

PAPER

Genetic modifications for personal enhancement: a defence

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ABSTRACT

Bioconservative commentators argue that parents should not take steps to modify the genetics of their children even in the name of enhancement because of the damage they predict for values, identities and relationships. Some commentators have even said that adults should not modify themselves through genetic interventions. One commentator worries that genetic modifications chosen by adults for themselves will undermine moral agency, lead to less valuable experiences and fracture people's sense of self. These worries are not justified, however, since the effects of modification will not undo moral agency as such. Adults can still have valuable experiences, even if some prior choices no longer seem meaningful. Changes at the genetic level will not always, either, alienate people from their own sense of self. On the contrary, genetic modifications can help amplify choice, enrich lives and consolidate identities. Ultimately, there is no moral requirement that people value their contingent genetic endowment to the exclusion of changes important to them in their future genetic identities. Through weighing risks and benefits, adults also have the power to consent to—and assume the risks of—genetic modifications for themselves in a way not possible in prenatal genetic interventions.

Some commentators regard the prospect of genetically enhanced human beings as not only desirable but inevitable. Allen Buchanan has said that there is no realistic prospect of stopping the development of genetic and other kinds of enhancement (p.11–2).¹ Not only that, some commentators have made the case that genetic enhancement may be morally obligatory if and when safe and effective techniques emerge to confer protection from disorders or other benefits on children.² Despite this enthusiasm for genetic enhancement, certain commentators continue to object to the use of genetic interventions to shape the traits of children with regard to sex, intelligence and athletic ability, among other things. The claim that prenatal genetic interventions wrongfully constrain the choices of descendants pervades bioconservative outlooks in bioethics.³ Commentators in this camp argue variously that such interventions are unnecessary, that they change the terms of our relationships to one another and that they even undermine the possibility of moral equality.^{4 5}

By contrast to a focus on descendants, Peter Herissone-Kelly argues that genetic interventions chosen *by and for oneself* for the purpose of enhancement are even more objectionable than

those for children.⁶ This analysis is out of the ordinary precisely because it focuses on self-modification rather than modification of individual children or future generations as a whole. What makes this analysis worth attention from a moral point of view is the objection to the effects of genetic modification for the people who would choose those interventions for themselves. Herissone-Kelly maintains that the enhanced capacities that might emerge from such genetic interventions diminish moral agency, diminish the worth of outcomes the interventions make possible and alienate people from their own experiences. To the contrary, I will show that moral agency survives genetic modifications, that outcomes of experiences after genetic modifications are still meaningful and that people can integrate genetic modifications into their lives in ways that do not necessarily alienate them from their experiences. The capacity for assuming the risks of one's choices adds a supporting rationale to the defence of genetic self-modification.

THE CASE AGAINST GENETIC MODIFICATIONS Erosion of moral agency

Taking his cues from Jürgen Habermas, Herissone-Kelly says that 'for autonomy or agency to be a possibility for us, we must regard our natures as simply given, rather than manufactured' (p.204).⁶ To make this point, Herissone-Kelly gives the example of someone using motorised leg braces to run a 4-min mile. He sees such a performance as virtually involuntary, and he sees the effects of genetic modifications as equivalent to the effect of motorised leg braces, so far as the diminishment of personal agency is concerned: 'If an action were to issue from a wholly chosen capacity, we would be unable to regard that action as our own' (p.206).⁶ Even if one wanted to allow that there were *some* measure of choice involved in deciding to run the race, Herissone-Kelly discounts the importance of that choice: he is still 'tempted to say' that 'an alien capacity is responsible' (p.206).⁶ In other words, moral agency is the condition of the possibility of responsibility for our actions. Genetic modifications undercut that agency and therefore our responsibility for the resulting actions that, in a sense, happen to us rather than being the effects of choice.

The value of our behaviour

Not only would genetic modifications compromise moral agency, they would undermine the value of the behaviour they make possible. Herissone-Kelly puts the matter this way: 'part of the point of

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[actions] being performed is not simply that they should be realized but that they should be carried out by the agent who performs them' (p.206).⁶ In his view, the meaning of a 4-min mile, for example, would be undercut if genetics were the engine of success. Because the outcomes of genetic interventions would be more or less involuntary, they would be relatively valueless as accomplishments. By contrast, running a race without braces or genetic modifications renders the event meaningful relative to its accomplishment measured against our unknown genetic capacities (p.205).⁶

