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Genetic Enhancement: Plan Now to Act Later

ABSTRACT. All three main articles in the issues of the *Kennedy Institute of Ethics Journal* endorse the view that genetic enhancement should be permitted, including human germ-line genetic enhancement. However, unregulated, wealth-based access to genetic enhancement in general, and germ-line enhancement in particular, would create intolerable risks for society. Although there are a number of practical problems raised by proposals to regulate or restrict access to genetic enhancement, which will make it difficult if not impossible to muster support for any effective restrictions until we begin to experience the societal problems that genetic enhancement will create, it is important to consider now what restrictions would be appropriate, how they would be imposed, and what changes would be needed in existing laws and institutions to facilitate them. Without this type of groundwork, there is no way society will be in a position to act in time.

The articles by Robert Loftis (2005), Fritz Allhoff (2005), and Ronald Lindsay (2005) in this issue of the *Kennedy Institute of Ethics Journal* demonstrate how hard it will be to assure just access to scarce genetic enhancement technologies. If, as a result of their cost or other supply constraints, it is not possible to give them to everyone, how should they be distributed?

Allhoff focuses on germ-line genetic enhancement, which most commentators regard as the most objectionable. He starts by arguing that genetic enhancement is not inherently immoral. His conclusion is sound, although he uses two examples, both from Erik Parens, that are problematic. The first is genetic enhancement in sports. As I have argued elsewhere (Mehlman 2004), the ethical rules governing sports and games differ fundamentally from the rules governing other sorts of competitive activities. Allhoff's second example is genetic intervention to prevent or

retard aging. There is a vigorous debate underway about whether aging is natural and desirable or pathological; those who subscribe to the latter view would deem anti-aging interventions to be therapy rather than enhancement.

Allhoff maintains that, although germ-line genetic enhancement is not inherently objectionable, it must be distributed in an ethical manner. He is confident that society will have enough time “to prepare for its disbursement by making appropriate policy adjustments” (Allhoff 2005, p. 45), and he boldly suggests the guiding principle upon which these policy adjustments should be based: “[G]erm-line genetic enhancements are morally permissible *if and only if* they augment primary goods . . .” (p. 50, emphasis in original). One problem is to determine what counts as a primary good. A primary good, in Allhoff’s (and Rawls’s) opinion, is something that would be desired by all rational agents. One need not worry that parents will try to create star basketball players, Allhoff asserts, because one of the main traits that is associated with this type of athletic prowess—height—is not a primary good, since not everyone would desire to be tall. Likewise, skin color, eye color, and sex. On the other hand, improvements in eyesight, speed, strength, and mental abilities are primary goods. But it is not clear that everyone would want to be fast or strong, especially if this interfered with being deliberate or delicate. Nor is it clear that rational agents who perceived that skin color or gender were instrumental in determining whether they suffered severe discrimination would forgo the opportunity to alter those traits.

Loftis’s article criticizes our society’s preoccupation with the ethics of futuristic human germ-line genetic enhancement, when far more immediate ethical issues are raised by the current practice of nonhuman germ-line modification. When he does address human germ-line enhancement, he uses two questionable examples: retardation of aging and enhanced immunity from disease. As noted earlier, if aging is regarded as pathological, then interventions that retard aging can be thought of as therapeutic rather than enhancing. As for immunity from disease, Eric Juengst (1998) has argued that, although the result would be to endow individuals with super-normal immune systems, the intervention should be deemed therapy rather than enhancement since its goal is to prevent disease. More importantly, Loftis assumes away the distributive justice problem by proposing public funding for free distribution of enhancements. This indeed would solve the problem, but would be prohibitively expensive. Perhaps recognizing this, Loftis (2005, p. 68) proposes in addition that social structures

be tailored so that “they continue to include the unenhanced.” He does not elaborate what he has in mind, but it may well be similar to suggestions I have made to level the playing field in certain competitive circumstances, such as by making the enhanced fiduciaries for the unenhanced (Mehlman 2003).

Lindsay’s provocative proposal is to table the question of how to distribute access to genetic enhancements until the technologies are available. More specifically, along with the other authors in this collection, he thinks that society should not, at present, attempt to restrict development of or access to genetic enhancement. He puts forth four arguments in support of his position. In response to the suggestions of myself and others that wealth-based access to genetic enhancement would confer intolerably unfair competitive advantages on the enhanced, Lindsay points out that individuals might seek genetic enhancement for noncompetitive reasons, such as self-actualization, and argues that it would be unjust to prevent them from doing so. Since there is no “defensible way” to distinguish competitive from self-actualizing enhancement, Lindsay concludes that it would be unjust to restrict access to genetic enhancement. To his credit, he acknowledges the flaw in his argument: the same enhancement technologies that permit self-actualization also provide competitive advantages. If, as I have maintained, wealth-based access to these advantages is likely to destroy liberal democratic society, his “*prima facie* moral right” to the pursuit of self-improvement is easily trumped by the necessity of maintaining a society in which such moral rights may be freely exercised.

