legislation, the violation of the concept of “human dignity” in this case is composed of the following three elements:

1) instrumentalization of human beings for a particular purpose;
2) violation of individuality through presetting of genetic particularities;
3) parthenogenesis which leads to family and social disorder.

The conjunction of these three elements defines human dignity on this account, although it defines it only in a negative way. (In reverse, like the negative on the film of an old fashioned camera.)

This example is only intended to show that many central concepts commonly used in Western bioethics are not immediately recognized or endorsed by members of non-Western cultures. Ethical appeals to human welfare or individual happiness to justify the use of science of technology may have intuitive force in the West, but may seem alien to a non-Western audience.

Conclusion

The Utilitarian approach to the use of advances in the life sciences and associated technologies is not widely accepted in many non-Western countries, in particular in Japan and in other Asian countries. In East and South East Asia, Buddhism and Confucianism often have a dominant role in daily life, and the lifestyle and social practices are still rooted in agricultural traditions. The doctrine of Utilitarianism might still find some adherents in Japan and in Asian countries, but only if it was revised and adapted to this very different cultural and ethical setting.

4

The Case Against Perfection: What’s Wrong with Designer Children, Bionic Athletes, and Genetic Engineering

Michael J. Sandel

Breakthroughs in genetics present us with a promise and a predicament. The promise is that we may soon be able to treat and prevent a host of debilitating diseases. The predicament is that our newfound genetic knowledge may also enable us to manipulate our own nature—to enhance our muscles, memories, and moods; to choose the sex, height, and other genetic traits of our children; to make ourselves “better than well.” When science moves faster than moral understanding, as it does today, men and women struggle to articulate their unease. In liberal societies they reach first for the language of autonomy, fairness, and individual rights. But this part of our moral vocabulary is ill equipped to address the hardest questions posed by genetic engineering. The genomic revolution has induced a kind of moral vertigo.

Consider cloning. The birth of Dolly the cloned sheep, in 1997, brought a torrent of concern about the prospect of cloned human beings. There are good medical reasons to worry. Most scientists agree that cloning is unsafe, likely to produce offspring with serious abnormalities (Dolly recently died a premature death). But suppose technology improved to the point where clones were at no greater risk than naturally conceived offspring. Would

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human cloning still be objectionable? Should our hesitation be moral as well as medical? What, exactly, is wrong with creating a child who is a genetic twin of one parent, or of an older sibling who has tragically died—or, for that matter, of an admired scientist, sports star, or celebrity?

Some say cloning is wrong because it violates the right to autonomy: by choosing a child’s genetic makeup in advance, parents deny the child’s right to an open future. A similar objection can be raised against any form of bioengineering that allows parents to select or reject genetic characteristics. According to this argument, genetic enhancements for musical talent, say, or athletic prowess, would point children toward particular choices, and so designer children would never be fully free.

At first glance the autonomy argument seems to capture what is troubling about human cloning and other forms of genetic engineering. It is not persuasive, for two reasons. First, it wrongly implies that absent a designing parent, and children are free to choose their characteristics for themselves. But none of us chooses his genetic inheritance. The alternative to a cloned or genetically enhanced child is not one whose future is unbound by particular talents but one at the mercy of the genetic lottery.

Second, even if a concern for autonomy explains some of our worries about made-to-order children, it cannot explain our moral hesitation about people who seek genetic remedies or enhancements for themselves. Gene therapy on somatic (that is, nonreproductive) cells, such as muscle cells and brain cells, repairs or replaces defective genes. The moral quandary arises when people use such therapy not to cure a disease but to enhance their physical or cognitive capacities, to lift themselves above the norm.

Like cosmetic surgery, genetic enhancement employs medical means for nonmedical ends—ends unrelated to curing or preventing disease or repairing injury. But unlike cosmetic surgery, genetic enhancement is more than skin-deep. If we are ambivalent about surgery or Botox injections for sagging chins and furrowed brows, we are all the more troubled by genetic engineering for stronger bodies, sharper memories, greater intelligence, and happier moods. The question is whether we are right to be troubled, and if so, on what grounds.

In 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. Since these questions verge on theology, modern philosophers and political theorists tend to shrink from them. But our new powers of biotechnology make them unavoidable. To see why this is so, consider four examples already on the horizon: muscle enhancement, memory enhancement, growth-hormone treatment, and reproductive technologies that enable parents to choose the sex and some genetic traits of their children. In 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.

**Muscles**

Everyone would welcome a gene therapy to alleviate muscular dystrophy and to reverse the debilitating muscle loss that comes with old age. But what if the same therapy were used to improve athletic performance? Researchers have developed a synthetic gene that, when injected into the muscle cells of mice, prevents and even reverses natural muscle deterioration. The gene not only repairs wasted or injured muscles but also strengthens healthy ones. This success bodes well for human applications. H. Lee Sweeney, of the University of Pennsylvania, who leads the research, hopes his discovery will cure the immobility that afflicts the elderly. But Sweeney’s bulked-up mice have already attracted the attention of athletes seeking a competitive edge. Although the therapy is not yet approved for human use, the prospect of genetically enhanced weightlifters, home-run sluggers, linebackers, and sprinters is easy to imagine. The widespread use of steroids and other performance-improving drugs in professional sports suggests that many athletes will be eager to avail themselves of genetic enhancement.

Suppose for the sake of argument that muscle-enhancing gene therapy, unlike steroids, turned out to be safe—or at least no riskier than a rigorous weight-training regimen. Would there be a reason to ban its use in sports? There is something unsettling about the image of genetically altered athletes lifting SUVs or hitting 650-foot home runs or running a three-minute mile. But what, exactly, is troubling about it? Is it simply that we find such superhuman spectators too bizarre to contemplate? Or does our unease point to something of ethical significance?
It might be argued that a genetically enhanced athlete, like a drug-enhanced athlete, would have an unfair advantage over his unenhanced competitors. But the fairness argument against enhancement has a fatal flaw: it has always been the case that some athletes are better endowed genetically than others, and yet we do not consider this to undermine the fairness of competitive sports. From the standpoint of fairness, enhanced genetic differences would be no worse than natural ones, assuming they were safe and made available to all. If genetic enhancement in sports is morally objectionable, it must be for reasons other than fairness.

Memory

Genetic enhancement is possible for brains as well as brawn. In the mid-1990s scientists managed to manipulate a memory-linked gene in fruit flies, creating flies with photographic memories. More recently researchers have produced smart mice by inserting extra copies of a memory-related gene into mouse embryos. The altered mice learn more quickly and remember things longer than normal mice. The extra copies were programmed to remain active even in old age, and the improvement was passed on to offspring.

Human memory is more complicated, but biotech companies, including Memory Pharmaceuticals, are in hot pursuit of memory-enhancing drugs, or "cognition enhancers," for human beings. The obvious market for such drugs consists of those who suffer from Alzheimer's and other serious memory disorders. The companies also have their sights on a bigger market: the 81 million Americans over fifty, who are beginning to encounter the memory loss that comes naturally with age. A drug that reversed age-related memory loss would be a bonanza for the pharmaceutical industry; a Viagra for the brain. Such use would straddle the line between remedy and enhancement. Unlike a treatment for Alzheimer's, it would cure no disease; but insofar as it restored capacities a person once possessed, it would have a remedial aspect. It could also have purely nonmedical uses: for example, by a lawyer cramming to memorize facts for an upcoming trial, or by a business executive eager to learn Mandarin on the eve of his departure for Shanghai.

Some who worry about the ethics of cognitive enhancement point to the danger of creating two classes of human beings: those with access to enhancement technologies, and those who must make do with their natural capacities. And if the enhancements could be passed down the generations, the two classes might eventually become subspecies—the enhanced and the merely natural. But worry about access ignores the moral status of enhancement itself. Is the scenario troubling because the unenhanced poor would be denied the benefits of bioengineering, or because the enhanced affluent would somehow be dehumanized? As with muscles, so with memory: the fundamental question is not how to ensure equal access to enhancement but whether we should aspire to it in the first place.

Height

Pediatricians already struggle with the ethics of enhancement when confronted by parents who want to make their children taller. Since the 1980s human-growth hormone has been approved for children with a hormone deficiency that makes them much shorter than average. But the treatment also increases the height of healthy children. Some parents of healthy children who are unhappy with their stature (typically boys) ask why it should make a difference whether a child is short because of a hormone deficiency or because his parents happen to be short. Whatever the cause, the social consequences are the same.

In the face of this argument some doctors began prescribing hormone treatments for children whose short stature was unrelated to any medical problem. By 1996 such "off-label" use accounted for 40 percent of human-growth-hormone prescriptions. Although it is legal to prescribe drugs for purposes not approved by the Food and Drug Administration, pharmaceutical companies cannot promote such use. Seeking to expand its market, Eli Lilly & Co. recently persuaded the FDA to approve its human-growth hormone for healthy children whose projected adult height is in the bottom one percentile—under five feet three inches for boys and four feet eleven inches for girls. This concession raises a large question about the ethics of enhancement: If hormone treatments need not be limited to those with hormone deficiencies, why should they be available only to very short children? Why shouldn't all shorter-than-average children be able to seek treatment? And what about a child of average height who wants to be taller so that he can make the basketball team?
Some oppose height enhancement on the grounds that it is collectively self-defeating; as some become taller, others become shorter relative to the norm. Except in Lake Wobegon, not every child can be above average. As the unenhanced began to feel shorter, they, too, might seek treatment, leading to a hormonal arms race that left everyone worse off, especially those who couldn’t afford to buy their way up from shortness.

But the arms-race objection is not decisive on its own. Like the fairness objection to bioengineered muscles and memory, it leaves unexamined the attitudes and dispositions that prompt the drive for enhancement. If we were bothered only by the injustice of adding shortness to the problems of the poor, we could remedy that unfairness by publicly subsidizing height enhancements. As for the relative height deprivation suffered by innocent bystanders, we could compensate them by taxing those who buy their way to greater height. The real question is whether we want to live in a society where parents feel compelled to spend a fortune to make perfectly healthy kids a few inches taller.

Sex selection

Perhaps the most inevitable nonmedical use of bioengineering is sex selection. For centuries parents have been trying to choose the sex of their children. Today biotech succeeds where folk remedies failed. One technique for sex selection arose with prenatal tests using amniocentesis and ultrasound. These medical technologies were developed to detect genetic abnormalities such as spina bifida and Down syndrome. But they can also reveal the sex of the fetus—allowing for the abortion of a fetus of an undesired sex. Even among those who favor abortion rights, few advocate abortion simply because the parents do not want a girl. Nevertheless, in traditional societies with a powerful cultural preference for boys, this practice has become widespread.

Sex selection need not involve abortion, however. For couples undergoing in vitro fertilization (IVF), it is possible to choose the sex of the child before the fertilized egg is implanted in the womb. One method makes use of pre-implantation genetic diagnosis (PGD), a procedure developed to screen for genetic diseases. Several eggs are fertilized in a Petri dish and grown to the eight-cell stage (about three days). At that point the embryos are tested to determine their sex. Those of the desired sex are implanted; the others are typically discarded. Although few couples are likely to undergo the difficulty and expense of IVF simply to choose the sex of their child, embryo screening is a highly reliable means of sex selection. And as our genetic knowledge increases, it may be possible to use PGD to cull embryos carrying undesired genes, such as those associated with obesity, height, and skin color. The science-fiction movie Gattaca depicts a future in which parents routinely screen embryos for sex, height, immunity to disease, and even IQ. There is something troubling about the Gattaca scenario, but it is not easy to identify what exactly is wrong with screening embryos to choose the sex of our children.

One line of objection draws on arguments familiar from the abortion debate. Those who believe that an embryo is a person reject embryo screening for the same reasons they reject abortion. If an eight-cell embryo growing in a Petri dish is morally equivalent to a fully developed human being, then discarding it is no better than aborting a fetus, and both practices are equivalent to infanticide. Whatever its merits, however, this “pro-life” objection is not an argument against sex selection as such.

The latest technology poses the question of sex selection unclouded by the matter of an embryo’s moral status. The Genetics & IVF Institute, a for-profit infertility clinic in Fairfax, Virginia, now offers a sperm-sorting technique that makes it possible to choose the sex of one’s child before it is conceived. X-bearing sperm, which produce girls, carry more DNA than Y-bearing sperm, which produce boys; a device called a flow cytometer can separate them. The process, called MicroSort, has a high rate of success.

If sex selection by sperm sorting is objectionable, it must be for reasons that go beyond the debate about the moral status of the embryo. One such reason is that sex selection is an instrument of sex discrimination—typically against girls, as illustrated by the chilling sex ratios in India and China. Some speculate that societies with substantially more men than women will be less stable, more violent, and more prone to crime or war. These are legitimate worries—but the sperm-sorting company has a clever way of addressing them. It offers MicroSort only to couples who want to choose the sex of a child for purposes of “family balancing.” Those with more sons than daughters may choose a girl, and vice versa. But customers may not use the technology to stock up on children of the same sex, or even to choose the sex of their firstborn child. (So far the majority of MicroSort
clients have chosen girls.) Under restrictions of this kind, do any ethical issues remain that should give us pause?