Bystander to one's life

Herissone-Kelly also thinks that genetic modifications would alienate the self from the events they make possible. For example, he says that someone who runs a 4-min mile—because of a genetic modification—can only look at that outcome as an event external to oneself: 'because the enhanced capacity does not grow out of [the] given self. . . its presence will be experienced as discontinuous with the self for which we have taken responsibility' (p.207).⁶ Herissone-Kelly says further that 'There will be little difference, from my perspective, between my enhanced self running the mile and its being run by someone else entirely' (p.206).⁶ He thinks this alienation would attach to other outcomes achieved in the wake of genetic modification so that genetic modifications will, to put this in my own language, transform one into a perpetual bystander to the events of one's life. (Since children would experience prenatal modifications as given, as experientially always part of their selves, they would not face the problem of a divided self, unlike adults who could only see their changed circumstances in relation to their prior traits and capacities) (p.208–09).⁶

In a way, this line of analysis might be construed as continuous with the claim that genetically-effected outcomes will seem less valuable than outcomes achieved against the background of a contingently given nature. It seems worth pursuing the idea that genetic self-modifications will lead to outcomes necessarily perceived as 'external to oneself' because this kind of claim requires sorting events in one's life on the basis of their comparative value and on the basis of their authenticity as an expression of one's self. Herissone-Kelly says enough along these lines to justify this interpretation.

I will show that Herissone-Kelly's objections to genetic self-modification fail because they fail as acceptable interpretations of the meaning of genetic self-modification.

MY RESPONSIBILITY, OUTCOMES VALUABLE TO ME AND MY SENSE OF SELF

Erosion of moral agency: reply to the objection

When it comes to assigning responsibility for action, Herissone-Kelly criticises certain advocates of enhancement for genetic reductionism. He wants to temper the enthusiasm for genetic enhancement through reminders that genetic modifications cannot be expected to confer benefits inevitably and necessarily. Yet, at times, Herissone-Kelly also oversimplifies the outcomes of genetic modification in his case to magnify the extent to which the modifications detract from individual responsibility (p.202).⁶ For example, he mentions prenatal genetic modifications intended to confer athletic gifts, while cautioning that these modifications would not determine the person's entire life history since the affected person might choose another life altogether (p.202).⁶ That caution notwithstanding, most of the examples he offers in objection to genetic modification more or less presuppose a strong genetic determinism and therefore a necessary erosion of responsibility. For

example, Herissone-Kelly mentions running a 4-min mile, earning a degree, doing a *Times* crossword puzzle in 5 min and doing high quality philosophical work. In the example of the crossword puzzle, he cedes that someone would be responsible for that outcome 'in the sense that she alone decides to exercise her newly acquired capacity.' Yet he immediately goes on to say that 'there is another sense in which she is not responsible for its having been finished so quickly,' as if genetic modification must eventuate in that outcome (p.206).⁶ Herissone-Kelly at one point stipulates that the effects he puts into question are those that follow from 'a wholly chosen capacity.' In other words, without the genetic modification, the effect in question could not happen at all. The idea that 'a wholly chosen capacity' can originate in a genetic modification presupposes a genetic determinism that Herissone-Kelly himself elsewhere says is inconsistent with what we know about genetics, namely that genetics are not destiny.

At one point, Herissone-Kelly presents an example of making *all* the genetic modifications (and not just for increased intelligence alone) necessary to enhance 'to have the full range of capacities responsible for high quality philosophical work' (p.205–06).⁶ Even granting rather direct linkages between genetic modifications and behaviour, the prospect of doing high quality philosophical work requires mastery of a certain body of work and analytic skills that emerge only from education and socialisation, which involve factors that are logically independent of genetic modifications. Whatever genetic modifications can do for someone, they cannot engineer anyone as philosophically learned. This is to say that outcomes do not flow from capacities in any causally determinate way, certainly not without contextual influence.⁷ In this indeterminacy, there is plenty of room for the exercise of moral agency.

When it comes to the effect of *prenatal* genetic modifications on moral agency, Herissone-Kelly rejects the idea that prenatal interventions would—as Habermas indicates—limit the ability of children to take responsibility for themselves, since responsibility turns on responsiveness to the presence of a trait, not its origin. By contrast, however, he argues that adults could only see the effects of genetic interventions as an erosion of their agency. However, not only does context necessarily influence behaviour in ways that defy genetic reductionism, the contingency of experiences and choices during life preserves moral agency.⁸ While people can expect—probabilistically speaking—that genetic modifications will open certain outcomes to them, people who choose genetic modifications for themselves will have just as much contingency in their lives as would be the case as if they had no modifications. One can only ever respond to one's circumstances, no matter whether one's genetics were constituted entirely by chance or partly by design.