Another of Lindsay’s arguments rejects the possibility that injustice can be avoided à la Rawls by distributing access to genetic enhancement to the worst off. On this he and I agree: such a scheme would raise serious conceptual and practical difficulties. My only criticism of his argument is that he uses “severely cognitively impaired” to characterize those who might be deemed the worst-off. But since these individuals are cognitively impaired, genetically increasing their intelligence would be gene therapy rather than genetic enhancement.

Lindsay’s third argument is that the fear that wealth-based genetic enhancement will destroy liberal democratic society is greatly exaggerated, since “[g]enetic aristocracies will not seize power overnight.” But the issue is not the speed of the coup, but its impact on society. Indeed, there is a real peril in slowing down the introduction of genetic enhancement. We may wake up one morning and discover that, although the enhanced did

not seize power overnight, they did so incrementally without our realizing or preventing it. In either case, the consequences for society would be dire.

Lindsay's final argument is his most provocative: If one assumes that genetic enhancement will radically transform society, one cannot know what justice would look like in a post-enhancement society. Therefore, it would be improper to restrict enhancement in the interest of distributive justice, because one cannot tell in advance whether the effect of the restrictions would be just. Envisioning a post-enhancement society in which the enhanced constituted a separate and noninterdependent species, Lindsay asserts that the enhanced will no more owe moral obligations to the unenhanced than people owe moral obligations to animals.

Lindsay's first error is to assume that the only polity-threatening form of genetic enhancement is that which creates a new species. Although I and others have raised the new species concern, far less radical wealth-based genetic alterations would undermine western democratic society by destroying the belief in equality of opportunity. His second mistake is to adopt a static conception of society as pre- and post-enhancement. The effect of genetic enhancement will be dynamic, and there are clearly justice implications in moving from one distributive state to another, since some people gain while others lose. Finally, Lindsay seems to assume that, so long as society does not restrict wealth-based access to genetic enhancement, it is not opting for a particular distribution scheme. But of course it is: It is endorsing a wealth-based approach. Perhaps this is his underlying goal. "Only if and when the requisite technology evolves," he writes, "will one be able to make sound judgments about the requirements of justice" (Lindsay 2005, p. 7). But by then, only the rich will be enhanced, and it is doubtful and altogether too dangerous to suppose that they would voluntarily share their advantages with anyone else.

Collectively, then, all three of articles endorse the view that genetic enhancement should be permitted, including human germ-line genetic enhancement. Lindsay takes a *laissez-faire* approach, or perhaps what can be better described as a "wait-and-see *laissez-faire*" approach. Loftis is convinced that any justice concerns can be dealt with by providing free access and leveling the playing field, and Allhoff would limit genetic enhancement to what he regards as primary goods.

None of these articles shakes my conviction that unregulated, wealth-based access to genetic enhancement in general, and germ-line enhancement in particular, would create intolerable risks for society. Despite his permissive arguments, Lindsay at one point seems to share my concerns.

He admits that “nothing [he has said] implies that we should not act to prevent the creation of a genetic aristocracy. My main point,” he explains, “is that fears of a genetic aristocracy do not justify the ‘drawing of red lines’ that would result in the prohibition of genetic enhancements at the present time” (Lindsay 2005, p. 32). He adds:

I am opposed to the preemptive strike approach; its use in the area of biotechnology is as troubling and questionable as it is in the area of international relations. As I stated at the beginning of this section, we should be able to take appropriate action to manage the consequences of genetic interventions as they evolve, and we certainly will be in a better position to evaluate the consequences after they take place. (Lindsay 2005, p. 32)

Lindsay correctly identifies a number of practical problems raised by proposals to regulate or restrict access to genetic enhancement, including my own suggestions. As he points out, these problems will make it difficult if not impossible to muster support for any effective restrictions until we begin to experience the societal problems that genetic enhancement will create. On this we agree. The objective of my work is not to insist that we impose these restrictions right now, but that we consider what they might be, how they would be imposed, and what changes would be needed in existing laws and institutions to facilitate them. Without this type of groundwork, there is no way society will be in a position “to take appropriate action to manage the consequences of genetic interventions,” as Lindsay (2005, p. 32) puts it.

Unlike Lindsay, however, I am extremely worried that society will not act in time. Bearing in mind that the consequences of unregulated wealth-based access to genetic enhancement could mean the destruction of the liberal state, it will be far too late to wait to act until after, to use his phrase, the consequences have taken place. The trick is to figure out how to know when the time to act is right. For this decision makers need well-designed surveillance mechanisms, constant vigilance, and suitable societal telltales—“canaries in the mine,” as my colleague Eric Juengst is fond of saying. What society cannot afford is a blasé attitude, which is what the adoption of Lindsay’s perspective would promote.

If my concerns about the societal consequences of genetic enhancement are justified, then decision makers also must pay particular attention to the risks posed by germ-line interventions. Allhoff and Loftis, who defend germ-line enhancement, pay no attention to the much greater threat that inherited as opposed to acquired advantages pose to liberal democ-

racy. Granted, restricting germ-line enhancement entails interfering with cherished notions of procreative liberty and privacy. These values council caution and care, not indifference. If there is a way to minimize the intrusiveness of our controls, then let us find them. But society must begin to consider how to avoid the dangers of a genobility now, not wait until the dangers are realized.

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