The case of MicroSort helps us isolate the moral objections that would persist if muscle-enhancement, memory-enhancement, and height-enhancement technologies were safe and available to all.

It is commonly said that genetic enhancements undermine our humanity by threatening our capacity to act freely, to succeed by our own efforts, and to consider ourselves responsible—worthy of praise or blame—for the things we do and for the way we are. It is one thing to hit seventy home runs as the result of disciplined training and effort, and something else, something less, to hit them with the help of steroids or genetically enhanced muscles. Of course, the roles of effort and enhancement will be a matter of degree. But as the role of enhancement increases, our admiration for the achievement fades—or, rather, our admiration for the achievement shifts from the player to his pharmacist. This suggests that our moral response to enhancement is a response to the diminished agency of the person whose achievement is enhanced.

Though there is much to be said for this argument, I do not think the main problem with enhancement and genetic engineering is that they undermine effort and erode human agency. The deeper danger is that they represent a kind of hyperagency—a Promethean aspiration to remake nature, including human nature, to serve our purposes and satisfy our desires. The problem is not the drift to mechanism but the drive to mastery. And what the drive to mastery misses and may even destroy is an appreciation of the gifted character of human powers and achievements.

To acknowledge the giftedness of life is to recognize that our talents and powers are not wholly our own doing, despite the effort we expend to develop and to exercise them. It is also to recognize that not everything in the world is open to whatever use we may desire or devise. Appreciating the gifted quality of life constrains the Promethean project and conduces to a certain humility. It is in part a religious sensibility. But its resonance reaches beyond religion.

It is difficult to account for what we admire about human activity and achievement without drawing upon some version of this idea. Consider two types of athletic achievement. We appreciate players like Pete Rose, who are not blessed with great natural gifts but who manage, through striving, grit, and determination, to excel in their sport. But we also admire players like Joe DiMaggio, who display natural gifts with grace and effortlessness. Now, suppose we learned that both players took performance-enhancing drugs. Whose turn to drugs would we find more deeply disillusioning? Which aspect of the athletic ideal—effort or gift—would be more deeply offended?

Some might say effort: the problem with drugs is that they provide a shortcut, a way to win without striving. But striving is not the point of sports; excellence is. And excellence consists at least partly in the display of natural talents and gifts that are no doing of the athlete who possesses them. This is an uncomfortable fact for democratic societies. We want to believe that success, in sports and in life, is something we earn, not something we inherit. Natural gifts, and the admiration they inspire, embarrass the meritocratic faith; they cast doubt on the conviction that praise and rewards flow from effort alone. In the face of this embarrassment we inflate the moral significance of striving, and depreciate giftedness. This distortion can be seen, for example, in network-television coverage of the Olympics, which focuses less on the feats the athletes perform than on heartrending stories of the hardships they have overcome and the struggles they have waged to triumph over an injury or a difficult upbringing or political turmoil in their native land.

But effort isn’t everything. No one believes that a mediocre basketball player who works and trains even harder than Michael Jordan deserves greater acclaim or a bigger contract. The real problem with genetically altered athletes is that they corrupt athletic competition as a human activity that honors the cultivation and display of natural talents. From this standpoint, enhancement can be seen as the ultimate expression of the ethic of effort and willfulness—a kind of high-tech striving. The ethic of willfulness and the biotechnological powers it now enlists are arrayed against the claims of giftedness.

The ethic of giftedness, under siege in sports, persists in the practice of parenting. But here, too, bioengineering and genetic enhancement threaten to dislodge it. To appreciate children as gifts is to accept them as they come, not as objects of our design or products of our will or instruments of our ambition. Parental love is not contingent on the talents and attributes a child happens to have. We choose our friends and spouses at least partly on the basis of qualities we find attractive. But we do not choose our children. Their qualities are unpredictable, and even the most conscientious parents...
is why parenthood, more than other human relationships, teaches what the theologian William F. May calls an “openness to the unbidden.”

May’s resonant phrase helps us see that the deepest moral objection to enhancement lies less in the perfection it seeks than in the human disposition it expresses and promotes. The problem is not that parents usurp the autonomy of a child they design. The problem lies in the hubris of the designing parents, in their drive to master the mystery of birth. Even if this disposition did not make parents tyrants to their children, it would disfigure the relation between parent and child, and deprive the parent of the humility and enlarged human sympathies that an openness to the unbidden can cultivate.

To appreciate children as gifts or blessings is not, of course, to be passive in the face of illness or disease. Medical intervention to cure or prevent illness or restore the injured to health does not desecrate nature but honors it. Healing sickness or injury does not override a child’s natural capacities but permits them to flourish.

Nor does the sense of life as a gift mean that parents must shrink from shaping and directing the development of their child. Just as athletes and artists have an obligation to cultivate their talents, so parents have an obligation to cultivate their children, to help them discover and develop their talents and gifts. As May points out, parents give their children two kinds of love: accepting love and transforming love. Accepting love affirms the being of the child, whereas transforming love seeks the well-being of the child. Each aspect corrects the excesses of the other, he writes: “Attachment becomes too quietistic if it slackens into mere acceptance of the child as he is.” Parents have a duty to promote their children’s excellence.

These days, however, overly ambitious parents are prone to get carried away with transforming love—promoting and demanding all manner of accomplishments from their children, seeking perfection. “Parents find it difficult to maintain an equilibrium between the two sides of love,” May observes. “Accepting love, without transforming love, slides into indulgence and finally neglect. Transforming love, without accepting love, badgers and finally rejects.” May finds in these competing impulses a parallel with modern science: it, too, engages us in beholding the given world, studying and savoring it, and also in molding the world, transforming and perfecting it.

The mandate to mold our children, to cultivate and improve them, complicates the case against enhancement. We usually admire parents who seek the best for their children, who spare no effort to help them achieve happiness and success. Some parents confer advantages on their children by enrolling them in expensive schools, hiring private tutors, sending them to tennis camp, providing them with piano lessons, ballet lessons, swimming lessons, SAT-prep courses, and so on. If it is permissible and even admirable for parents to help their children in these ways, why isn’t it equally admirable for parents to use whatever genetic technologies may emerge (provided they are safe) to enhance their children’s intelligence, musical ability, or athletic prowess?

The defenders of enhancement are right to this extent: improving children through genetic engineering is similar in spirit to the heavily managed, high-pressure child-rearing that is now common. But this similarity does not vindicate genetic enhancement. On the contrary, it highlights a problem with the trend toward hyperparenting. One conspicuous example of this trend is sports-crazed parents bent on making champions of their children. Another is the frenzied drive of overbearing parents to mold and manage their children’s academic careers.

As the pressure for performance increases, so does the need to help distractible children concentrate on the task at hand. This may be why diagnoses of attention deficit and hyperactivity disorder have increased so sharply. Lawrence Diller, a pediatrician and the author of Running on Ritalin, estimates that five to six percent of American children under eighteen (a total of four to five million kids) are currently prescribed Ritalin, Adderall, and other stimulants, the treatment of choice for ADHD. (Stimulants counteract hyperactivity by making it easier to focus and sustain attention.) The number of Ritalin prescriptions for children and adolescents has tripled over the past decade, but not all users suffer from attention disorders or hyperactivity. High school and college students have learned that prescription stimulants improve concentration for those with normal attention spans, and some buy or borrow their classmates’ drugs to enhance their performance on the SAT or other exams. Since stimulants work for both medical and nonmedical purposes, they raise the same moral questions posed by other technologies of enhancement.

However those questions are resolved, the debate reveals the cultural distance we have traveled since the debate over marijuana, LSD, and other
drugs a generation ago. Unlike the drugs of the 1960s and 1970s, Ritalin and Adderall are not for checking out but for buckling down, not for beholding the world and taking it in but for molding the world and fitting in. We used to speak of nonmedical drug use as "recreational." That term no longer applies. The steroids and stimulants that figure in the enhancement debate are not a source of recreation but a bid for compliance—a way of answering a competitive society's demand to improve our performance and perfect our nature. This demand for performance and perfection animates the impulse to rail against the given. It is the deepest source of the moral trouble with enhancement.

Some see a clear line between genetic enhancement and other ways that people seek improvement in their children and themselves. Genetic manipulation seems somehow worse—more intrusive, more sinister—than other ways of enhancing performance and seeking success. But morally speaking, the difference is less significant than it seems. Bioengineering gives us reason to question the low-tech, high-pressure child-rearing practices we commonly accept. The hyperparenting familiar in our time represents an anxious excess of mastery and dominion that misses the sense of life as a gift. This draws it disturbingly close to eugenics.

The shadow of eugenics hangs over today's debates about genetic engineering and enhancement. Critics of genetic engineering argue that human cloning, enhancement, and the quest for designer children are nothing more than "privatized" or "free-market" eugenics. Defenders of enhancement reply that genetic choices freely made are not really eugenic—at least not in the pejorative sense. To remove the coercion, they argue, is to remove the very thing that makes eugenic policies repugnant.

Sorting out the lesson of eugenics is another way of wrestling with the ethics of enhancement. The Nazis gave eugenics a bad name. But what, precisely, was wrong with it? Was the old eugenics objectionable only insofar as it was coercive? Or is there something inherently wrong with the resolve to deliberately design our progeny's traits?

James Watson, the biologist who, with Francis Crick, discovered the structure of DNA, sees nothing wrong with genetic engineering and enhancement, provided they are freely chosen rather than state-imposed. And yet Watson's language contains more than a whiff of the old eugenic sensibility. "If you really are stupid, I would call that a disease," he recently told The Times of London. "The lower 10 percent who really have difficulty, even in elementary school, what's the cause of it? A lot of people would like to say, 'Well, poverty, things like that.' It probably isn't. So I'd like to get rid of that, to help the lower 10 percent." A few years ago Watson stirred controversy by saying that if a gene for homosexuality were discovered, a woman should be free to abort a fetus that carried it. When his remark provoked an uproar, he replied that he was not singling out gays but asserting a principle: women should be free to abort fetuses for any reason of genetic preference—for example, if the child would be dyslexic, or lacking musical talent, or too short to play basketball.

Watson's scenarios are clearly objectionable to those for whom all abortion is an unspeakable crime. But for those who do not subscribe to the pro-life position, these scenarios raise a hard question: If it is morally troubling to contemplate abortion to avoid a gay child or a dyslexic one, doesn't this suggest that something is wrong with acting on any eugenic preference, even when no state coercion is involved?

Consider the market in eggs and sperm. The advent of artificial insemination allows prospective parents to shop for gametes with the genetic traits they desire in their offspring. It is a less predictable way to design children than cloning or pre-implantation genetic screening, but it offers a good example of a procreative practice in which the old eugenics meets the new consumerism. A few years ago some Ivy League newspapers ran an ad seeking an egg from a woman who was at least five feet ten inches tall and athletic, had no major family medical problems, and had a combined SAT score of 1400 or above. The ad offered $5,000 for an egg from a donor with these traits. More recently a Web site was launched claiming to auction eggs from fashion models whose photos appeared on the site, at starting bids of $15,000 to $150,000.

On what grounds, if any, is the egg market morally objectionable? Since no one is forced to buy or sell, it cannot be wrong for reasons of coercion. Some might worry that hefty prices would exploit poor women by presenting them with an offer they couldn't refuse. But the designer eggs that fetch the highest prices are likely to be sought from the privileged, not the poor. If the market for premium eggs gives us moral qualms, this, too, shows that concerns about eugenics are not put to rest by freedom of choice.

A tale of two sperm banks helps explain why. The Repository for Germinal Choice, one of America's first sperm banks, was not a commercial
enterprise. It was opened in 1980 by Robert Graham, a philanthropist dedicated to improving the world’s “germ plasm” and counteracting the rise of “retrograde humans.” His plan was to collect the sperm of Nobel Prize–winning scientists and make it available to women of high intelligence, in hopes of breeding supersmart babies. But Graham had trouble persuading Nobel laureates to donate their sperm for his bizarre scheme, and so settled for sperm from young scientists of high promise. His sperm bank closed in 1999. In contrast, California Cryobank, one of the world’s leading sperm banks, is a for-profit company with no overt eugenic mission. Cappy Rothman, M.D., a co-founder of the firm, has nothing but disdain for Graham’s eugenics, although the standards Cryobank imposes on the sperm it recruits are exacting. Cryobank has offices in Cambridge, Massachusetts, between Harvard and MIT, and in Palo Alto, California, near Stanford. It advertises for donors in campus newspapers (compensation up to $900 a month), and accepts less than five percent of the men who apply. Cryobank’s marketing materials play up the prestigious source of its sperm. Its catalogue provides detailed information about the physical characteristics of each donor, along with his ethnic origin and college major. For an extra fee prospective customers can buy the results of a test that assesses the donor’s temperament and character type. Rothman reports that Cryobank’s ideal sperm donor is six feet tall, with brown eyes, blond hair, and dimples, and has a college degree—not because the company wants to propagate those traits, but because those are the traits his customers want: “If our customers wanted high school dropouts, we would give them high school dropouts.”

