement "will involve a technological or instrumental mode of relationship with the embryo and, by implication, the future person [as product]." On the relational reading of (3) it is natural to take into account a person's self-conception of their and others' moral status and also their understanding of human nature. If we adopt this version of (3), then the purported problem of genetic obsolescence will rest on speculative claims about the ways in which future human beings will regard and treat themselves and others given widespread genetic enhancement. We agree with Sparrow's method here in

that good evidence for such speculation can be generated by appropriate analogies as we elsewhere used analogical reasoning to model future risks of technologies that quantify human relationships (Frank and Klincewicz 2018). However, Sparrow's consideration of the analogy to aging, significant in his speculations, is mistaken in at least two ways. Contrary to his claim that ageing is universal and uniform, people age differently. Furthermore, many societies hold the elderly in esteem. Another relevant analogy to future widespread genomic enhancement is past use of assisted reproductive technologies. The latter may be said to create the appearance of a technological or instrumental relationship between parents (or others) and embryos. However, its widespread use did not lead to those persons being treated as products or to undermining their moral status. This challenges the idea that the genetically obsolescent will be excluded from the moral community or anyone would be treated merely as means, as Sparrow predicts. To make a case for a relational reading of better analogies need to be provided.

In summary, we agree with Sparrow that genomic enhancement is likely to cause changes, but are not convinced that Sparrow makes a sufficient case that this change is morally troubling. Social and legal instruments that can be used to address the interests of humans disadvantaged relative to some other group already exist. We should use these instruments more effectively and extend their reach to cover the interests of unenhanced humans, if the need arises. If Sparrow is right, genomic enhancement could generate a pressing need to strengthen legal and economic instruments that ensure equal treatment under law and ensure socioeconomic parity. ■

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