HHS Public Access

Author manuscript

Am J Bioeth. Author manuscript; available in PMC 2020 July 01.

Published in final edited form as:

Am J Bioeth. 2019 July ; 19(7): 34–36. doi:10.1080/15265161.2019.1618962.

Could Genetic Enhancement Really Lead to Obsolescence?

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Introduction

Sparrow (2019) supposes, for the sake of argument, that CRISPR and related gene-editing technologies will lead to rapid and continuous enhancement of human capacities through genetic modifications. If this were to occur, he argues, it would lead to a situation in which the genetic modifications given to children born in one year would rapidly be made obsolete by more advanced enhancements available to children born later. This, he thinks, would render each such "yesterday's child" *themselves* obsolete, both in the psychosocial sense that they would be widely *viewed* and *treated* this way and in the deeper ontological sense that they would in fact *be* obsolete. We raise three critical points in response to these claims. First, genetic modifications that improve one phenotype may lead to detriments in other phenotypes, complicating the linear progression that Sparrow imagines. Second, we question whether Sparrow's predicted negative psychosocial consequences would be likely to occur even given the assumption of linear progress. Finally, we question the plausibility of Sparrow's rather disturbing claims about the ontological consequences of genetic enhancement.

Who is Enhanced and Who is Obsolete?

Sparrow's framing of the discussion suggests a linear progression of genetic enhancements that will lead to continuous phenotypic improvements in children born at later dates. In the world that Sparrow describes, "The children who are conceived in 2035, for instance, will be born with significantly better enhancements than the children conceived in 2030" (Sparrow 2019, 7–8). However, given the complex polygenic nature of many of the phenotypes he identifies as likely targets for improvement (e.g., intelligence, creativity) and gene-gene interactions, it is very likely that improvements in one of these areas may lead to significant

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detriments in other phenotypes. This is not just hypothetical; already, psychiatric genomics studies have shown genetic correlations between artistic creativity and risk of schizophrenia, bipolar disorder, and depression (MacCabe et al. 2018). Even assuming that we had the capacity to modify the genome to enhance specific "desirable" phenotypes, this could in many cases lead to detriments in other phenotypes. Thus, making determinations about who is enhanced and who is obsolete is likely to be much more nuanced and complex than what Sparrow portrays.

Psychosocial Consequences

Sparrow claims that comparing oneself to the next generation of enhanced individuals will generate feelings of inferiority and distress. This is because "obsolete genes are not just 'different' genes but are, in an important sense, 'rejected genes'" (Sparrow 2019, 9). While this much might be true given his assumptions, potential feelings of inferiority and distress on this basis would likely depend upon four things: 1) one's position along the continuum of existing enhancements, 2) degree of difference between enhanced generations, 3) prevalence of a given enhancement in a population, and 4) whether widespread moral enhancement also exists. In his paper, Sparrow devotes little attention to (3) and does not mention (4), but they have important implications for the plausibility of his predictions.

Those with the most recent enhancements may be preferentially rewarded with employment and education opportunities, even sexual selection. However, these forms of selection operate most easily when a wide range of contrasts exists. When only minorities of individuals have a given desirable trait, they stand out to a greater extent. But if enhancement becomes so prevalent that an individual (i.e. "yesterday's child") has the luxury of possessing even "obsolete" enhancements, a majority of society will be made up of enhanced individuals even if gradations in enhancement exist. This may have the effect of truncating the span of desirable traits, thereby rendering our selection criteria for "better" or "best" ever more subtle. Selecting among these increasingly subtle gradations might potentially become less important, because all will be finely-drawn variants of "good," potentially reducing both the size and substance of perceived differences between individuals.

This is especially plausible if we imagine society possessing the capacity for *moral* enhancement that helps to foster greater empathy, solidarity, and equal regard among people despite difference. While Sparrow has raised critical questions about moral enhancement elsewhere (Sparrow 2014), most of those objections are predicated on the assumption that only *some* individuals will be morally enhanced, potentially causing (or even, according to him, rationally justifying) inegalitarian sociopolitical arrangements. On the assumption of effective and widespread moral enhancement, such issues do not arise—especially if such enhancement aims precisely at fostering more egalitarian attitudes in individuals and society as a whole.

