

SECTION II

Advancing the Debate

10

Enhancing Conservatism

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10.1 Introduction

Recent years have seen polarized debate about novel biotechnologies, including human enhancement, cloning, stem cell research, and the use of PGD to select embryos for non-disease traits. Transhumanists typically welcome developments that aim to overcome human biological limitations, such as our expected lifespan and ordinary levels of intelligence, as some novel biotechnologies promise to do. Bioliberals do not necessarily view such technologies as good but they tend to reject most of the prominent bioconservative reasons for opposing them. For bioliberals, as for political liberals, good reasons to ban novel technologies must make reference to their harmfulness, or the inherent unfairness of their uses. Bioliberals are, as a result, accepting of new technologies on the condition that they are sufficiently safe, fairly distributed, and so on.

Bioconservatives oppose the use of these technologies. While some of their reasons for concern—such as those relating to safety, fairness, and distributive justice—are acknowledged by transhumanists and bioliberals, their main objections are rarely given much weight by their opponents.

Bioconservatives are often political conservatives, and their arguments reflect mainstream conservative thought, including a greater reliance on appeals to intuition than is typical of liberals.¹ Since bioconservatives oppose certain novel technologies even when concerns about harm and fairness do not apply, their views conflict with those of bioliberals and transhumanists.

Bioconservatives oppose enhancement because they believe the goods that enhancement promises to be less valuable than the goods it would destroy. We test this in-principle opposition by considering a hypothetical type of enhancement designed

¹ Parens (2005) argues that the difference between supporters and opponents of enhancement does not correspond to the difference between political liberals and conservatives. However, there is significant overlap between, on the one hand, bioliberalism and political liberalism; and on the other, bioconservatism (to be defined presently) and political conservatism. This chapter focuses on arguments that exist within these overlaps.

to promote values dear to bioconservatives; values that they see as being undermined by enhancement. We will consider how bioconservatives might argue against even this sort of enhancement—that is, against an intervention that promotes bioconservative values by a means that bioconservatives oppose. In doing so, we hope to identify some of the issues most fundamental to the bioconservative case against enhancement.

10.2 Enhancement Policy and Established Wisdom

Leon Kass and Michael Sandel—perhaps the two most prominent bioconservatives, and for this reason the main focus of this chapter—worry that technology develops so fast that we risk embracing it before considering whether what it offers is valuable. Kass remarks that ‘this push toward bio-engineered perfection strikes me as the wave of the future, one that will sneak up on us before we know it and, if we are not careful, sweep us up and tow us under’ (Kass 2003, p. 10). Sandel writes that ‘[w]hen science moves faster than moral understanding, as it does today, men and women struggle to articulate their unease. [...] The genomic revolution has induced a kind of moral vertigo’ (Sandel 2004, p. 1).

Human enhancement—the use of technology (including tools, techniques, and medicines) to raise human capacities above the normal level²—especially worries Kass and Sandel.³ They see it as an unintended, ill-considered side-effect of therapeutic technology. Kass writes:

It bears emphasis that these powers have not been developed for the purpose of producing perfect or post-human beings. They have been produced largely for the purpose of preventing and curing disease, and of reversing disabilities. [...] Yet the ‘dual use’ aspects of most of these powers [...] means that we must not be lulled to sleep by the fact that the originators of these powers were no friends to the Brave New World. Once here, techniques and powers can produce desires where none existed before, and things often go where no one ever intended. (Kass 2003, p. 11)

Similarly, Sandel discusses potentially powerful biotechnologies where ‘[i]n each case what began as an attempt to treat a disease or prevent a genetic disorder now beckons as an instrument of improvement and consumer choice’ (Sandel 2004, p. 2).

Kass and Sandel are concerned that the value of enhancement may be outweighed by the loss of something of greater value. For Kass, this greater value ‘may have something to do with what is natural, or what is humanly dignified, or with the attitude that is properly respectful of what is naturally and dignifiedly human’ (Kass 2003, p. 17). For Sandel, enhancement ‘represent[s] a kind of hyperagency—a Promethean

² Specifying exactly what counts as the ‘normal level’ in this context is itself a difficult task, and one that we do not tackle here. See Bostrom and Roache 2007.