Not everyone objects to marketing sperm. But anyone who is troubled by the eugenic aspect of the Nobel Prize sperm bank should be equally troubled by Cryobank, consumer-driven though it be. What, after all, is the moral difference between designing children according to an explicit eugenic purpose and designing children according to the dictates of the market? Whether the aim is to improve humanity’s “germ plasm” or to cater to consumer preferences, both practices are eugenic insofar as both make children into products of deliberate design.

A number of political philosophers call for a new “liberal eugenics.” They argue that a moral distinction can be drawn between the old eugenic policies and genetic enhancements that do not restrict the autonomy of the child. “While old-fashioned authoritarian eugenicists sought to produce citizens out of a single centrally designed mold,” writes Nicholas Agar, “the distinguishing mark of the new liberal eugenics is state neutrality.” Government may not tell parents what sort of children to design, and parents may engineer in their children only those traits that improve their capacities without biasing their choice of life plans. A recent text on genetics and justice, written by the bioethicists Allen Buchanan, Dan W. Brock, Norman Daniels, and Daniel Wikler, offers a similar view. The “bad reputation of eugenics,” they write, is due to practices that “might be avoidable in a future eugenic program.” The problem with the old eugenics was that its burdens fell disproportionately on the weak and the poor, who were unjustly sterilized and segregated. But provided that the benefits and burdens of genetic improvement are fairly distributed, these bioethicists argue, eugenic measures are unobjectionable and may even be morally required.

The libertarian philosopher Robert Nozick proposed a “genetic supermarket” that would enable parents to order children by design without imposing a single design on the society as a whole: “This supermarket system has the great virtue that it involves no centralized decision fixing the future human type(s).” Even the leading philosopher of American liberalism, John Rawls, in his classic A Theory of Justice (1971), offered a brief endorsement of noncoercive eugenics. Even in a society that agrees to share the benefits and burdens of the genetic lottery, it is “in the interest of each to have greater natural assets,” Rawls wrote. “This enables him to pursue a preferred plan of life.” The parties to the social contract “want to insure for their descendants the best genetic endowment (assuming their own to be fixed).” Eugenic policies are therefore not only permissible but required as a matter of justice. “Thus over time a society is to take steps at least to preserve the general level of natural abilities and to prevent the diffusion of serious defects.”

But removing the coercion does not vindicate eugenics. The problem with eugenics and genetic engineering is that they represent the one-sided triumph of willfulness over giftedness, of dominion over reverence, of molding over beholding. Why, we may wonder, should we worry about this triumph? Why not shake off our unease about genetic enhancement as so much superstition? What would be lost if biotechnology dissolved our sense of giftedness?

From a religious standpoint the answer is clear: To believe that our talents and powers are wholly our own doing is to misunderstand our
place in creation, to confuse our role with God’s. Religion is not the only source of reasons to care about giftedness, however. The moral stakes can also be described in secular terms. If bioengineering made the myth of the “self-made man” come true, it would be difficult to view our talents as gifts for which we are indebted, rather than as achievements for which we are responsible. This would transform three key features of our moral landscape: humility, responsibility, and solidarity.

In a social world that prizes mastery and control, parenthood is a school for humility. That we care deeply about our children and yet cannot choose the kind we want teaches parents to be open to the unbidden. Such openness is a disposition worth affirming, not only within families but in the wider world as well. It invites us to abide the unexpected, to live with dissonance, to rein in the impulse to control. A Gattaca-like world in which parents became accustomed to specifying the sex and genetic traits of their children would be a world inhospitable to the unbidden, a gated community writ large. The awareness that our talents and abilities are not wholly our own doing restrains our tendency toward hubris.

Though some maintain that genetic enhancement erodes human agency by overriding effort, the real problem is the explosion, not the erosion, of responsibility. As humility gives way, responsibility expands to daunting proportions. We attribute less to chance and more to choice. The more alive we are to the chanced nature of our lot, the more reason we have to share our fate with others. Consider insurance. Since people do not know whether or when various ills will befall them, they pool their risk by buying health insurance and life insurance. As life plays itself out, the healthy wind up subsidizing the unhealthy, and those who live to a ripe old age wind up subsidizing the families of those who die before their time. Even without a sense of mutual obligation, people pool their risks and resources and share one another’s fate.

But insurance markets mimic solidarity only insofar as people do not know or control their own risk factors. Suppose genetic testing advanced to the point where it could reliably predict each person’s medical future and life expectancy. Those confident of good health and long life would opt out of the pool, causing other people’s premiums to skyrocket. The solidarity of insurance would disappear as those with good genes fled the actuarial company of those with bad ones.

The fear that insurance companies would use genetic data to assess risks and set premiums recently led the Senate to vote to prohibit genetic discrimination in health insurance. But the bigger danger, admittedly more speculative, is that genetic enhancement, if routinely practiced, would make it harder to foster the moral sentiments that social solidarity requires.

Why, after all, do the successful owe anything to the least-advantaged members of society? The best answer to this question leans heavily on the notion of giftedness. The natural talents that enable the successful to flourish are not their own doing but, rather, their good fortune—a result of the genetic lottery. If our genetic endowments are gifts, rather than achievements for which we can claim credit, it is a mistake and a conceit to assume that we are entitled to the measure of the bounty they reap in a market economy. We therefore have an obligation to share this bounty with those who, through no fault of their own, lack comparable gifts.

A lively sense of the contingency of our gifts—a consciousness that none of us is wholly responsible for his or her success—saves a meritocratic society from sliding into the smug assumption that the rich are rich because they are more deserving than the poor. Without this, the successful would become even more likely than they are now to view themselves as self-made and self-sufficient, and hence wholly responsible for their success. Those at the bottom of society would be viewed not as disadvantaged, and thus worthy of a measure of compensation, but as simply unfit, and thus worthy of eugenic repair. The meritocracy, less chastened by chance, would become harder, less forgiving. As perfect genetic knowledge would end the simulacrum of solidarity in insurance markets, so perfect genetic
control would erode the actual solidarity that arises when men and women reflect on the contingency of their talents and fortunes.

Thirty-five years ago Robert L. Sinsheimer, a molecular biologist at the California Institute of Technology, glimpsed the shape of things to come. In an article titled “The Prospect of Designed Genetic Change” he argued that freedom of choice would vindicate the new genetics, and set it apart from the discredited eugenics of old. To implement the older eugenics... would have required a massive social programme carried out over many generations. Such a programme could not have been initiated without the consent and co-operation of a major fraction of the population, and would have been continuously subject to social control. In contrast, the new eugenics could, at least in principle, be implemented on a quite individual basis, in one generation, and subject to no existing restrictions. According to Sinsheimer, the new eugenics would be voluntary rather than coerced, and also more humane. Rather than segregating and eliminating the unfit, it would improve them. “The old eugenics would have required a continual selection for breeding of the fit, and a culling of the unfit,” he wrote. “The new eugenicus would permit in principle the conversion of all the unfit to the highest genetic level.”

Sinsheimer’s paean to genetic engineering caught the heady, Promethean self-image of the age. He wrote hopefully of rescuing “the losers in that chromosomal lottery that so firmly channels our human destinies,” including not only those born with genetic defects but also “the 50,000,000 ‘normal’ Americans with an IQ of less than 90.” But he also saw that something bigger than improving on nature’s “mindless, age-old throw of dice” was at stake. Implicit in technologies of genetic intervention was a more exalted place for human beings in the cosmos. “As we enlarge man’s freedom, we diminish his constraints and that which he must accept as given,” he wrote. Copernicus and Darwin had “demoted man from his bright glory at the focal point of the universe,” but the new biology would restore his central role. In the mirror of our genetic knowledge we would see ourselves as more than a link in the chain of evolution: “We can be the agent of transition to a whole new pitch of evolution. This is a cosmic event.”

There is something appealing, even intoxicating, about a vision of human freedom unfettered by the given. It may even be the case that the allure of that vision played a part in summoning the genomic age into being. It is often assumed that the powers of enhancement we now possess arose as an inadvertent by-product of biomedical progress—the genetic revolution came, so to speak, to cure disease, and stayed to tempt us with the prospect of enhancing our performance, designing our children, and perfecting our nature. That may have the story backwards. It is more plausible to view genetic engineering as the ultimate expression of our resolve to see ourselves astride the world, the masters of our nature. But that promise of mastery is flawed. It threatens to banish our appreciation of life as a gift, and to leave us with nothing to affirm or behold outside our own will.
What Is and Is Not Wrong with Enhancement?1

Frances Kamm

Abstract
This article examines the arguments concerning enhancement of human persons recently presented by Michael Sandel. In the first section, I briefly describe some of his arguments. In Section II, I consider whether, as Sandel claims, the desire for mastery motivates enhancement and whether such a desire could be grounds for its impermissibility. Section III considers how Sandel draws the distinction between treatment and enhancement, and the relation to nature that he thinks each expresses. The fourth section examines Sandel’s views about parent/child relations and also how enhancement would affect distributive justice and the duty to aid. In conclusion, I briefly offer an alternative suggestion as to why enhancement may be troubling and consider what we could safely enhance.

Should we enhance human performance? There are at least two types of enhancement. In the first, we make it the case that more people are above the current norm in ways that many people are already quite naturally. For example, we might increase intelligence so that many more people who would otherwise be only moderately intelligent function as well as

1 This article is a revised version of “Is There a Problem with Enhancement?”*American Journal of Bioethics* ([AJOB]), 5(3): 1–10. It incorporates some of my responses to the very useful commentaries on that article. The commentaries appear in the same issue of *AJOB* and my complete responses appear at the *AJOB* website. It also incorporates some of my responses to Sandel’s helpful commentary on my presentation of parts of this article at the Inaugural Conference of the University-Wide Program on Ethics and Health, Harvard Medical School, Nov. 19, 2005. I am also grateful to audiences at that conference, at the UCLA Program in Genetics and Society, at Bowdoin College, and at Harvard Law School.
those few who are geniuses. In the second type of enhancement, we introduce improvements that no human being has yet evidenced—for example, living to be two hundred years old and healthy. The question of whether we should engage in either type of enhancement has arisen recently within the context of human genetics. Here one generation would probably modify the next. However, enhancement can also occur by way of drugs or intensive training and be done by a person to himself or to another.

Michael Sandel has recently argued that there is a moral problem with both types of enhancement regardless of the way in which they would be brought about, even if there were agreement (which there often is not) that the changes would be improvements, that they were safe, and they were fairly distributed among socioeconomic groups (Sandel 2004). Sandel’s discussion is worth significant attention both because he was a member of the President’s Council on Bioethics and because it expresses in compact form, readily available to the general public, some prominent concerns. In this essay, I shall present what seem to me to be the important components of Sandel’s argument and then evaluate it.

I. Sandel’s views

Sandel thinks that the deepest objection to enhancement is the desire for mastery that it expresses. He focuses especially (but not exclusively) on the attempt of parents to enhance their children, whether by genetic manipulation, drugs, or extensive training. He says:

the deepest moral objection to enhancement lies less in the perfection it seeks than the human disposition it expresses and promotes. The problem is not that parents usurp the autonomy of a child they design. The problem is in the hubris of the designing parents, in their drive to master the mystery of birth... it would disfigure the relation between parent and child, and deprive the parent of the humility and enlarged human sympathies that an openness to the unbidden can cultivate. (Sandel 2004, 57)

And he thinks:

the promise of mastery is flawed. It threatens to banish our appreciation of life as a gift, and to leave us with nothing to affirm or behold outside our own will. (Sandel 2004, 62)

However, he believes this objection is consistent with the permmissibility and even the obligation to treat illnesses by genetic modification, drugs, or training. He is, therefore, arguing for a moral distinction between treatment and enhancement. He says (Sandel 2004, 57): “Medical intervention to cure or prevent illness or restore the injured to health does not desecrate nature but honors it.” He also thinks parents must “shape and direct the development of their children...,” but he thinks there must be an equilibrium between “accepting love” and “transforming love.”

Among the bad effects of mastery, he identifies the increasing responsibility that we must bear for the presence or absence of characteristics in ourselves and others and the effects this may have on human solidarity. The first point is concerned with the fact that we will no longer be able to say that lacking a perfection is a matter of luck, something outside our control. We might be blamed for not improving ourselves or others. The second point is (supposedly) related to this. Sandel believes that the more our characteristics are a matter of chance rather than choice, “the more reason we have to share our fate with others” (Sandel 2004, 60). He goes on:

Consider insurance. Since people do not know whether or when various ills will befall them, they pool their risk... insurance markets mimic solidarity only insofar as people do not know or control their own risk factors... Why, after all, do the successful owe anything to the least-advantaged members of society? The best answer to this leans heavily on the idea of giftedness... A lively sense... that none of us is wholly responsible for his or her success makes us willing to share the fruits of our talents with the less successful. (Sandel 2004, 60)

II. Desire for mastery

(A) Let us first clarify the nature of Sandel’s objection to enhancement based on the desire for mastery over life processes. It implies that if (both types of) enhancements were occurring quite naturally, without our intervention, the desire for mastery objection to enhancement would not be pertinent. Indeed, interfering with the natural enhancing changes would itself require mastery over life processes, and so Sandel’s objection might pertain to this. It is also important to keep in mind several distinctions.
Actual mastery is different from the desire for it. We could achieve and exercise mastery over nature as a side-effect of doing other things, without desiring it. This might be more acceptable to Sandel, but it might still raise the issue about responsibility and solidarity. For if we become able to control our natures despite never having wanted mastery and power, the question of how to deal with those who do not exercise the power well will arise.