Ontological Consequences

Obsolescence has ontological consequences, Sparrow thinks, in the sense that it has "implications for our understanding of human nature" (Sparrow 2019, 17). Sparrow's main worry, inspired by Habermas (2003), is "that genetic enhancement would result in a transformation of human nature such that human beings would become 'products'" (Sparrow 2019, 18–19).

In defending this claim, however, Sparrow appears to assume without argument that the value of an individual herself may be inferred from the value of her enhancements. He claims that "enhancement imposes a mode of evaluation on human beings that tends to reduce them to their ranking on a single dimension" (Sparrow 2019, 19). The thought seems to be that, in identifying an *enhancement* as a superior enhancement, we would thereby be identifying the *person* whose enhancement it is as superior. But the value of an enhancement *qua* enhancement does not imply anything about the value of a person *qua* the distinctive form of value possessed by persons. Sparrow is here concerned with the enhancement of capabilities (naming intelligence, longevity, and artistic ability). But absent special assumptions, capabilities are not plausibly regarded as good in themselves, but instead as instrumentally good on the basis of what they allow one to obtain or achieve. Even if we do suppose that capabilities are intrinsically good, possessing superior ones does not thereby grant an individual superior *moral status*. It implies only that she is more advantaged.

Sparrow also claims that "because progress requires a goal, progress in enhancement implies that human beings have a function or a goal that enhancements improve or advance" (Sparrow 2019, 20). But the idea of progress need not rely upon "teleology" in the sense of a natural or externally-imposed function or purpose. The standards by which we judge some state of affairs as progress might be *our own* standards, the ends that we set for ourselves. The kind of progress that enhancement involves might be understood in just this way: greater capabilities on the part of the enhanced person to achieve her own ends, whatever those ends may be (Gunderson 2007, 94). If enhancement designers have as their explicit aim the promotion of a future individual's ability to live as she decides, it is not plausible to think of enhancement as imposing any external, totalizing goal.

Sparrow also writes that "enhancement subsumes human beings under an essentially technological dynamic that treats them as things to be improved upon" (Sparrow 2019, 20) and "will involve a technological or instrumental mode of relationship with the embryo and, by implication, the future person" (Sparrow 2019, 21). But the Kantian outlook that Sparrow here invokes does not prohibit treating people as things (or in Kant's own parlance, as *means* to ends). It prohibits treating people *merely* as things (or as means), without *also* treating them as ends. The Kantian outlook thus does not problematize such a relationship unless it involves a purely technological or instrumental mode with a person. *Contra* Habermas and Sparrow, so long as embryonic enhancements are performed for the sake of the future person herself, they are not plausibly interpreted as treating the future person *merely* as a thing or as a means (Schaefer et al. 2014, 132–34).

Indeed, Kant maintains that each individual has a *duty* to treat him- or herself (or at least his or her *talents*) as, in Sparrow (2019, 22)'s words, "things to be improved upon." Kant claims this on the grounds that "as a rational being he necessarily wills that all capacities in him be developed, because they serve him and are given to him for all sorts of possible purposes" (Kant 2013 [1786], 35). While Kant considers this a duty to oneself, it plausibly implies at least the permissibility of others supporting one's ability to fulfill it, including via genetic engineering (Allhoff 2005, 50; Gunderson 2007, 91–92).

Ultimately, it seems to us, the alleged ontological implications of genetic enhancement that Sparrow discusses do not depart fundamentally from Habermas' worry that it involves unacceptable instrumentalization of persons. Such objections to genetic enhancement are not in fact implied by the Kantian outlook, nor are they well-motivated when divorced from that outlook. They have in our view been satisfactorily answered in the critical literature we have cited here. Even if it were possible to achieve the fast-paced, linear progression of genetic enhancements that Sparrow describes, we are not persuaded that this would generate obsolescence in any normatively problematic sense, though of course it might well raise issues beyond those discussed here.

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