³ Other bioconservatives who are opposed to human enhancement for reasons similar to those of Kass and Sandel include Francis Fukuyama (2002) and the members of the President’s Council on Bioethics (2003), of which Kass was chair between 2001 and 2005.

aspiration to remake nature, including human nature, to serve our purposes and satisfy our desires'; an attitude that 'misses and may even destroy [...] an appreciation of the gifted character of human powers and achievements' (Sandel 2004, p. 5). Since enhancement might undermine something of great value, we should resist the temptation to use it.

Both Kass and Sandel hold that, while enhancement should not be embraced if it is unsafe, the most important objections do not relate to safety. Even so, the bioconservative objection that we should avoid enhancement because it might destroy more value than it creates is unconvincing unless bioconservatives have good reason to believe that important values are more effectively promoted by abstaining from enhancement than by pursuing it. Indeed, some bioliberals have argued that some bioconservative values are better promoted by enhancement than by opposition to it.⁴

Traditional conservative thought offers bioconservatives a response to this attack. The caution advocated by Kass and Sandel reflects a typically conservative view that the way things are (or, perhaps, the way things used to be in some bygone era when everything was better) is not the result of current whims or random circumstances; rather, the current arrangements—and in particular the traditions that conservatives esteem⁵—have been shaped by the accumulated wisdom of our ancestors. Let us call this accumulated wisdom of our ancestors *established wisdom*. Reverence for established wisdom, combined with pessimism about the ability of society to withstand radical change,⁶ leads conservatives to oppose attempts to overturn the status quo. Bioconservatives can argue, then, that by resisting enhancement we concur with established wisdom. Since established wisdom plausibly exceeds that of bioliberals, it is more likely that bioconservative values will be preserved by resisting enhancement than by enhancing.

This conservative attitude can be traced back to Edmund Burke, often seen as the founder of modern conservative thought. In an influential 1790 essay, he supports the 1688 Glorious Revolution, an event generally viewed as a defence and reassertion of British tradition in the face of a threat.⁷ Burke writes of it:

The Revolution was made to preserve our *ancient*, indisputable laws and liberties, and that *ancient* constitution of government which is our only security for law and liberty. [...] The very idea of the fabrication of a new government is enough to fill us with disgust and horror. We

⁴ For example, Bostrom 2005, 2008; Savulescu 2007, 2009; Kahane 2011; Pugh, Kahane, and Savulescu 2013; Schaefer, Kahane, and Savulescu 2014.

⁵ For some contemporary accounts of the importance of traditions to conservatives, see Kekes 1998 and Scruton 2001.

⁶ Kekes 1998, pp. 41–5, 213–19.

⁷ In it, King James II of England was overthrown by a collaboration of English parliamentarians and the Dutch William of Orange. Already uneasy about King James's Catholicism and close ties with (Roman Catholic) France, parliamentarians feared the establishment of a Roman Catholic, Anglo-French monarchy when the birth of the king's son in 1688 displaced his Protestant daughter, Mary (wife of William of Orange), as heir to the throne. Following the revolution, William and Mary took the throne as William III and Mary II of England.

wished at the period of the Revolution, and do now wish, to derive all we possess as *an inheritance from our forefathers*. Upon that body and stock of inheritance we have taken care not to inoculate any scion alien to the nature of the original plant. All the reformations we have hitherto made have proceeded upon the principle of reverence to antiquity: and I hope, nay I am persuaded, that all those which possibly may be made hereafter, will be carefully formed upon analogical precedent, authority, and example. (Burke 1790)

Kass and Sandel, like Burke, exhibit ‘reverence to antiquity’. Kass bemoans the fact that, ‘[t]oday, one must even apologise for voicing opinions that twenty-five years ago were nearly universally regarded as the core of our culture’s wisdom on these matters’ (Kass 1997, p. 18). Sandel remarks that ‘[i]n order to grapple with the ethics of enhancement, we need to confront questions largely lost from view—questions about the moral status of nature, and about the proper stance of human beings toward the given world’—questions from which ‘modern philosophers and political theorists tend to shrink’ (2004, p. 2).