Suppose we did desire mastery, however. We could desire it as a means to some other end (e.g., achieving such good aims as health, intelligence, or virtue) or we could desire it as an end in itself. So long as we desire it as a means to other things considered good, it is clearly wrong for Sandel to conclude that desire for mastery will “leave us with nothing to affirm or behold outside our own will” (Sandel 2004, 62). Even if mastery were desired as an end in itself, this need not mean that it is our only end, and so we could still continue to affirm other good aims (such as virtue, health, etc.) as ends outside our own will. I shall henceforth assume that if we desire mastery, it is as a means to good ends, as this seems most reasonable.

Such a desire for mastery is not inconsistent with an openness to the unbidden that Sandel emphasizes (Sandel 2004, 56), if the unbidden means just “those things that come without our deliberately calling for or causing them.” For if many good things were to come without our deliberately intervening to bring them about, presumably we would be happy to have them and not regret that they came about without our deliberately bringing them about. Such a form of openness to the unbidden does not, however, necessarily imply a willingness to accept whatever comes even if it is bad when one could change it. Sometimes people are also unwilling to accept things that merely differ from their preferences or that are not as good as they might be, though the things are not necessarily bad. One or all of these forms of being closed to the unbidden may be what Sandel is concerned with, as he speaks of enlarged human sympathies resulting from an openness to the unbidden.

So far, I have been distinguishing various attitudes and states of mind that might be involved in a desire for mastery. Suppose some form of the desire for mastery and nonopenness to the unbidden were bad. The further question is whether there is any relation between having even a bad desire and the impermissibility of enhancing. As noted above, even Sandel supports the efforts to find certain treatments for illnesses. But seeking treatments for illnesses by manipulating the genome typically involves desiring mastery as a means, not being open to all things unbidden, and attempting to master the mystery of birth. Hence, Sandel may think that while there is something bad per se about desiring mastery even as a means, not being open to the unbidden, and attempting to master the mystery of birth, these bads can be outweighed by the good of curing diseases (if not by the pursuit of enhancements). Alternatively, he may believe that when the unbidden is very horrible—not a gift, even in disguise—not being open to the unbidden is not bad at all. If he believes these things, the question then is why enhancements cannot outweigh or transform the negative value of seeking mastery and not being open to the unbidden in the same way that he thinks that treatments outweigh or transform them.

There is a further, deeper problem about the relation between having bad desires and dispositions and the impermissibility of conduct. For suppose that desiring mastery as one’s sole end in life is a bad desire to have. Suppose a scientist who works on finding a cure for congenital blindness is motivated only by such a bad desire for mastery. He seeks a cure but only as a means to achieving the goal of being a master over nature. Does this make his conduct impermissible? Presumably not. The good of treating diseases still justifies the work of the scientist even when his ultimate aim is not that disease be treated but rather to achieve mastery. This is a case where there may be a duty to do the work. However, even when the act one would do would produce a good that is not one’s duty to produce, I think the act can be permissible independent of one’s desires or disposition in doing it. So suppose several people could be saved only if you do an act

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* Notice that not deliberately causing something is not the same as not causing it. For example, a parent may cause his child’s IQ to move down from 160 to 140 by inadvertently eating improperly during pregnancy. This reduction is unbidden, though caused by the parent. It is in part because we might be causally responsible for making things worse than they could naturally be, that some may think that we have a duty to achieve at least the knowledge of life processes that prevents our interfering with naturally occurring goods.

* When one cannot change bad things that come, one could be open to them in the sense of being accepting of one’s fate. This is consistent with desiring mastery so that one could change one’s fate. I owe this point to an anonymous reader.

* I shall return to this point below.
that has a high probability of killing you. It is not typically your duty to do such an act, though it could be worthwhile to do it. If the only reason you do it is to make those who care about you worry, this alone will not make saving the people impermissible. More generally, it has been argued, the intentions and attitudes of an agent most often reflect on the agent's character but do not determine the permissibility of his action (Scanlon 2000; Thomson 1990). People often do permissible acts for bad reasons, not for the sake of factors that justify the act.

If desires and dispositions do not generally affect the permissibility of acts, and if Sandel were right that "the deepest moral problem with enhancement" is "the human disposition it expresses," then the deepest moral problem would provide no grounds at all for thinking that acts seeking enhancement are morally impermissible (Sandel 2004, 57). We would have to decide whether particular enhancements are permissible independently of the desires, attitudes, and dispositions of agents who act. Among the factors we might consider are the goods that would be brought about and the bad effects that might also occur. It is true that if these goods outweigh the bad effects, then it is possible for a rational agent to have as his ultimate aim the pursuit of the goods, rather than the (supposedly) bad aim of seeking mastery above all else. But still it is the evaluation of objective goods and bads, rather than the agent's actual aims, dispositions, or desires that play a role in accounting for the permissibility of producing the enhancement. If the only possible aim of a rational agent in seeking a particular change were to seek mastery as an end in itself, then presumably this would be an indication that no good effect achieved by the change would be able to justify the act and so the act would be impermissible for that reason.

Furthermore, we need not be restricted to a consequentialist weighing of goods and bads in accounting for the permissibility of an act of enhancement. Individual rights may be at stake and the causal role of bad effects (e.g., whether they are side-effects or necessary means to producing good effects) could be morally relevant to the permissibility of an act, even if agent's intention and disposition are not.

In connection with the effects of enhancing, there is a further point that Sandel makes, for he is concerned not only with the disposition that enhancement expresses but with "the human disposition it . . . promotes." Promoting the disposition to seek mastery could be an effect of seeking enhancements, and we have said that the effects of acts can be relevant to their permissibility even if the attitudes and aims of agents who perform the acts are usually not. Indeed, considering the disposition as an effect helps us understand that when Sandel says that "the deepest moral problem with enhancement is the human disposition it expresses," he may not so much be giving an explanation of the wrongness of acts of enhancement as simply focusing on the bad type of people we will be if we seek mastery. But why would we be bad people if we have the disposition to seek mastery as a means, if this disposition always led to permissible acts, and, furthermore, the disposition always led us to act for the sake of the good effects that make the acts permissible because they make it permissible? (Such persons will be very different from the scientist described above who did not care about the good effect that justified his act [i.e., treating disease] per se but only about mastery.) Sandel's account implies that even people with such a disposition to mastery could be worse people in virtue of the disposition, and I do not believe this is true.

Perhaps even such a disposition, not in itself bad, could be bad to have, if it leads us to focus on certain types of acts to the exclusion of other worthwhile activities. Consider an analogy. An artist is always seeking to improve her paintings. She never rests content with just appreciating her own and other people's great works. Hence, other people may have a certain desire or motivation to pursue certain aims, but this would not necessarily be an impermissible act. As emphasized by Paul Littin and Larry Temkin.
better appreciation of great masters that she lacks, and her worthwhile aim interferes with other worthwhile aims. However, often it is not possible to achieve all worthwhile aims, one has to choose. And it is not clear that her way of responding to value—by trying to create more of it—is inferior to an admittedly good alternative way of responding to value (i.e., appreciating valuable things that already exist). Furthermore, sometimes these two approaches to value may be combined to one degree or another. Similarly, the dispositions to enhance and to appreciate goods already present may be combined.

(B) I have considered the relation between the permissibility of acts and the desires and dispositions related to mastery that produce them and that are produced by them. It might be suggested that acts themselves can have meaning as well as being the result of intentions and followed by consequences. Perhaps some reason for an act’s being permissible or impermissible is given by what it means or expresses because we should not “say” certain things by our acts. Sometimes, meaning can be due to the intention of the agent, but it has been argued by some that it can also be due to context and to the properties of the act itself. If the meaning of an act can be affected by an agent’s intention, and meaning is relevant to permissibility, this still does not show that intention per se is relevant to permissibility, but only that what the intention causes (i.e., the meaning) is relevant to permissibility. Consider a situation in which, it has been said, context, not intention, determines meaning. For example, suppose that in the United States, selecting a male rather than a female child to balance a female child one already has means no more than that one is balancing genders. That is, it has been said, with respect to the act’s meaning, the context would “drown out” an agent’s intention if the parent is actually choosing to have a male child in order to avoid having what he believes is another inferior female in his family. Is his intention, which we shall suppose no one will ever know of, a reason for his act being impermissible? Those who are concerned with an act’s meaning would have no reason to think it is.

Now, suppose that, in a case where intention determines an act’s meaning, no one will understand what an act means because no one knows the intention. It is not clear that the act’s actual meaning, as opposed to people’s interpretation of its meaning, can be a reason for its impermissibility. Where a bad intention determines meaning and people will find out about the intention, this still does not imply that there is good enough reason not to do the act. For example, suppose parents want good educations for their children, but only as a means to their own social climbing. When the children understand this, they will get the message that their parents see them as mere tools. But, of course, despite their parents’ beliefs, they are not mere tools, and whatever the parents’ intentions, the parents do have a duty to give their children a good education. If it is clear that the children will understand their parents’ view of them if and only if the parents give them the education and this understanding will be psychologically very harmful to them, then this must still be weighed against the good of their being educated.

The specific immoral meaning that some think enhancement has, and the immoral message some think it sends, is that the unenhanced have less intrinsic worth than others, where presumably this implies that they do not have equal moral status just in virtue of being persons. (Call this Message 1. Notice that concern about this message could also apply to nongenetic methods of enhancement, such as education and exercise.) Message 1 is to be distinguished from a message that says that some properties are not as good for people to have as other properties. (Call this Message 2.) Presumably, expressing Message 2 is not immoral if it is true. This is because we can show our concern for someone of equal intrinsic worth by trying to give him properties that it will be better for him to have.

I think that it is highly unlikely that enhancement could carry the immoral Message 1. This is because enhancement is to be done to individuals who are already within the normal range of properties typical of the species. Such people are far less likely to be thought to lack the equal moral status that persons have just in virtue of being persons. By contrast, those people who would be improved by being given treatments are more likely to

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This was emphasized in A. Martin and J. Peerzada (2005). The discussion that follows is my response to their views and some of their cases.
be in danger of being mistakenly thought to lack such equal moral status, for they fall below the norm. Yet this is, presumably, not a strong reason against treating them. We should cure blindness by drugs or surgery or genetic means because sightedness is good for persons, and because blind persons as much as any persons are worthy of care.

(C) I have been focusing on the desires, intentions, and actions of individuals and whether their acts of enhancement could be made impermissible by their desires, intentions and the meanings of their acts. One reason why I have discussed the desires, intentions and dispositions of individuals is that Sandel seems to be concerned with why individual parents might seek enhancement in their offspring. Furthermore, one way to conceive of the dispositions and aims of a society is as the sum of the dispositions and aims of the majority of people in it or of its typical members. It is possible, however, that one would not be concerned if some individuals did certain types of acts from certain dispositions unless there were collective action, in the sense that a good part of the society were acting in this way, perhaps in unison. Indeed, Sandel has said that he is really concerned with social practices, not individual acts, and that he thinks that these are constituted, in part, by dispositions as well as acts. For example, we now have a valuable social practice of parenthood which is constituted, in part, by a disposition to love whatever child comes unbidden and not to predetermine its properties. We now have valuable competitive sports practices which are constituted, in part, by excellence in the skillful exercise of natural gifts. If we pursue enhancements, Sandel thinks, we will corrupt and even eliminate these valuable practices.

Consider how this might happen. If the current practice of parenthood is conceived of as constituted (in part) by an openness to the unbidden in a sense that is in conflict with predetermining a child's properties, then the desire to seek mastery as a means to goods will indeed eliminate the current practice. The question, however, is whether a new practice—which might include the disposition to seek mastery in order to improve children for the sake of the children themselves—would be an even more valuable social practice than the older one. One measure would be its effects on children's lives, parent-child relations, etc. (This is an issue I consider in Section IV (A) below). I have already argued that having the disposition to seek mastery as a means to good need not be a bad characteristic of persons in itself. Of course, if the means chosen to the good effect, even if prompted by a good disposition, were bad, there would still be a problem. For example, Sandel mentions the possibility that the new practice might involve selecting mates on the basis of their potential for producing children of certain types. But the problem with doing this lies in the inappropriate way it treats potential mates, for relations between adults who seek to be mates should, presumably, be based primarily on love between them, as a response to their noninstrumental personal characteristics. So impermissible behavior between adults could be involved if this particular means to achieve mastery were chosen and the new practice of parenthood should not use it. But that does not mean that other ways of giving children good properties could not be part of the new practice.