This point can be made in the following way. Suppose one of two monozygotic 'identical' twins is genetically modified in a way known to increase intelligence in adulthood, but the other twin undergoes no modification. As twin siblings often do, these twins may share the same familial, education and social environment. Against this background, the modified twin faces no fewer circumstances for choice—in matters great and small—than the unmodified twin. No diminution in the need for choice follows in the wake of genetic modification. Unless one's capacities are altogether moulded by the genetic modifications into the equivalent of involuntary instincts, human agency and contingency enough in one's circumstances will survive the influence of genetic modification. The indeterminacy of one's circumstances is enough to preserve responsibility for one's actions. Genetic modifications might even arguably *increase*

responsibility by expanding the range in which one could express a choice, such as might happen in the case of increased intelligence.

The value of our behaviour: reply to the objection

Will people value the outcome of their choices less because genetic modifications diminish a sense of responsibility? The ranks of those who have run a 4-min mile are small enough; fewer still have run a mile in less time. The ranks of both camps would swell if motorised leg braces were available to all, which would essentially cheapen the accomplishment, but that 4-min mile might still be meaningful and valuable outside competitive races. If I have to cross a mile-long field numerous times a day, I might want to do this in a series of 4-min leg-braced runs rather than lose the time involved in walking. Some people might simply enjoy the experience of a 4-min mile, no matter that it is accomplished through motorised leg braces. The value of a modification can only be measured relative to a standard, and it does not follow that modifications should be measured only in contexts in which a strong sense of responsibility is presupposed as a condition of the outcome being valuable. One might want to enhance musical abilities late in life, not to compete musically with others but to be better situated to offer music lessons to children as a way to earn some income. Genetic modifications to intelligence late in life might help offset the losses in cognitive function that are the effects of senescence. I cannot see how these outcomes, instrumentally valuable as they are, should be interpreted as a morally valueless simply because they were achieved with the help of genetic modification.

Throughout his analysis, Herissone-Kelly also seems to think that one's goals must remain static. If everyone had access to motorised leg braces, competitive interest in achieving a 4-min mile with their use would vanish, but with braces locked on people could set about achieving new racing goals. One could similarly move the goal posts for any capacity enhanced by genetic modifications, both personally and socially. If I turn to genetic modifications to improve my capacity to learn a new language, for example, not only will I master that language more quickly than I would have otherwise, but I may be able to set my sights higher. In addition to learning Portuguese, I might add other Latinate languages as well. One will always have—one can only have—choices in relation to one's capacities, no matter how genetic modifications enlarge them. This is to say that genetic modifications may close down some prior achievements as valuable, but achievements valuable to one's self remain possible in principle.

Bystander to one's life: reply to the objection

In addition to worries about erosion of responsibility and diminishment of value, Herissone-Kelly also thinks that genetic modifications will alienate people from their experiences. The events of one's life will happen at a distance, so to speak, from one's own identity. I think Herissone-Kelly's account skews likely meanings of genetic modifications and that it is not at all clear that genetically modified people must interpret their accomplishments as external to their own identities.

Contrary to all we know about language acquisition, suppose genetic modifications could implant a fully-functional capacity for a specific language (let's say German) in someone (let's say Smith) over the course of a few days. Smith might need some transition period to his new-found skills as he plumbs the powers of his new capacity. Early on, he might hesitate momentarily as he ventures into the thickets of German pronunciation and syntax, not expecting to find them at the ready, but quickly

enough he will achieve confidence and fluency. With his new-found language skills, must Smith stand in some kind of alienated relationship to his capacities and achievements? If Smith has no occasion to exercise his new capacity to speak German, I suspect he would hardly notice the difference between his prior self and his current self. If he were *only* to speak German afterward, I suspect his own prior image of himself would give way to a new self-image that integrates his new fluency with his prior non-fluency. After all, most of us can scarcely recall our limited powers of language as juveniles; we do not ordinarily look back on our juvenile language skills as evidence of a bifurcated identity.