It is certainly true that many ideological radical revolutions, such as the various communist revolutions of the twentieth century, backfired. Often, such revolutions have been insufficiently situated in the realities of human psychology and capacity for social life. However, bioliberalism about enhancement is unlikely to involve the sort of radical social change that conservatives typically fear. It is more likely to involve incremental changes as technology advances. Yet Kass in particular seems to object even to gradual social change, as the remarks quoted above suggest. We might take him not only to view radical change as undesirable, but to endorse the stronger view that the status quo represents the ideal state, from which even gradual changes are undesirable. This makes him vulnerable to a charge of status quo bias.⁸

Bioliberals can recognize the value of caution about enhancement. One only has to look around to see that current society celebrates various dubious values. Our consumerist culture depletes our planet’s resources at unsustainable levels. Western popular culture celebrates unattainable standards of physical beauty. The reality television craze has led to a prurient obsession with unremarkable people. Reminding ourselves that things have not always been this way helps us keep the status quo in perspective. It is prudent to heed the bioconservative warning not to be seduced by what human enhancement offers without first questioning whether the values it promotes are worthwhile.

Some writers have adopted a questioning attitude in response to the growing popularity of cosmetic surgical enhancement (e.g. Blum 2005; Elliott 2008). Further, some have argued that even when enhancement appears to promote laudable values, promoting these values could have devastating effects in practice. Rob Sparrow argues that, since women have a longer life expectancy than men (along with various other welfare-related advantages), those committed to maximizing the welfare of their children should use sex-selection technology to ensure that their children are female. He

⁸ For an account of status quo bias, see Bostrom and Ord 2006.

intends this as a *reductio* of the appealing view that technology should be used in medicine primarily to promote welfare (Sparrow 2010).

Bioliberals would no more welcome the results of implementing Sparrow's sex-selection policy than would bioconservatives, as one of us has argued.⁹ Bioliberals can acknowledge that the pursuit of enhancement may be guided by many values that are initially appealing but which must be balanced, and that the premature promotion of a narrow range of values may result in disaster, as bioconservatives like Sparrow fear.

10.3 Does Established Wisdom Really Demand that We Oppose Enhancement?

Even conceding that established wisdom likely outweighs that of today's thinkers, an appeal to established wisdom is insufficient to show that what bioconservatives value is better safeguarded by opposing enhancement than by permitting it. Clearly things *do* change and progress *is* made; history is replete with attempts to improve the human condition, and indeed the human. It is far from clear that the desire to enhance is opposed to established wisdom, rather than reflective of it. The desire to enhance traits such as intelligence, strength, and self-confidence arises from a culture whose established wisdom values these traits.

Further, the process of accumulation of wisdom is ongoing. As such, those who thoughtfully wish to permit enhancement may be viewed as contributing to established wisdom just as our ancestors did. While some modern views—including, according to bioconservatives, the desire to enhance—may appear to contrast starkly with what has gone before, the same can be said of many earlier views that are now accepted as part of established wisdom. In fact, established wisdom is hardly a homogenous, harmonious category of beliefs and practices. Our culture is shaped as much by conflict as by agreement; perhaps even more so. In addition, individuals change their beliefs over time—even bioconservatives. Raymond Vande Wiele became co-director of the first IVF clinic in 1983, yet a decade earlier he had objected so vehemently to IVF that he sabotaged a colleague's experimental attempt to use it.¹⁰

We might view bioconservatives as adopting a virtue ethics approach, whereby their views about enhancement are shaped by the virtues enshrined in established wisdom. A common criticism of virtue ethics is that it provides insufficient guidance about how to act.¹¹ When the virtues in question are exemplified by a huge group of people, existing at different times and holding diverse and conflicting views, this difficulty is magnified. It is unclear what the relevant virtues are and how they can guide current decision-making.

⁹ Kahane and Savulescu 2010; Savulescu 2015.

¹⁰ See Clarke and Roache 2012, p. 37.

¹¹ For a discussion, see Hursthouse 1999.