In the case of sports, one of Sandel's concerns is that when athletes enhance their physical strength as a way to win competitions, we have a practice that is no longer about exercising skill but about whose body mass can fell an opponent. If this were so, I would say that the problem is that a good aspect of our current practice is not replaced by anything else of equal value in the new practice. But no one is arguing for "body enhancing changes" that have overall bad effects. Sometimes, Sandel claims that athletes' eating large quantities of muscle-building substances as a component of the new practice, while not in itself an impermissible act, is problematic because the focus on body mass eliminates a practice that relies on the use of valuable skills. However, sometimes he claims that in making their bodies massive, athletes are degrading themselves. If this were so, then, I would argue, the new practice would not only be less valuable but also involve impermissible acts.

My conclusion is that whether we are concerned with individuals and individual acts or with social practices, we shall have to focus on whether outcomes are valuable and can help justify acts or practices, whether means are permissible, and whether disposition to mastery as a means to goods is
inconsistent with being good people. Emphasizing social practices merely because the identity conditions of a social practice (as a matter of definition) include effects, means, and dispositions will not alter the basic terms of our evaluative analysis from what they are when we consider individual acts and individual character.

III. Treatment versus enhancement

As noted above, Sandel's view is that the desire for mastery, rather than letting nature "give" us whatever "gifts" it will, is bad. However, the goods of treatment do justify seeking mastery. We may resist unbidden disease and disability. Why does treatment justify what enhancement cannot justify?

I suggested above that it may not be true that people's mastering nature, uncovering the secrets of life, and trying to improve what comes in life are bad in themselves. If they are not bad, then we do not have to show that avoiding great harm but not achieving great goods can outweigh the bad, in order to permissibly engage in these activities. However, if mastering nature were bad, one would have to show not only that the goods of enhancement are not as important as the goods of treatment but that they are not good enough to outweigh or transform the bad aspects of mastery.

There are several possible routes to showing that the goods of enhancement are not as important as the goods of treatment. One is the idea of diminishing marginal utility, according to which the benefit someone gets out of a given improvement in his condition decreases the better off he is. Hence, we do more good if we help those who are worse off than if we help those who are already better off. A second route is the view that there

12 Carson Strong emphasizes that the idea of a gift requires a gifteaver and that, therefore, from a secular perspective where we do not assume a God, it is not literally true that children or naturally occurring goods properties are gifts, as Sandel speaks of them (Strong 2005). However, Strong himself notes that Sandel might simply emphasize the role of chance and good luck—as in a Rawlsian natural lottery—and use a metaphorical sense of giftedness. Strong also suggests that literal giftedness would come into the world, in the secular point of view, if parents did deliberately give good traits to their offspring. But "gift" has another connotation that militates against this conclusion to some degree, I believe. For a gift suggests some good that one gives beyond the call of duty; the recipient is not entitled to receive it. Children, however, might be entitled to certain enhancements, let alone certain treatments, from their parents and then those would not be gifts in the strict sense.

is greater moral value in helping people the worse off they are in absolute terms, even if we produce a smaller benefit to them than we could to people better off. (This is the view behind the position known as giving priority to the worse off.) A possible third route is to distinguish qualitatively between what some call harmed states and merely not being as well off as one might be but not badly off in absolute terms (Shiffrin 1999). All these routes depend on its being true that those to be treated are worse off than those to be enhanced. However, this may not always be true. For example, some illnesses produce states that are less bad than, or equal to, being at the low end of a normal range for a property. Furthermore, none of these routes to comparing the ends of enhancement and treatment shows that enhancements are not in themselves great enough goods to justify mastery as a means, even if enhancements are not as important as treatment. They also do not rule out that providing enhancements might be endorsed as a means to achieving some treatments. That is, suppose it is only if we are much smarter than we currently are that we will find a cure for terrible illnesses quickly. Then the importance of finding treatments could be transmitted to the enhancement of intelligence. (Of course, not all means are permitted to even justified ends. So if mastering nature to produce enhancements were sufficiently intrinsically objectionable, it might not be permissible to use the only available means [i.e., enhancement] to acquire treatments.)

At one point, Sandel tries to draw the distinction between treatment and enhancement by claiming that "medical intervention to cure or prevent illness . . . does not desecrate nature but honors it. Healing sickness or injury does not override a child's natural capacities but permits them to flourish" (Sandel 2004, 57). The assumption behind the first sentence is that nature is sacred and should be honored. When Sandel claims that curing and preventing illness do not desecrate nature, he implies that enhancement is a problem because of the sort of relation we should have to nature, as if this could be a source of moral imperatives in addition to our relations to other persons. But should we believe this? Cancer cells, AIDS, and tornadoes are all parts of nature. Are they sacred and to be honored? The natural and the good are distinct conceptual categories and the two can diverge: the natural can fail to be good and the good can be unnatural (art, dams, etc.).

13 Similarly, the human and the good are distinct conceptual categories. Human traits (such as arrogance) could be bad, and inhuman altruism could be good.
However, it is an important claim made by some that when there are goods in nature, they can indeed be sources of moral imperatives in addition to our relations to persons. By this they mean that independent of their effects on people, certain natural goods give us reasons to protect or promote them. For example, a great oak or the Grand Canyon may give us reasons to protect it even if no persons were favorably affected by this. Furthermore, recognizing their worth means not supplanting them with some things of inferior worth that may be good for people, such as parking lots.

How does this claim—call it the Independent Worth of Nature Claim—bear on not enhancing people? I do not think it serves as any support for the idea that there is a duty to nature not to engage in enhancement. First, it does not imply that, insofar as a "gift" in a person is a good of nature, what is a "gift" should be determined independently of its effect on people (i.e., independently of what is good for, or what is the good of, the person). So, if a person were turning into a magnificent oak, this would not be a gift because it is not good for the person, and we should act to prevent this transformation. Second, the Independent Worth of Nature Claim need not imply that we may not enhance, supplement, or even transform the goods of nature with genuine additional or superior goods.

Now consider the idea embodied in the second sentence of the Sandel quote, that healing honors nature by permitting natural capacities to flourish rather than overriding them. If enhancement involves the opposite, then we would be overriding people's natural capacities if we enhanced their immune system (by genetic means or immunization) so that they were able to resist illnesses that they could not naturally resist. Is doing this impermissible because it does not honor nature? Surely not. Suppose nature were sacred and to be honored. We would clearly be overriding its dictates by making people able to resist (by immunization) illnesses that they could not naturally resist. Is doing this impermissible because it does not honor nature? Surely not.

And indeed, Sandel has said14 that such enhancement of natural functioning in order to combat illnesses is to be understood as part of treatment and is not the sort of enhancement he opposes. This may be because overriding natural capacities leads to treatment (or prevention) that does not itself override other natural capacities but permits them to flourish.

The position expressed by this view might be illuminated by the following diagram, where "E" stands for enhancement and "T" for treatment (including prevention).

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Ends
E  T

Means
T  TE  ET
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Figure 1.

This figure brings to light a distinction that may be overlooked in most discussions of enhancement: enhancement can be used to refer to an end—enhancing end states—or to a means—enhancing in order to either treat or enhance as ends. In the immune enhancement, we would enhance people as a means to stopping illness that interferes with natural gifts (ET). But a way to treat Alzheimer's disease might also involve increasing general memory power enormously simply as a way to diminish the effects of eventual dementia. Here overriding natural capacities to treat or prevent an illness that interferes with natural capacities does not merely allow those natural capacities to flourish. It overrides by supplementing them. (This is because it does not enhance capacities other than the ones that we seek to protect from the disease.) So Sandel might see this not as a form of ET, but rather as EE. But it is a special form of EE: the alternative to it is not being treated for a disease rather than being in a normal state. Perhaps when EE is the only alternative to disease, Sandel would permit it. (He would presumably object to a more indirect route to stopping Alzheimer's disease, namely increasing intelligence of scientists so that a cure could more easily be found.) He would object to EE when the alternative is a normal state and also possibly to TE when one treats an illness one would otherwise ignore just because treating it also enhances an end state (in a way that is not intermediate to further treatment).

Treatment, even ET, is commended by Sandel because it permits some natural capacities to flourish by eliminating one impediment to them, namely illness. Why would it not honor nature to interfere with other impediments. That is, might Sandel's view be better expressed as the view

14 In discussion on November 19, 2005.
that we may permissibly override and not honor nature when we get rid of
the things in nature that interfere with the other parts of nature that are its
gifts (i.e., good things)? If this is so, then Sandel's position would not rule
out dramatically lengthening the human life span and preventing the ageing
process. This involves getting rid of things that are normal and not illnesses,
but do impede the exercise of natural gifts that we have had all our lives.
Yet most people would consider this a radical enhancement. (And, indeed,
life-lengthening seems in some respects like a form of EE [in Figure 1].)
So, Sandel's original objection to enhancement, that it interferes with gifts
that nature has given someone rather than allowing them to flourish, is not
always true. It is not true, in some forms of ET and some forms of EE
(such as life-lengthening). But sometimes his original objection is true of
treatments, as in increasing memory power to stop Alzheimer's.

For another example, suppose that a child's natural gifts are those of
a Down's Syndrome child and we seek to supplement these and provide
greater gifts than nature provided by changing the child's genome. This
would change or add to natural capacities, not merely permit them to
flourish. Yet, presumably, Sandel would want to classify this with allowable
treatment rather than enhancement because it compensates for a genetic
defect that caused the Syndrome. This form of treatment, which involves
changing and supplementing nature's gifts with new ones, rather than curing
or preventing conditions that interfere with gifts already present, raises the
more general question of why appreciation of nature's gifts requires limiting
ourselves to them. We can appreciate what is given and yet supplement it
with something new, even when we are not compensating for a defect.

There are three primary conclusions to this section so far. First, Sandel's
attempt to draw a distinction between treatment and enhancement, based
on allowing natural capacities to flourish versus overriding natural capacities,
does not seem successful. Second, on one interpretation of how he draws
the treatment/enhancement distinction, Sandel's objection to enhancement
does not rule out maintaining natural gifts (that would otherwise wither)
throughout a greatly extended human life span. Third, we would need
much more argument to show that there is some duty owed to nature
which we offend against when we change natural capacities and that it
is our relation to nature rather than to persons that should be a primary
source of concern with enhancement.

Consider an alternative way to draw the treatment/enhancement dis­tinction suggested by P. H. Schwartz. We treat when we eliminate a
dysfunction, not merely prevent anything that interferes with nature's gifts.
Dysfunction is an interference with healthy human life, which involves
the normal, proper functioning of the human being. The normal, proper
functioning of a human being or its parts is the functioning that contributes
to survival and reproduction to a degree that does not fall too far below
the mean for individuals of the same age and gender. (Possibly, if we alter
a genome to add to a Down's Syndrome child's gifts, we might be seen
to compensate for the dysfunction that originally interfered with normal
development.) Schwartz thinks that we should value healthy human life
and that fixing dysfunction (i.e., treating the failure of a part to contribute
to survival and reproduction to a degree that does not fall too far below
the mean for individuals of the same age and gender) has 'superior moral
status' to modifying normal functioning (enhancing), because it alone has
'a virtue of accepting the normal' and avoiding the implied rejection of
normal human life (Schwartz 2005, 6).

Despite drawing the treatment/enhancement distinction in this way,
and identifying treatment as morally superior in at least one way to
enhancement, Schwartz thinks there is "no need to treat dysfunctions that
are valued by their bearers (such as infertility in some)" and no rule against
modifying people so as to produce valued dysfunctions (e.g., infertility by
vasectomy). Hence, on his view, the way in which treatment is morally
superior to enhancement—by accepting the normal—can be overridden
by other ways in which not treating or even producing dysfunction can be
morally superior to treatment (e.g., by providing people with things that
they correctly value). 17

15 An anonymous reader of this paper suggested the following: Suppose that we would permit
the person's natural capacities to flourish, even if we compensate for a congenital disease by genetic
intervention. On this view, the wrong genes would mask, but not alter, an individual's natural capacities.
So what are natural capacities? Not those likely to exist given an individual's genetic endowment.
If, instead, they are those capacities that can be achieved in an individual given practical genetic
interventions, then we permit an individual's natural capacities to flourish however we intervene,
whether through treatment or enhancement. (Perhaps, the natural capacities would be those given by
the idea of the normal capacities for the species?)

16 As described in P. H. Schwartz (2005).
17 F. Miller and H. Brody (2005) suggest that induced infertility by contraception is an enhancement.
Schwartz thinks of it as an induced dysfunction. This suggests that sometimes dysfunctions are
enhancements. Miller and Brody at one point attempt to fit contraception into a narrow notion of
Let me raise the following concerns with Schwartz’s analysis of treatment and enhancement.

(a) First, it draws the treatment/enhancement distinction by relativizing the normal to “the mean for one’s age and gender.” Hence, what would ordinarily be thought of as dysfunctions can be perfectly normal. For example, it is normal for brain cells to die as we age, heart muscle to atrophy, and joints to wear out. So, it turns out on Schwartz’s account that common interventions to eliminate such conditions, for example, by providing drugs or doing surgery, is not treatment but rather enhancement. (Only dealing with abnormal dysfunctions would be treatment.) If these are enhancements, then undoing similar normal dysfunctions so that people have radically longer life spans with continuing capacities cannot be distinguished from what we already do by appeal to a treatment/enhancement distinction. (On Sandel’s view, I argued, radically longer life spans might turn out to be treatments because they stop impediments to normal gifts. On Schwartz’s view, they turn out to be enhancements because they do not deal with abnormal dysfunctions. But neither author’s analysis distinguishes such life-lengthening from what they already consider permissible.)