Herissone-Kelly himself has disputed Habermas' contention that genetically modified children might experience the lives as third-person observers, saying that 'we have been given no compelling reason to suppose that this must happen' (p.209).⁶ Yet, Habermas argues the inward nature of the intervention could obstruct any direct perception of children's experiences as modified; they could have no first-person way to know of that modification. Habermas also admits that children might never learn about their modification if, for example, their parents never disclosed the intervention. (This is not too difficult to accept since some parents do not disclose the use of donor gametes or even surrogate mothers to children conceived and gestated that way.)⁹ Since children would experience prenatal modifications as given, as experientially always part of their selves, it would be hard to argue that the problem of a divided sense of self is necessarily their fate (p.208–09).³

Is such an outcome possible for adults? Herissone-Kelly does not think so; he argues that the person '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' (p.209).⁶ In other words, someone must perceive the lack of a trait or capacity in oneself in order to see modification as desirable in the first place. According to Herissone-Kelly, achieving that trait or capacity by genetic modification will not extinguish the prior sense of having a deficit. In this way, he thinks one will or must retain an observer perspective on the effects of the modification, no matter their scope or value. Even if this were true, I see no reason to attribute much significance to this changed image of self. People's capacities change over their lives without necessarily requiring current 'selves' to see former 'selves' as alienated states.

At present, some people are immune to HIV infection for genetic reasons, but the vast majority of people in the world have no such immunity.¹⁰ Those who are not immune may act in ways that protect against HIV infection, but these practices are sometimes difficult to observe, and involuntary exposures can occur too. Suppose a genetic intervention could confer immunity to HIV infection for an adult under all circumstances? As Herissone-Kelly tells it, the conferral of genetic immunity on oneself would mean that HIV protection would have been achieved as if it were an event external to oneself (p.207).⁶ What would be lost in this genetic immunity would be the opportunity for a conscious and life-long effort to avoid HIV infection. By contrast to this account, I myself would prefer to have lifelong immunity against this infection rather than have to practice lifelong and fallible vigilance. I very much doubt that after this genetic modification I would experience nostalgia for my prior vulnerability to infection. I would not either feel that I was now living out someone else's life or my own life under a materially altered sense of self. If I were somehow accidentally exposed to HIV, I do not think I would be alienated by the

protection conferred on me by a genetic modification, as if that outcome were an outcome achieved by someone else entirely. On the contrary, I would be more than grateful for having protection against HIV that is stronger than my own resolve to protect myself from voluntary exposures and stronger than my ability to protect myself from involuntary exposures.

Herissone-Kelly describes outcomes that are mined out of an unmodified genetic nature as a realisation of the potential of that nature (p.209).⁶ But why should we assume that a person's nature as given by a roll of the genetic dice must express someone's identity in a more morally significant sense than the traits and capacities to which a person aspires and—sometimes—achieves? After all, many of one's *given* traits and capacities can be experienced as alienating, especially diseased and disordered conditions that are also the realisation of one's given nature.¹¹ As against assuming that a valuable life consists only in realising the potentiality of a contingent nature, we should cede that that overcoming perceived deficits through genetic modifications may do more to consolidate a sense of identity—and a valuable identity at that—than to deconstruct it.

CONCLUSIONS

If it becomes possible to bring about modifications to oneself through genetic modifications, I think bioconservatism faces a formidable burden of proof: why should people not be able to consent to modifications that are important to them? Even now we take significant steps to modify the bodies that are the epiphenomena of given genetic endowments in order to express values and identities. The searching philosophical question here is why people should be required to remain only as their genetic endowments—contingent in nature—have left them.

Contrary to the bioconservative view that choosing genetic modifications for one's self is even more morally problematic than choosing to intervene in ways that affect descendants, we can with clear moral conscience pursue those changes—as they become possible—in order to express values and identities important to us, evaluating those modifications on a case by case basis. The indeterminacies of life are such that we remain responsible beings who will still have to navigate the choices that life brings our way, even if we were to modify our own genetics. Genetic interventions need not either 'undermine the point of the actions we use [our] capacities to perform, wherever those actions involve reflexive agency, that is, wherever it matters to us that we are responsible for those actions or

outcomes' (p.209).⁶ There is no reason to believe that our goals must remain static either; as our traits and capacities change, we will not necessarily value prior choices in the same way, but we can move on to new goals as we explore the meaning of those changes in the pursuit of meaningful lives.

A further consideration distinguishes genetic modifications for adults as against children: the capacity to consent. Bioconservative critics claim that prenatal interventions are objectionable because human descendants cannot consent to them.^{3 5} By contrast, adults are able to consent in ways that are not possible in prenatal interventions, and they are also able to assume risk as part of that consent, as they do when pursuing aesthetic surgeries, for example. Aesthetic surgery is, in fact, open to many of the same charges that Herissone-Kelly lays at the feet of genetic modifications: it has outcomes that could be called involuntary, it could lead to a devaluation of the outcomes that are possible through one's modified nature, and it could alienate people from the effects of their new traits and capacities. Yet, to judge from the way people have voted on aesthetic surgery with their feet (and their breasts, noses and chins), most people have no fundamental objection to moving their bodies into line with their values.

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