Faced with such problems, a common strategy of bioconservatives, and of conservatives more generally, is to appeal to intuition.¹² While appeal to intuition plays a central role in moral evaluation and reasoning, it plays a dominant role in conservative moral reasoning, since conservatives often resist attempts rationally to analyse and evaluate their moral intuitions.¹³ A characteristic conservative appeal to intuition enables bioconservatives to insist both that enhancement conflicts with established wisdom and that it is not possible to articulate exactly how and why this is the case.

This strategy will not work, however. First, different people have different intuitions—for example, bioliberals do not share bioconservatives' intuition that enhancement is bad—meaning that in order to decide who has the right intuitions, we must appeal to some standard of evaluation that is independent of individuals' intuitions.¹⁴ Second, as illustrated by the example of Vande Wiele above, people's intuitions change over time. Kass himself recognizes this when he bemoans that '[w]e have in some sense been softened up to the idea' of cloning since it first came to public attention in the 1960s (Kass 1997, p. 17). Given this, it is likely that even people with an intuitive aversion to enhancement would, over time, become more accepting of it if they were repeatedly confronted with it (e.g. by meeting enhanced people and encountering discussion of it in the media).¹⁵ That they are likely to become more intuitively accepting of it even if it is in fact morally objectionable points to the conclusion that, again, its moral acceptability must be assessed with reference to considerations independent of individuals' unanalysed intuitions.

10.4 Factor X Enhancement: Remaking Humans in the Bioconservative Image

We can emphasize the idea that enhancement need not undermine bioconservative values by imagining a type of enhancement that promotes these values. Following Fukuyama, let us use the term 'factor X' to denote that difficult-to-define aspect of humanity that bioconservatives worry will be undermined by enhancement.¹⁶ Factor

¹² We follow Neil Levy in understanding intuitions as 'spontaneous intellectual seemings', a definition compatible with a range of philosophical and psychological uses of the term.

¹³ For a discussion of the role played by intuition in bioconservative arguments against human enhancement, see Roache and Clarke 2009.

¹⁴ Such a standard need not be independent of intuitions in general, however. It could involve, for example, applying the Rawlsian method of reflective equilibrium, in which we conduct an ongoing revision and reconciliation of new and existing beliefs, reasoned judgments, intuitions, and observations in order to maintain a maximally coherent set of beliefs. This process might itself be said to involve intuition.

¹⁵ Clarke and Roache have argued that awareness of intuitions' tendency to change over time can enable liberal governments to introduce technologies such as enhancement into society in a way that maximizes acceptance from conservatives who initially oppose them (Clarke and Roache 2012).

¹⁶ Fukuyama himself is unable to define factor X. He claims that 'when we strip all of a person's contingent and accidental characteristics away, there remains some essential human quality underneath that is worthy of a certain minimal level of respect—call it Factor X' (2002, p. 149), but concedes that 'there is no simple answer to the question, What is Factor X?' (p. 171).

X, let us assume, includes wisdom (esteemed by Kass 2003, pp. 17–19), an appreciation of giftedness (Kass 2003, pp. 19–20; Sandel 2004, pp. 5, 9, 10), human dignity (Kass 2003, p. 20, 2008), humility (Kass 2003, pp. 17, 19; Sandel 2004, pp. 5, 6, 9), ‘openness to the unbidden’ (Sandel 2004, pp. 6, 9)—that is, the capacity of parents to ‘appreciate children as gifts or blessings’ (Sandel 2004, p. 6)—and whatever else bioconservatives might view as valuable human features endangered by enhancement. Now, imagine that scientists create a technology that promotes factor X in those who use this technology. Factor X-enhanced people are exactly the sort of people that bioconservatives wish we all were.

Since factor X enhancement, by definition, promotes those features of humanity that bioconservatives value, anticipating how bioconservatives might resist it will be a useful exercise in trying to identify exactly what they find objectionable about enhancement. Even bioconservatives find it difficult to identify the root of their objection, as Sandel notes when he comments that ‘[w]hen science moves faster than moral understanding, as it does today, men and women struggle to articulate their unease’ (Sandel 2004, p. 1), and as Kass acknowledges in his remark that ‘[i]t is difficult to put this disquiet [about enhancement] into words. We are in an area where initial repugnances are hard to translate into sound moral arguments’ (Kass 2003, p. 17).¹⁷

We’ll now consider two reasons that bioconservatives might give for resisting factor X enhancement. First, they might think that enhancement—even of values they endorse—is bad because it is dehumanizing. Second, they might worry that factor X enhancement would increase factor X beyond a level that would be desirable.