(b) Now consider Schwartz’s value analysis. He begins by saying that we should value a life without dysfunction and that it is morally superior not to reject the normal, but he then concludes by saying that it is not unreasonable to sometimes value a life with dysfunction (such as infertility) over a life without it. This, of course, implies that it can be right to reject the normal (either in end state or in mechanism leading to an end state). It seems that this could be true because it could be more important for a life to be good in nonnormal ways than for it to be normal. Hence, as Schwartz recognizes, it remains open that an enhanced life will be a greater good than a normal one, just as a life with a dysfunction can be a greater good than one without it. Furthermore, suppose a very small additional good gotten through abnormality (either dysfunction or enhancement) overrides any medical care by suggesting that even though it is an enhancement, it prevents clear medical risks involved in pregnancy and mental health problems associated with unwanted births. But suppose (counterfactually) that pregnancy had no medical risks and hormonal changes in women made it possible for them to always adjust psychologically to each additional child. It could still be true that a woman could sometimes have a better life if she did something besides have another child, and she should use contraception to achieve that goal. Here the provision within medical care of contraception, which itself has some medical risks, would be unrelated to avoiding health risks. Yet it could be appropriate for a doctor to prescribe it.

(c) Indeed, it is not clear that there is anything morally preferable about normality at all, or anything morally superior about preserving the normal rather than rejecting it. First, as noted in (a), according to Schwartz’s analysis, some dysfunctions (e.g., brain cells not working) will be normal, and if we should value life without dysfunction, this means that sometimes we should not value the normal per se.

Second, recall that on Schwartz’s analysis, normal means “functions so as to survive and reproduce at not too far from the mean for one’s age and gender.” Presumably, survival and reproduction are worth valuing only if there is survival and reproduction of what is good; survival and reproduction of what is bad may be normal but not in any way morally good. Let us assume that what survives and reproduces is good, and this supports the view that survival and reproduction are morally good. Why cannot superior-to-normal performance of these functions be better than normal function? For example, if it were normal for a species to just barely survive and reproduce, could the normal not have less value per se than the supernormal?

In order to see a general problem with using the normal as a basis for deciding when to alter characteristics, it helps to imagine what it would be right to do if, counterfactually, the normal for us were what is, in fact, abnormal. (I shall call this the Shifted Baseline Argument.) So Down’s Syndrome is abnormal for humans. But suppose it were normal for our species to have the intelligence of a Down’s Syndrome person. Should we think that it would then be wrong for the abnormally intelligent members of our species to alter the rest of us so that everyone had the sort of intelligence that is now considered normal? Presumably not, unless there were bad side effects of doing this. Those currently opposed to enhanced intelligence or enhanced memory point to the possible problems that might accompany these, such as not being able to forget and noticing too many defects in life. But suppose it were normal for our species to have the same intelligence as a Down’s Syndrome person or a weaker memory than we now have. Would we think it wrong for us to be altered so

merit in normality. This would show that the merit in normality is very weak.18

There is also another sense in which enhancement is more important than normality-preserving treatments: We are all willing to risk some illness by spending money on life-enhancing activities (such as education) rather than on cures for disease. I owe this point to Julian Savulescu.
that we had levels of intelligence and memory now considered normal for us, despite some drawbacks relative to the lower states (as those lower states may involve blissful ignorance and a constant pleasant disposition)? Presumably not.

The appeal to the moral value of the normal may just be a hidden way of supposing that there is a delicate balance between all our properties (and between our species and the rest of the world), and things might go for the worse overall for people if they made a local improvement to the normal.

I conclude that we have so far not seen why treatment but not enhancement justifies mastery over nature.

IV. Parental and social relations

In this section, I shall examine Sandel's views on how enhancement may negatively affect our relations to persons, ourselves or others.

(A) One's Children

As noted above, Sandel paints with a broad brush in condemning enhancements due not only to genomic changes but to drugs and training. However, he also realizes that much of ordinary good parenting consists of what might ordinarily be called enhancement. Hence, he says the crucial point is to balance accepting love and transformative love. (Perhaps Sandel would want to apply this idea to changes adults seek to make to themselves as well.) But he also seems to think of transformative love as concerned with helping natural gifts to flourish, framing and molding them so that they shine forth. (Similarly, in sport, he thinks that good running shoes help bring out a natural gift by comparison to drugs that would change a gift into something else. Treatment was also said to help natural gifts but only by removing impediments to them.)

Let us first deal with the issue of balance. For all Sandel says, it remains possible that many more enhancements than he considers appropriate are ones that satisfy the balance between accepting and transformative love, even if we expand the latter idea to include adding to natural gifts, for it is not clear what falls under "balancing." For example, suppose my child already has an IQ of 160. Might balancing the two types of love in her case imply that I may (if this will be good for her) increase her IQ another 10 but not 20 points, and that a parent whose child has an IQ of 100 should not change her child as much as to give her a 120 IQ, for this would err on the side of too much transformation?

An alternative to this view of balancing might be called Sufficientarianism. It could imply that there is no need at all to increase the first child's IQ and that in the second child's case much more transformation (in the sense of adding to natural gifts) than acceptance is appropriate—that is the right balance—in order to reach a sufficient level. (Sufficientarians are not interested in perfection, though they want mastery as a means to getting sufficient goods.)

Let us now restrict ourselves to Sandel's sense of transformation—bringing out natural gifts—and consider the ways in which this may be done. To the extent to which Sandel allows training and appliances to be used to bring out and shape gifts, nothing in his argument rules out using drugs or genetic manipulation that do exactly the same thing. So suppose that a certain amount of voice training is permitted to strengthen vocal chords. Would a drug or genetic manipulation that could strengthen vocal chords to the same degree also be permissible? If the argument Sandel gives does not alone rule out training, it alone will not rule out transformation by drugs or genetic means because a gift is transformed to the same degree by each method. If appliances such as running shoes are allowed, why not genetically transformed feet that function in the same way? Ordinarily, such genetic changes would be considered enhancements, even if they are only traits in addition to one's natural capacities that allow the other natural capacities to flourish. An argument different from Sandel's, based on the possible moral difference in using different means to transform capacities, would be necessary to rule out drug or genetic means but permit training. As we have noted, Sandel treats training, drugs, and genetic manipulation on a par. This leaves his position open to endorsing many genetic enhancements (in addition to those that aim at treatment, as discussed in Section III).

While Sandel rightly condemns excessive pressure to transform oneself and one's children in a competitive society, especially if the societal values are shallow, he does not condemn moderate training for worthwhile transformation. Unless he emphasizes a difference in means used, he

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19 Hilary Bok emphasized this point.
should then permit moderate, worthwhile genetic transformations that bring out natural gifts, even if not excessive ones driven by competitive pressures and/or governed by shallow values. (His argument against giving traits merely to give one's child a competitive advantage, on the ground that when everyone has the traits no one has gained a competitive advantage, will also fail against traits that are good to have even if everyone gets them. For example, better eyesight or higher intelligence can raise the absolute quality of each person's life even if there is no change in relative advantage.)

Now consider one way in which Sandel may be wrong not to distinguish different ways of either bringing out natural gifts or bringing about more radical enhancement by introducing major new capacities. Perhaps we should separate how we treat changes that are made before a child exists (what I shall call ex-ante changes) from those that are made once a child exists (what I shall call ex-post changes). The former are primarily genetic, while the latter will include drugs and training.

Love, it has been said, is for a particular. Consider love for an adult. Before we love someone, we may be interested in meeting a person who has various properties, such as kindness and intelligence. When we meet such a person, we may be interested in him or her rather than someone else because he or she has these properties. However, though it is through these properties that we may be led to love this particular person, it is the particular person that we wind up loving, not his or her set of properties. For if another person appears with the same set of properties, that does not mean that we could as easily substitute him or her for the person we already love. Even if the person we love loses some of the properties through which we were originally led to love him or her (e.g., his beauty), we would not necessarily stop loving the particular person that we love (Nozick 1977).

It seems then that when we love a particular person, this involves much of what Sandel calls accepting love. If we do seek transformation in the properties of the person we love, this may be because of moral requirements he would fail to meet without the properties, or because we want what is good for the person and can see a way of achieving it that is consistent with what he wants for himself. By contrast, before a particular person whom we love exists (just as before we find someone to love), it is permissible to think more boldly in terms of the characteristics we would like to have in a person and that we think it is excellent for a person to have, at least so long as these characteristics would not be bad for the person who will have them and are consistent with respect for persons.

The latter side-constraint—respect for persons—could even conflict with seeking properties that are good for someone. For example, suppose peace of mind and equanimity are goods for a person. Nevertheless, ensuring their presence by modifying someone so that she is self-deceived about awful truths or about her duties to others would be inconsistent with taking seriously that one is creating a person, an entity worthy of respect. Both the side-constraint of respect and the side-constraint of concern for the person's best interests could conflict with what has been called a "genetic supermarket," wherein parents choose traits for offspring according to their own preferences. I agree with Sandel that such a consumer model is out of place when creating persons. Sandel says, "Not everything in the world is open to whatever use we may desire or devise" (2004, 54). This is certainly true of persons.

Still, before the existence of a person, there is no one with certain characteristics that we have to accept, if we love him and do not want to impose undue burdens necessary for changes. Hence, not accepting whatever characteristics nature will bring but altering them ex-ante does not show lack of love. Nor can it insult or psychologically pressure a person at the time changes are made the way ex-post changes might. This is because no conscious being yet exists who has to work hard to achieve new traits or suffer fears of rejection at the idea that they should be changed. Importantly, it is rational and acceptable to seek good characteristics in a new person, even though we know that then the child comes to be and we love him or her, many of these characteristics may come and go and we will continue to love the particular person. This is an instance of what I call the distinction between "caring to have" and "caring about." That is, one can know that one will care about someone just as much whether or not she has certain traits and yet care to have someone, perhaps for their own sake, who has, rather than lacks, those traits (Kamm 2004). Sandel says that "parental love is not contingent on talents and attributes

21 I previously argued for this distinction in Kamm (2004) when discussing the compatibility of (a) a disabled person caring about his life as much as a nondisabled person cares about his life, and (b) a disabled person caring to have a nondisabled life rather than a disabled one.
a child happens to have” (Sandel 2004, 55). This is true because love is for a particular about whom one cares, but this is consistent with caring to have, and seeking better attributes in, a person-to-be, at least ex-ante. Hence, it would not be correct for a child to think that just because his parents tried and succeeded in giving him certain good traits, they would not have loved him as much if he had not had these traits.

Applying what I have said to the issue of enhancement suggests that even if transformative and enhancing projects should be based primarily on what is best for the child-to-be, determined independently of mere competitive advantage, this is consistent with trying to achieve ex-ante a child with traits that will be desirable per se, so long as these traits will not be bad for the child and are not inconsistent with respect for persons. By contrast, ex-post enhancement may have to be more constrained for it could involve psychological pressure on the child and lead to fear of rejection. However, even ex-ante enhancement, given that the child knows about it ex-post, can lead to some forms of psychological pressure. For example, if you know that you have been deliberately given a talent for music, you may feel under pressure to use it, though you would prefer not to. It might be suggested that we could avoid this problem by modifying the person-to-be so that the person would always prefer the traits that we have given them. But doing this would be inconsistent with respect for persons, for the exercise of independent judgment should not be restricted; if anything, it should be enhanced. An alternative way to reduce pressure ex-post is to provide traits that either add value simply in being present (such as better eyesight) or by increasing options for someone (for example, to either play or not play music).

Drawing a distinction between the methods of ex-ante and ex-post “designing” people does not, however, put to rest different sorts of objections to even nonpressuring ex-ante enhancements. Let us consider some.

(1) First, Sandel thinks that people are not products to be designed. I agree that people are not products in the sense that they are not commodities, but rather beings worthy of concern and respect in their own right. But I do not think this implies that it is morally wrong to design them. Consider first if it would be acceptable to redesign oneself. We are accustomed to people having replacement parts, such as knees and transplants. Suppose when our parts wore out, we were offered alternatives among the new ones—for example, teeth of various colors, joints that were more or less flexible, limbs that were longer or shorter—it might well make sense to make selections that involved redesigning ourselves. Similarly, if we could replace brain cells, it might make sense to choose ones that gave us new abilities. This would also be redesigning ourselves.

Now consider creating new people. We already have much greater control over the timing of pregnancy, over whether someone can conceive at all, and over which embryos are chosen (via pre-implantation diagnosis) for development. Rather than humility, we have justifiable pride in these accomplishments. Suppose that we each had been designed in detail by other persons. (We all know that the story about the stork bringing babies is a myth. Just suppose that sexual reproduction and the natural lottery in traits are also myths, and we have really all been designed.) Presumably, we would still be beings of worth and entitled to respect. But might it be that although a being retains its high status despite such an origin, it is inconsistent with respect for persons to choose such a designed origin for them? (Analogously, a person retains his status as a rights bearer even when his rights are violated, but it is not, therefore, appropriate to violate his rights.) To answer this question, imagine that the natural way of reproducing required that important properties be selected for offspring, otherwise they would be mere lumps of flesh. Surely, selecting properties would then be permissible. If this procedure were working well, would we nevertheless be obligated, out of respect for persons, to introduce a lottery based on chance as a way for definite properties to come about? I do not think so. If this is correct, then the designing of persons is not per se inconsistent with respect for persons.