Kass and Sandel both fear that enhancement might be dehumanizing (Kass 2003, pp. 10, 15–16, 20, 23, 2008; Sandel 2004, p. 3). Dehumanization is the failure to acknowledge another human (or group of humans) as fully human (Haslam 2006), and a resulting failure to recognize their full moral status.

Since the dehumanized are denied their full moral status as humans, it would be worrisome if enhancement were dehumanizing. Bioconservatives, including Kass and Sandel, worry that enhancement could dehumanize the enhanced, and both bioconservatives and bioliberals have speculated that it could dehumanize the unenhanced.¹⁸ For bioliberals, the worry that enhancement could dehumanize the unenhanced applies only to certain kinds of enhancement—for example, enhancement of cognitive capacity could ground a claim to greater moral status by the cognitively enhanced if

¹⁷ It might be remarked that the best way to find out what bioconservatives think about the idea of factor X enhancement is to ask them. In fact, one of us (Roache) did ask Sandel about something very similar several years ago, in conversation: she asked whether he would object in principle to an enhancement that reliably and safely increased the subject’s appreciation of giftedness, a quality he esteems. He responded by doubting that this would be possible. He may be right. Even so, it is likely to be enlightening to explore the bioconservative attitude to factor X enhancement on the assumption that it is (or might be) possible.

¹⁸ For an analysis of this worry, see Savulescu 2009 and Douglas 2013. In speculating about the effects of enhancement on moral status, bioliberals tend not to worry that the unenhanced would lose moral status, but that the enhanced would gain it, and that this would make life worse for the unenhanced. This could happen without the unenhanced being dehumanized, but we gloss over this point here.

cognitive capacity is relevant to one's moral status. It is far from clear that factor X enhancement would constitute such an enhancement.¹⁹ Even so, there is arguably a case for delaying the introduction of factor X enhancement until we are satisfied that it would be a genuine enhancement.

Kass and Sandel, on the other hand, do not distinguish between enhancements that might dehumanize the unenhanced and those unlikely to do so; rather, they fear that enhancement in general might dehumanize the unenhanced. They also fear that enhancement in general might dehumanize the enhanced. For Kass, enhancement would dehumanize the enhanced by undermining human dignity. He sees human dignity as that property that not only underlies our moral status but also gives us our place in the hierarchical natural (and supernatural) order below that of gods and above that of non-human animals (Kass 2008). Unsurprisingly, Kass' view is controversial (Macklin 2003; Pinker 2008), but one need not subscribe to his account of dignity in order to take seriously his worries about dehumanization.

We can compare aspects of Kass' concerns about enhancement to concerns that others have expressed about dehumanization. Kass repeatedly objects to a view of human capacities and achievements that abstracts them from their context in human life. For example, he complains that

Human experience under biological intervention becomes increasingly mediated by unintelligible forces and vehicles, separated from the human significance of the activities so altered. [...] The relations between the knowing subject and his activities, and between his activities and their fulfilments and pleasures, are disrupted. (Kass 2003, pp. 22–3)

By contrast, when expressing his view of human flourishing, he does so in terms that place human subjects firmly in the context of familiar human activities:

Still, if human flourishing means not just the accumulation of external achievements and a full curriculum vitae but a life-long *being-at-work* exercising one's *human* powers *well* and without great impediment, our genuine happiness requires that there be little gap, if any, between the dancer and the dance. (Kass 2003, p. 23)

He views enhancement as objectionable because it encourages us to view human capacities as abstracted from, rather than embedded in, human activities:

[O]ne major trouble with biotechnical (especially mental) 'improvers' is that they produce changes in us by disrupting the normal character of human being-at-work-in-the-world, what

¹⁹ Factor X enhancement, as we have envisaged it, involves wisdom enhancement. Enhancing wisdom would almost certainly involve cognitive enhancement (e.g. enhancement of intelligence, memory, and reasoning skills), and as such it could entitle factor X enhanced individuals to greater moral status if cognitive capacity is relevant to moral status. However, wisdom enhancement would likely involve much more than cognitive enhancement. Nick Bostrom, in conversation, has defined wisdom as the ability to get the important things right. This suggests that enhancing wisdom should also involve enhancing moral judgement, which plausibly involves an emotional element. As such, while the wisdom-enhanced would have greater cognitive capacities than the unenhanced, there seems no obvious reason to believe that their presence in society would make things worse for the unenhanced; on the contrary, it could improve life for the unenhanced.

Aristotle called *energeia psyches*, activity of soul, which when fine and full constitutes human flourishing. With biotechnical interventions that skip the realm of intelligible meaning, we cannot really own the transformations nor experience them as genuinely ours. (Kass 2003, p. 24)

Similarly,

There is an old expression: to a man armed with a hammer, everything looks like a nail. To a society armed with biotechnology, the activities of human life may come to be seen in purely technical terms, and more amenable to improvement than they really are. (Kass 2008, pp. 302–3)

This view is echoed again in Kass' comments that 'patients should not be reduced to "thing-hood" or treated as mere bodies' (Kass 2008: p. 301), and in his reference to enhancements as 'peculiar treatments of the body or uses of our embodiments' (Kass 2008, p. 313). He repeatedly contrasts this view of humans as objects or mere bodies with his own view of humans as subjects, deeply rooted in ordinary activities such as 'sewing a dress, throwing a pot, building a fire, cooking a meal, dressing a wound, singing a song, or offering a blessing made in gratitude' (Kass 2008, p. 314).

If enhancement would indeed encourage a view of enhanced or enhanceable capacities as abstracted from the individual humans who have those capacities, Kass could be right to worry. Others have remarked that significant contributing factors to the dehumanization of disabled people are the tendencies to focus on disabilities rather than on individuals who have disabilities, and to define disabled people in terms of their disabilities (Bogdan and Taylor 1989; Haslam 2006; UNICEF 2013).

Because it can be harmful to focus on disability rather than disabled individuals, Kass may be right to worry that enhancement could encourage a similarly harmful focus on (enhanced or enhanceable) capacities rather than on (enhanced or enhanceable) individuals. Kass cites no evidence for his fear that enhancement would encourage this view, but suggestive evidence may be found in the literature on dehumanization. Nick Haslam writes:

The concept of dehumanization features prominently in writings on modern medicine, which is said to dehumanize patients with its lack of personal care and emotional support; its reliance on technology; its lack of touch and human warmth; its emphasis on instrumental efficiency and standardization, to the neglect of the patient's individuality; its related neglect of the patient's subjective experience in favor of objective, technologically mediated information; and its emphasis on interventions performed on a passive individual whose agency and autonomy are neglected. (Haslam 2006, p. 253)

Haslam's references here to medicine's 'reliance on technology', its 'emphasis on instrumental efficiency and standardization', and its 'neglect of the patient's subjective experience in favor of objective, technologically mediated information' should give us pause. Since enhancing ourselves would likely involve increasingly relying on technology, emphasizing instrumental efficiency and standardization (e.g. by altering ourselves in ways that aim to achieve some measurable standard of intelligence, strength, and so on), and focusing on objective, technologically mediated information (e.g. as we

compare our existing capacities with those of others and with the enhanced standards that we wish to achieve), we might reasonably worry that embracing enhancement would exacerbate existing dehumanizing factors in medicine.

Of course, bioliberals would argue—and, indeed, have argued²⁰—that enhancement would not dehumanize but would instead amplify much of what is good about being human, and that it is not restrictive but liberating. Recall that bioconservatives too, by definition, endorse the values that factor X enhancement would promote. Even so, those who are worried about dehumanization may insist that what is at issue is not whether enhancement would promote worthwhile values but how it might change public perception of the enhanced and/or the unenhanced. If it would lead people, for example, to focus abstractly on human capacities and their usefulness (or otherwise), and to take an impersonal view of other people as things capable of being improved rather than as individuals, then enhancement could lead to dehumanization.