(2) Some associate designing people with engineering them rather than raising them and letting them grow, and criticize designing for this reason. However, I do not think these necessarily are contrasts. One could put together the innate mechanisms that are now present in people at birth (thus engineering them) and then they could grow and be raised as they are now. Some may think that putting together a living being according to a design would threaten our ability to worship, revere, and love it; we

I owe this point to Sean Shiffin.

Notice also that there is an alternative of designing the gene pool so that only enhanced options are available and this is compatible with chance determination of the properties of any given individual.

could not have what might be called the “ooh-response.” Worse, the idea of putting something together might suggest that there is nothing wrong with taking it apart (thereby destroying it). But many things we revere and love are created by us, and not just as the result of acts of inspiration. Works of art and craft, literature, hybrid plants and animals are composed, revised, put together in parts that we can come to understand completely. And yet we can respond to these as more than the sum of their parts, revering and loving them. Of course, such entities are not persons and do not have the moral status of persons. But that is because they do not have the properties of persons. If we gave such properties (as rationality and emotion), the worth that supervenes on them, and the response to the worth, would be present, too.

Crucially, it is a mistake in criticizing enhancement to focus on its occurring by a mechanical, piecemeal construction process (engineering) for enhancement does not essentially involve it. Consider that parents typically wish and pray that their children be good people, have good judgment and worthwhile capacities. Suppose that wishing made it so and one could be assured that one’s prayers would be answered. This would be a means of enhancement. Should parents then not engage in such efficacious wishing and praying, even if they wish and pray for the right things?

(3) A third general objection to ex-ante designing asks, if someone wants to have a child, should she not focus only on the most basic goods, such as having a normal child to love? If so, then if she focuses on achieving many superior qualities, does that not show that she is interested in the wrong things in having a child? To answer this worry, consider an analogy. If the primary concern for a philosopher in getting a job should be that she be able to do philosophy, does that mean that it is wrong to choose between possible jobs that equally satisfy that characteristic on the basis of higher salary? If not, why is the search for properties other than the basic ones in a child wrong, when the basic ones are not thereby put in jeopardy? (Of course, in the case of the child-to-be, unlike the job, the enhanced properties are usually to be for its benefit, not only for those doing the selecting.)

Furthermore, as noted above, searching for more than the basics does not by itself imply that if one could not achieve those enhancements, one would not still happily have a child who had only the basics, and love the particular person she is. In this way, too, seeking enhancement is consistent with being open to the unbidden. What about disappointment? It is true that the more one invests in getting enhancements, the more resources one will have wasted if the enhancements do not come about; the lost resources, rather than the child one has, could be a source of disappointment. There may be disappointment for the child when enhancements fail—that one could not bring about something good for it. But that is different from disappointment in the child. Further, while someone who would refuse to have a child without enhancements might thereby show that he did not care about the core reasons for having a child, even this does not show he is unfit to be a parent. For he could still come to love the child if he actually had it, through attachment to it as a particular (as described above).

(4) I have argued that often ex-ante changes would be preferable to ex-post changes because there would be less pressure on, and less opportunity for feelings of rejection by, the child. But a fourth concern about ex-ante enhancements is that a parent will simply have greater control over the child’s nature, whether she seeks it or not. (As Sandel agrees, this does not mean that the child will have less control, for it is chance, not the child, that will determine genetic makeup, if other persons, such as parents, do not. Nor does it mean that the issues of “designing” children and of parental control are not separable in principle. For if someone other than the parent designed the child, relative to the parent the child would still be part of the unbidden.) Is it possible that if we could produce a certain desirable trait in someone equally well and as safely by genetic means or by ex-post drugs or training, we should prefer the latter means because they give the child greater freedom relative to its parent?

Consider the following argument for this position: Suppose a parent is told that its fetus has a gene that will make it aggressive to a degree that is undesirable from the parent’s point of view though not outside the normal range. The gene could be altered so that the person that will develop will be less aggressive. Alternatively, the person who will
develop could take a drug through her life that will successfully reduce the aggressiveness caused by the gene. The latter course is to be preferred, the argument maintains, because when the child reaches maturity she can decide to stop taking the drug, if she decides that she prefers being a more aggressive person. By contrast, if her parents had made the genetic change, the claim is, she would not have this freedom to choose to be more aggressive.

This argument does not succeed, I believe. For it rests on the assumption that a genetic trait for aggression can be altered perfectly well by taking a drug. But if that is so, then it is also possible that the alternative genetic trait for less aggression can be altered by taking a drug that increases aggressiveness. Hence, the child whose parents made the genetic change could have the same freedom to alter her temperament as the child whose parents did not make the genetic change. On the other hand, if drugs could not alter traits as well as genetic modification, this would leave each child with a genetic makeup either given by nature or by a parent; the child would still be unfree to modify itself by drugs ex-post.

Suppose parents would have greater control than they now have over their children's characteristics with either ex-ante or ex-post enhancement. In numerous areas of life, persons now justifiably stand in relations of control over other people where once chance ruled. The important thing is that this be done justly and well. Furthermore, if we choose certain characteristics in particular in offspring, the balance of control over the child's life may shift to the child rather than the parent, even if the child does not have the capacity to further alter the characteristic ex-post. What I have in mind is that if we could ensure that a child had such enhancing traits as self-control and good judgment, then the child would be less, not more, likely to be subject to parental control after birth. This is what is most important.

(5) A fifth concern is that if each parent individually tries to do what is best for its child, all parents will end up making the situation worse for all their children. This can come about if we give traits that could benefit a child only by giving her a competitive advantage. If all children are similarly altered, everyone may be overall worse off, in virtue of efforts made that do not alter any individual's benefit. To avoid this prisoner's dilemma situation: I have already suggested that we focus on characteristics that would benefit someone independently of competitive advantage. With respect to other traits some rule that coordinates the choices of parents seems called for.27

Larry Temkin emphasized this problem of prisoner's dilemmas. Another objection to some ex-ante enhancements was raised by Matthew Liao (in Liao (2005)). Liao argues that some ex-ante enhancements (which I contrast to ex-post enhancements) are impermissible, even though the person does not yet exist, and this is not because of any property the person eventually comes to have, but because of the morally dubious intention of the enhancer (2005, 1–3). For example, suppose someone creates a female child for the purpose of selling her into prostitution, or (in my own illustration) creates a brain-enhanced child for the purpose of exhibition in a zoo. However, each creator then comes to love the child for her own sake and treats it properly. Liao notes that I suggest that characteristics sought ex-ante should not be bad for the person who will have them and should be consistent with respect for persons. But being female or brain-enhanced is not bad for a person or inconsistent with creating a person worthy of respect. Hence, he thinks, it is not because of the properties that would be given, but because of the further intentions of the agents that their acts are wrong (2005, 3).

He also thinks that I mean to imply that properties that are morally undesirable (such as being subject to self-deception) make persons no longer worthy of respect, but he counters that having a morally dubious property does not do this. Yet, he agrees, it is still wrong ex-ante to do what gives this property to someone. This cannot be, he thinks, because of what the property is in itself, or because the person could have existed without the property and been better. The latter claim, Liao thinks, cannot be true because an individual comes into existence at the same time as his ex-ante chosen properties and the person without that property would have been a different person. Hence, the person now in existence with the property cannot complain that he was harmed by being given the property, assuming his life is worth living. Liao concludes from all this that the wrongness of giving such a property lies in the morally dubious intention of the agent (2005, 6).

I do not think Liao's arguments succeed. First, consider the person who creates a female child intending to make her a prostitute, or a brain-enhanced person intending to exhibit her. I would say that the first creator is attempting to create a prostitute and the second an exhibition animal, and each of these properties is not one that persons should have. But suppose that an agent attempting to create someone with these properties cannot succeed, perhaps because he is bound to love each of the people he creates. Then I would say that his actual act of creating the people is not impermissible, though what he attempts to do (make prostitutes or exhibition animals) is impermissible. I would say that a morally worse event or act has taken place in virtue of the bad intention prompting his act, but this does not mean his act is impermissible.

Second, contrary to Liao, I do not mean to imply that giving a person a morally dubious property renders that person not worthy of respect. The person just remains competent with respect to the property it contains, more appropriate to his respect-worthy status. Similarly, violating someone's rights can be inconsistent with respect for a person without in any way altering his status as a creature worthy of respect. Most disturbing, from the fact that a naturally disabled person remains a person worthy of respect, Liao concludes that the wrongness of deliberately creating a disabled person cannot be due to his winding up with the property of being disabled; the act must rather be wrong because of the motivation or intention of the agent. But surely it can be wrong to do what gives people properties that do not diminish their worth but just make their lives much worse for them to live, regardless of one's motivation or intention (for example, as a mere side effect of some useful act). Now consider Liao's arguments based on identity considerations for the claim that an act creating a person with a certain property cannot be wrong because of the property. First, it is not always true that a person would not have existed at all if he had not existed with a certain property. For not all properties are essential properties of a person without which that person would not exist, and we could imagine having charged a given embryo for the better by affecting one of its nonessential properties. Then that person could have been better than he actually is. Now consider the cases in which a different person would have been created if a property had been different—perhaps because an essential property is at issue. Liao says that in such a case, the person created with the nonoptimal property cannot complain...
(6) Of course, many would reject both ex-ante and ex-post genetic and drug modification, whether controlled by parents or by the offspring themselves, rather than modification by effort or exercise. Such opponents try to distinguish means of enhancement that Sandel does not distinguish, but in another way than I have. Sometimes it is said that the struggle involved in effort and exercise has moral value. Or, it is said, that if our performance is not the result of our consciously bringing it about by trying and effort, then there will be no connection that we understand as human agents between our performance and ourselves. There will be no intelligible connection between means and ends. The performance will come about as if by magic. However, these points suggest that it would be better if most members of our species did not have, for example, the genetic tendency that they in fact have toward fellow feeling, but rather, like the few amongst us who are very aggressive, had to produce fellow feeling in themselves by great effort or through a process that intelligibly led to fellow feeling. But this would not be better. Similarly, imagine the following imaginary case. Your high intelligence and natural grace, which in someone else would be due to an enhancement, is your normal luck in life’s lottery, and it is due to a large degree to your genetic makeup. Then normal changes in your physical makeup lead to your losing the automatic presence of high intelligence and grace. Would you now be thankful that you had the freedom to decide whether or not to work extra hard and, by a humanly intelligible process, bring these good things about, or even take many drugs each day to bring them about? Or would you prefer genetic surgery so that your system worked automatically the way it always had? Presumably the latter. Here I have again employed the Shifting Baseline Argument, by imagining that a characteristic that is normally genetically controlled, either in the species or just you, is absent. Then we consider whether there is anything offensive per se in introducing a genetic trait to restore or produce the desirable characteristic.

The basic point is that people do not now complain that many good capacities they have come about independently of their will and not through an intelligible process. Indeed, one might analogize genetic changes (or taking drugs) in order to improve performance to maturation. Often, when someone cannot do or appreciate something, we tell them to wait until they mature. This means that no act of will or effort in an intelligible process can substitute for a physical change that will, as if by magic, make them capable of doing or appreciating something.

One major conclusion of this subsection is that Sandel does not show that seeking to enhance children, especially ex ante, is inconsistent with a proper balance between accepting and transforming love.

(B) Social Justice

Finally, we come to Sandel’s views on the connection between enhancement and the twin issues of burdens of responsibility and distributive justice. Consider responsibility first. If people are able to enhance themselves or others, can they not be held responsible in the sense of being blamed for not giving themselves or others desirable characteristics? Not necessarily, for one does not have a duty to do everything that could make oneself or someone else better, and if one has no duty, then one is not at fault in not enhancing and so not to be blamed. Even if one has certain duties, for example, to be the best doctor one can be, and taking certain drugs would help one to perform better, it is not necessarily one’s duty to take the drugs. One could retain a right not to alter one’s body even in order to better fulfill one’s duties as a physician. Hence, one need not be at fault even if one does not do what will help one perform one’s duties better. But retaining the right not to alter one’s body does not imply a right to make such alterations impermissible for anyone who wants them. Of course, if the characteristics one will have must be determined by others (for example, one’s parents), then one could not be blamed for causing or not causing the characteristics, as one could not have directed one’s parents’ behavior.

What about cases in which one can be blamed for a choice not to enhance? Thomas Scanlon has emphasized that one can hold someone responsible for an outcome in the sense of blaming him for it without thereby thinking that it is also his responsibility to bear the costs of his responsibility to bear the costs of his actions.²⁹ Asian traditions involve many techniques that produce good results by exercise (such as repetition of a mantra) that do not involve trying or moving by intelligible steps toward a goal.