Whether, and to what extent, introducing enhancement into society would lead people to view themselves and others in this undesirable way is ultimately an empirical matter: we cannot tell antecedently whether it will be a big problem, whether its undesirable effects will be outweighed by the desirable effects of enhancement, whether it can be countered by social measures, and so on. At the very least, bioconservatives might argue, the potentially dehumanizing effects of enhancement call for a cautious approach to it.

10.5 That a Value is Worth Promoting Does Not Entail that it Should Be Made Universal

Bioconservatives may argue that their esteem for factor X does not commit them to endorsing the view that it should be indiscriminately increased. They may instead maintain that while current levels of factor X in society are too low, there exists an ideal level which it would be undesirable to exceed. Given this, if bioconservatives have reason to worry that factor X enhancement might increase factor X in society to an undesirable level, then they have reason to resist such enhancement. This is the problem of overshoot.

One might believe it possible to overshoot the optimal level of factor X if one believes the desirability of increasing factor X in a given society to depend on certain facts about that society, including facts about current levels of factor X. It may, for example, be analogous to the trait of aggression. In a society populated mostly with non-aggressive individuals, aggressive individuals have an advantage because their aggressive strategies are an effective means to win resources. However, if the percentage of aggressive individuals rises above a certain level, being aggressive becomes disadvantageous because one's aggressive behaviour is more likely to result in conflict and injury than in winning resources (Maynard Smith and Price 1973).

²⁰ See, for example, Pearce n.d.; Bostrom and Roache 2007; Savulescu 2007; Bostrom 2008; Pugh, Kahane, and Savulescu 2013.

It is easier to grasp why too much aggression in society is undesirable than it is to grasp why it might be possible to have too much factor X. Even so, it would not be impossible for bioconservatives to defend the view that there is an optimal level of factor X that it would be undesirable to exceed. One way to do this would be to make the point, noted above, that our society (including the aspects of it valued by bioconservatives) has been shaped by conflict as much as by agreement. Indeed, in capitalist democracies, a diversity of views, insofar as they increase competition and choice, is widely viewed as desirable. As such, bioconservatives might oppose too high an uptake of factor X enhancement in case it reduces constructive and useful conflict by making people too similar. However, while adopting the view that conflict can be desirable may be a reason for bioconservatives to oppose factor X enhancement, it would also require them either to endorse (unless there are independent reasons to oppose) a type of enhancement designed to *increase* desirable conflict, or to argue that desirable conflict in society is currently at an optimum level (Kahane and Savulescu 2014). Failure to do the latter convincingly would leave bioconservative opposition to both potentially conflict-reducing factor X enhancement and conflict-increasing enhancement open to a charge of status quo bias (Bostrom and Ord 2006).

To build a more promising case for the claim that too much factor X in society might be undesirable, bioconservatives might find unexpected support in the liberal views of John Stuart Mill. He argued that individuality and originality are important values that ought to be promoted by society. He viewed them as important in part because they are necessary to the sort of thought that leads to improvement in society:

There is only too great a tendency in the best beliefs and practices to degenerate into the mechanical; and unless there were a succession of persons whose ever-recurring originality prevents the grounds of those beliefs and practices from becoming merely traditional, such dead matter would not resist the smallest shock from anything really alive, and there would be no reason why civilization should not die out, as in the Byzantine Empire. Persons of genius, it is true, are, and are always likely to be, a small minority; but in order to have them, it is necessary to preserve the soil in which they grow. Genius can only breathe freely in an *atmosphere* of freedom. Persons of genius are, *ex vi termini*, more individual than any other people—less capable, consequently, of fitting themselves, without hurtful compression, into any of the small number of moulds which society provides in order to save its members the trouble of forming their own character. (Mill 1860/1909)

Mill also criticizes ‘ape-like imitation’, subjugation of oneself to custom and fashion, indifference to individuality, and lack of originality.