²⁹ This point is especially emphasized by Leon Kass. See Kass (2007).
choice. These are conceptually two separate issues. For example, suppose someone is at fault for acting carelessly in using his hairdryer. If he suffers severe harm and will die without medical treatment, his being at fault does not mean that he forfeits a claim on others he otherwise had to medical care.

By contrast, Sandel thinks that the issue of responsibility for choosing to have or to lack certain characteristics is intimately related to how much of a claim we have against others for aid. However, he is not always clear in distinguishing the role of choice from the role of mere knowledge of one’s characteristics. For example, in discussing why we have insurance schemes, he seems to imply that even if we had no control over our traits but only knew what they were (for example, via genetic testing), we would lose a claim against others to financially share the costs of our fate. For, if people knew they were not at risk, people would not enter into insurance schemes that mimic solidarity. So Sandel’s argument based on solidarity against enhancement seems to be an argument against knowledge of genetic traits as well as against control of them. But those who urge us to use a veil of ignorance in deciding whether and when we should share others’ burdens (via allocation of resources) are, in effect, saying that even if we have knowledge of one another’s traits, there are sometimes moral reasons for behaving as though we lack the knowledge.

Let us put aside the issue of blameworthiness for, and the effect of mere knowledge of, traits. How should the mere possibility of making responsible choices that determine one’s traits affect responsibility for bearing costs for the outcome of choices? Sandel here seems to share with some philosophers (known as luck egalitarians) the view (roughly) that if we have not chosen to have traits but have them as a matter of luck (or other people’s choices), the costs of having them should be shared among everyone. However, if we choose the traits (by action or by omitting to change them if we can), then even if we do not in any deep sense deserve to have made this choice, there is no reason for the costs of having the traits to be shared. (According to some luck egalitarians, however, we may choose to buy insurance that will protect us against bad choices.) Sandel says he cannot think of any better reason for the well-off to help those who are not well off except that each is not fully responsible for his situation. (It is important to remember that some do not find lack of responsibility a compelling reason for sharing with others. Robert Nozick, for example, argued that one could be entitled to what followed from traits that one was not at all responsible for having.)

Contrary to Sandel, it seems that often we want to give people new options without taking away from them help they would have gotten from others when they had no control over their fates. One example given above involved someone whose choice—even a faulty one—to use a hairdryer should not lead to his forfeiting aid to avert a major disaster. Similarly, if someone for reasons of conscience refuses to take advantage of the option to abort a difficult pregnancy, we do not think that she should forfeit medical care simply because she could have avoided the need for it. In many cases, arguments for the duty to aid others seem to have more to do with respect and concern for persons and a willingness to support their having an opportunity for autonomous choice without fear of costs than with whether they have or have not gotten themselves into whatever situation they are in. Of course, in cases I have been considering, someone chooses in a way that leads to a bad outcome he does not per se choose. But recall that Kant thought we had a duty to help people pursue even the ends they themselves had deliberately chosen because people matter in

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20 See his Anarchy, State, and Utopia. Unlike luck egalitarians, Rawlins may think that what is necessary to justify shared responsibility as a matter of justice is the fact that a particular social structure is, to a large degree, responsible for what sort of fate in life one’s genetic properties will yield. By contrast, in the case of bad luck that is the result of socially unmediated natural effects, a Rawlins might think that shared responsibility is not a matter of justice. Notice that the problem for shared responsibility of outcomes (solidarity) with which Sandel is concerned is different from another problem that concerns J. S. Robert in Robert (2005). Robert is concerned that giving people the choice of enhancement before we take care of the many who lack basic necessities is already to show a lack of solidarity with others (2005, 6). The fact that we have such priorities tend to weaken Sandel’s view that we are more likely to help people when our traits are not chosen. For they are not chosen now, and yet, as Robert sees it, we are unwilling to share with the needy now. But does seeking enhancement indicate a lack of solidarity? Robert himself thinks that it is only psychologically realistic to demand moderate self-sacrifice from each of us. But such a degree of self-sacrifice may be consistent with seeking enhancement for oneself while others are in need of basic necessities. Further, if we were trying to provide the autonomous choice of enhancement to everyone, even though this is not what many need most, this itself would be an instance of solidarity, in the sense that we care for others as well as ourselves. And if it were unrealistic to expect—nor not morally required of—us to sacrifice a great deal for others, helping them to enhance themselves at small additional cost (if this were possible) may leave them better off overall than if there were no opportunities for enhancements. However, none of this would solve the problem of solidarity with which Sandel is concerned, as that only arises after people have the option of autonomously enhancing themselves, and then are thought (by Sandel) to both lose a claim to further assistance and to lose the motivation to assist.

21 The latter point in particular is emphasized by Seana Shiffrin.
their own right, rather than because they could not be held responsible for outcomes or because it was only the unwilled consequences of their choices with which we were asked to help.

It may throw further light on (a) the effect of the option to enhance on shared responsibility to consider (b) the effect of the option to treat on shared responsibility. Sandel, of course, is not against giving individuals the option to treat or prevent their diseases. This is so despite the fact that one might construct an argument concerning the option to use treatments and preventions parallel to the one he constructs for the option to use enhancements. That is, someone might say that giving the option to use treatments and preventions will destroy the willingness of the healthy to aid the sick who had the option to avoid illness by earlier treatment or prevention but did not, especially when the healthy attribute their own health to their choice to use such earlier interventions. The fact that this is not a successful argument against spreading the option of treatments—presumably because we think many will make use of the treatments and then not need the help of others—should lead us to question its success against enhancements.

Might it be that Sandel also believes that people should be able to call on the assistance of others when they need it, regardless of many individual choices they make? Such a belief might account for the subterfuge of eliminating the possibility of individual choice for enhancement, as a device to sustain a duty to aid. This would be somewhat like the strategy of pretending that one cannot figure out what share of an outcome each person is responsible for producing as a way of ensuring equal shares of a social product. The fact that one seeks such a subterfuge suggests that one simply believes that equal shares are right, regardless of differential input. But it also suggests that one cannot really see how this could be so. One deals with this intellectual conflict by eliminating the factor one is having trouble seeing as not inconsistent with an outcome that one wants.

I think that a good account of the worry that lies behind Sandel’s view focuses on a conflict between the right and the good. Here is an analogy that helps make this clearer. From the point of view of considering the good of a person, we may want to be sure that he gets help when he needs it. Suppose someone has the option of declaring himself emancipated. We can see the attraction in this status for that person is responsible for producing as a way of ensuring equal shares of a social product. The

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the assistance of others. For example, rather than redistributing wealth that only the talented can produce in a certain environment, each might have a relevant talent and so have the opportunity to be more productive in that environment. Most importantly, each person would not only have the material benefits that can be redistributed from some to others. Each person could have the intrinsic rewards of exercising abilities and talents, something that cannot be redistributed.

Let me conclude this section by noting that if Sandel were concerned with the increased burden of responsibility for one's traits and one's children's traits, not at the individual level but at the social level, there would be no way to completely avoid the burden of increased responsibility. For suppose a society or species knows that it could change traits of its members by using or developing genetic or chemical means. Those who decide that the society will not use these means will be to some degree responsible for the absence of enhanced traits. (This is so even if some other individuals will not be responsible because others in the society made it impossible for them to have a choice about use of the means at the individual level.) However, society will be to blame for failures to improve only if there were no good reasons not to engage in enhancement. Some seem to think that preventing individuals from becoming responsible for individual outcomes could be offered as such a good reason. But can preventing more social responsibility for outcomes be offered as a reason, if society already has increased responsibility when it is responsible for denying use or development of enhancement techniques? Possibly this reason would still be available, if a distinction could be drawn between degrees of responsibility, so that there is less social responsibility for genetic traits, if society chose to let chance determine them than if society actually selects the traits.

The primary conclusions of this subsection are that Sandel does not successfully show that we should limit options to enhance ourselves or others as a way of ensuring a right to social assistance.

V. Conclusion

Sandel focuses on the desire for mastery and the unwillingness to live with what we are “given” as objections to enhancement. (He also focuses on the more contingent issue of the misuse of the ability to enhance ourselves and others that is likely to occur in a competitive environment, especially one governed by shallow values.) I have argued that what is most troubling about enhancement is neither that there will be people who desire to have control over nature, offspring, and themselves, nor unwillingness to accept what comes unbidden. However, I do think that there are major problems with enhancement. Some are the ones Sandel puts to one side. Given our scarce resources, where should enhancement be on the list of things to do? Will there be a fair distribution of benefits of enhancement? Could we really safely alter a system as complex as a person (by genetic enhancement or treatment) without making disastrous mistakes? Consider the last point further.

It has been pointed out that in a complex system such as a human being, whose parts are densely interdependent, even small alterations can have unexpected bad effects. Extreme caution, at least, seems called for. Genetic manipulation has been contrasted with surgery or taking drugs in this respect. (Sandel's complaint holds equally against all these means of enhancement, and he deliberately puts to one side issues of differential safety to focus on an objection that he thinks would be present even if there were no safety issues.)

In rebuttal, it might be suggested that genetic changes to individuals that would not affect their offspring could be made no less safe for the individual and the species than use of drugs. For in using drugs or even surgery, one usually thinks that one can, at least often, stop a change and revert to one's original condition if things go badly. If genetic changes could also be reversible, or at least counteractable in some way, then the risk of using them would also be diminished.

Further, it might be pointed out that the dense interdependence of the parts of our system also creates great risks even with therapeutic interventions, so it would be good to know specifically why enhancements present greater potential threats than treatments. And then there is the interdependence of human beings with the rest of the world. Is it possible that treating a defect in individuals that eliminates the normal presence of such defects in the human species would upset some delicate balance.

**M. Coors and L. Hunter, 2005.**
between our species and the rest of nature? Would we let this possibility interfere with our search for treatments?

Another issue in enhancing, I think, is that we will be doing it, and so our lack of imagination as designers may raise problems. That is, most people's conception of the varieties of goods is very limited, and if they designed people their improvements would likely conform to limited, predictable types. But we should know that we are constantly surprised at the great range of good traits in people, and the incredible range of combinations of traits that turn out to be good. For example, could we predict that a very particular degree of irony combined with a certain degree of diffidence would constitute an interesting type of personality? In Section IV (A), I mentioned the view that potential parents should focus on having children with basic good properties rather than seek improvements beyond this. Oddly, the "lack of imagination" objection to enhancement I am now voicing is based on a concern that in seeking enhancements people will focus on too simple and basic a set of goods.

How does the lack of imagination objection relate to Sandel's view that an openness to the unbidden (excluding illnesses) extends the range of our sympathies? One construal of his point is that if we have no control, we are forced to understand and care about people, as we should, even when they are difficult and nonideal. By contrast, the lack of imagination objection emphasizes that when creatures of limited imagination do not design themselves and others, they are likely to extend the range of their appreciation of great positive goods because the range of such goods is likely to be larger. Fifty years ago, a parent who would have liked to design his child to have the good trait of composing classical music, could not have conceived that it would be good to have a child who turned out to be one of the Beatles. (To have conceived it, would have involved creating the Beatles' style before the Beatles did.) The lack of imagination objection is concerned that too much control will limit the number and combination of goods from what is possible. Hence, at least in those cases where greater goods are more likely to come about if chance rather than unimaginative choice is in control, the desire for enhancement will militate against control.

Finally, if the controlled selection of enhanced properties is a morally acceptable means, at least sometimes, what are the good ends to which it could safely be used? Presumably, if it were at all possible, it would be a safe end to enhance our capacities to recognize and fulfill our moral duties, at least if the enhancement involved our appreciating the reasons for these duties and not a purely mechanical response. Recognizing and fulfilling moral duties is a side constraint on the exercise of any other capacities and the pursuit of any ends. There is no point in worrying that having such moral capacities would interfere with unimagined goods. For if such moral capacities interfere with other goods, this just means that those other goods are not morally permissible options for us.

References


Enhancements Are a Moral Obligation*

John Harris

If it wasn’t good for you it wouldn’t be enhancement. In terms of human functioning an enhancement is by definition an improvement on what went before. Not necessarily, as we shall see, an improvement on normal species functioning or species typical functioning, nor are enhancements justified, as many seem to believe, primarily in terms of their contribution to equal opportunities.

There is a continuum between harms and benefits such that the reasons we have to avoid harming others or creating others who will be born in a harmed state are continuous with the reasons we have for conferring benefits on others if we can. In short, to decide to withhold a benefit is in a sense to harm the individual we decline to benefit. We have reasons for declining to create or confer even trivial harms, and we have reasons to confer and not withhold even small benefits.

The opportunity to create healthier, longer lived and altogether 'better' individuals is one that there are moral reasons to take. To say that, is to say that parents would act ethically if they attempt to achieve such an objective for their children for example, and those of us who are autonomous enough to consider such questions, have good reasons to confer such benefits on

* This chapter follows closely lines developed in John Harris, 2007, Enhancing Evolution (Princeton and Oxford: Princeton University Press). I am grateful to Princeton University Press for their indulgence in my use of these ideas here.


2 An extended argument for these assertions was given in John Harris, Violence and Responsibility (London: Routledge & Kegan Paul, 1980).