This argument suggests that enhancing a significant number of people in the same way may be an undesirable curb on originality, even if the values promoted by the enhancement in question are worthwhile. Kass expresses a similar view:

We are right to worry that the self-selected non-therapeutic uses of the new powers, especially where they become widespread, will be put in the service of the most common human desires, moving us toward still greater homogenization of human society—perhaps raising the floor but greatly lowering the ceiling of human possibility, and reducing the likelihood of genuine

freedom, individuality, and greatness. [...] Indeed, such homogenization may be the most important society-wide concern, if we consider the aggregated effects of the likely individual choices for biotechnical ‘self-improvement,’ each of which might be defended or at least not objected to on a case-by-case basis. (Kass 2003, p. 16)²¹

While homogenization and stifling of originality may be promoted by certain types of enhancement, however, it is not a necessary feature even of universally adopted enhancement. This is because some enhancements might promote originality and individuality. There are a number of ways in which enhancement might conceivably do this, including reducing the extent to which we are influenced by peer pressure and the opinions of others, increasing creativity, and increasing wisdom. Provided that such values are promoted by factor X enhancement, this type of enhancement would not undermine originality and individuality; on the contrary, it would increase them.

Bioconservatives could respond by arguing that promoting originality and individuality might depend not only on biological changes in enhanced people but also on complex social factors. Mill, after all, writes in the passage quoted above that in order to have geniuses in society ‘it is necessary to preserve the soil in which they grow,’ and that they require ‘an *atmosphere* of freedom.’ Social factors could prevent factor X enhancement from promoting originality and individuality if, for example, enhanced people were prevented from achieving their potential due to the sort of dehumanizing attitudes discussed above. Whether, and under what conditions, factor X enhancement promotes originality and individuality can only be ascertained empirically and, again, it may be impossible safely to run the sort of large-scale empirical study required to assess this. Such a study would need to run for many generations before we could draw any confident conclusions about the relationship between factor X enhancement and originality and individuality: recall that Mill refers to the desirability of ‘a succession of persons whose ever-recurring originality prevents the grounds of [our best] beliefs and practices from becoming merely traditional.’ If, at the end of such a long-term empirical study of the capacity of factor X to promote originality and individuality, we found that it is not desirable after all, it would likely be too late to reverse its effects, and we would likely be locked in to the technology.

In general, however, arguments that promoting factor X to too high a level might be undesirable do not justify bioconservatives’ outright rejection of factor X enhancement. Bioconservatives clearly believe that there is currently not enough factor X in society and that it ought to be promoted. This view is expressed in their writings. If there is some threshold level of factor X beyond which promoting it is undesirable, bioconservatives have reason to endorse factor X enhancement up to, but not beyond, that level. Of course, it might be that in practice it would be difficult to ensure that we did not overshoot this level. (It is also likely that, in practice, the number of people who would wish to use factor X enhancement would not exceed this level.) However, such

²¹ Frances Kamm speculates that a similar concern motivates Sandel’s opposition to enhancement (Kamm 2005, pp. 13–14).

observations are—like those relating to distributive justice and safety—of the sort that bioconservatives typically dismiss as secondary to the issue of whether enhancement is truly desirable. In theory, then, appeal to the worry that it is possible to have too much factor X in society will support the bioconservative claim that factor X enhancement should not be adopted beyond a certain level. If they wish to make the stronger claim that it should not be adopted at all, they must appeal to other considerations.

10.6 Conclusion

Often, debate between bioliberals and bioconservatives stalls because the two groups disagree about certain fundamental values, particularly those dear to bioconservatives but less important to bioliberals, such as human dignity and an appreciation of human capacities as gifts. By considering a form of enhancement that promotes exactly what bioconservatives value, and considering whether bioconservatives would have reason to object to such enhancement, we have shifted the focus of the debate away from the question of how valuable the intended results of enhancement are and towards that of whether there is anything wrong with achieving those results through enhancement. We considered two possible grounds on which bioconservatives might object to factor X enhancement. We found that neither supports an outright ban on this type of enhancement. However, the bioconservative concerns that we identified are ones that can be recognized even by those—such as bioliberals—who do not subscribe to typically bioconservative values.

Appeals to originality and individuality to some degree support bioconservative worries. However, to the degree that enhancement promotes such values, it is consistent with the very values that underpin conservative thought. Bioconservatives are surely right that we ought to take serious account of established wisdom and proceed with caution. But we ought not to be paralysed by fear and stuck in the past. Change, including enhancement, can be for the better, in any plausible account of value.

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