

# Ethical issues of genetic enhancement in humans philosophy essay



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While genetic engineering is not a topic that is discussed often in the public realm, genetic research and technology is moving forward at an insane pace. Genetics are now found to show massive improvement in a wide array of areas including: manufacturing and materials, energy, species restoration and management, food and agriculture industries, forestry, and pest control. The most controversial use of genetics, and the focus of this paper, is on human genetic intervention. In the case of genetic treatment used to prevent or cure genetic diseases, the procedure is appropriate and ethically moral. However, in the case of genetic enhancement and the concept of designer babies, any procedure is unethical. A line must be drawn between the definition of genetic enhancement and genetic treatment and with both cases, the invasion and risks to the mother of the child should also be considered. Efforts should be focused on social engineering to improve the behavioral aspects that are the target of genetic enhancement advocates. The possibilities of genetic engineering are quite limitless, which is scary if those who are able to do so begin to manipulate all aspects of nature and humanity through science. Yet there are truly some beneficial genetic techniques used not regarding human life that would and do improve many aspects of this earth. In their article " Genetic Engineering Could Benefit Society", Joseph F. Coates, John B. Mahaffie, and Andy Hines discuss many of these benefits. For example, some researchers are working to develop a microorganism that would be useful in converting crop wastes into biomass energy while others are boosting plants that have higher yields and better resistance to disease and other conditions. Insects carrying diseases will

likely be targeted through genetic technologies and the deadly disease malaria may ultimately be eliminated (176-177).

A lot of genetic engineering studies for human use are performed on animals, but animals also serve as a target for their own genetic modification purposes. " Designer animals" can be enhanced in a similar way to humans for food production, recreation, and pet purposes. Livestock can be customized for increased growth, shortened gestation, and greater nutritional value. In order for animals to withstand rough environments, transgenic animals are being created, which share genes of two or more species (Coates, Mahaffie, and Hines 176). Studies should be done on the ethics of manipulating animals through genetics before further interventions are performed.

Before even exploring the ethics of using genetic engineering to enhance or treat humans, current technologies and the reality of genetic modification regarding risks and success should be discussed. In her article " Genetic Engineering Could be Dangerous", Susan Wright explains that the human body tends to reject anything foreign, so at this point, its not even probable genetic procedures in humans will work effectively and with little risk (188). Stephen A. Phillips discusses some current studies in his article " Human Germline Genetic Enhancement and C. S. Lewis's the Abolition of Man" As far as success, animals that are producing genetically modified embryos for study are producing mainly defective embryos and very few embryos survive to produce the viable genetically modified animals. This study will help with the modification of humans, but in order to prevent the birth of children with serious defects, human embryos would need to be tested before <https://assignbuster.com/ethical-issues-of-genetic-enhancement-in-humans-philosophy-essay/>

implantation and those that are defective would need to be destroyed. Not only does the conflict greatly with the high moral values placed on human embryos, but the subjects used would have to be followed for their entire lifetime, as well as their descendants' lifetimes (Phillips 118-119).

Genetic intervention at this point is focused on two possible paths. Somatic cell modifications would impact only the individual being treated while the path of germline modifications actually change the genome of an individual and their descendents (Phillips 118). Gregory Stock and John H. Campbell look in-depth at the latter path in "Engineering the Human Germline: An Exploration of the Science and Ethics of Altering the Genes We Pass to Our Children." Germline modifications include injecting genes into a fertilized egg, which extends gene therapy to the germline and automatically introduces genetic changes into every cell of the body without having to intervene in each cell individually (Stock and Campbell 9). In the article, "A Not-so-new Eugenics", R. Sparrow presents another technology, preimplantation genetic diagnosis (PGD), which allows parents to discover the genetics of the embryos they have created by way of in vitro fertilization. They can then choose which embryo to implant into a woman's womb and try to bring to term. PGD is currently widely used as powerful technique to prevent birth of children with severe disabilities, but this process involves choosing which people are born, instead of enhancing the traits of existing persons. (Sparrow 33).

Gene-based pharmaceuticals can be used as treatments as well, which may use antisense DNA to block the body from transmitting genetic instructions for a disease process. Future therapies would allow genes to be removed, <https://assignbuster.com/ethical-issues-of-genetic-enhancement-in-humans-philosophy-essay/>

turned off, or blocked, with healthy replacement genes able to be directly inserted into fetuses or administered through injection, inhalation, retroviruses, or pills (Coates, Mahaffie, and Hines 180).

Suppose that genetic modification becomes widely efficient, successful, and uncostly- if that day comes, then it is critical to draw a line between genetic enhancement and genetic treatment and ban the former, but allow the latter. While most people see the distinction between the two, it is still hard to define. An attempt at defining the difference states that genetic enhancement involves modifications that are not for the purpose of treating or preventing diseases (Phillips 119). Some issues arise in separating these definitions, however. Alcoholism, for example, can be classified as a disease, which would, following my previous suggestion, would be legal and moral to genetically treat. However, some view alcoholism as a choice, not a disease, meaning that to prevent this through modification would be an enhancement not a treatment. Examples of enhancements often used include height, musical talent, athletic ability, and honesty.

Genetic intervention in humans is not all bad. When it is used to treat or prevent life-threatening or severely life-altering diseases it is ethical and practical. An estimate for the year 2025 shows almost 2, 000 single gene diseases completely eliminated. Genetic predisposition diseases, such as cancer, are also estimated to be cut in half by 2025. Eliminating genetic diseases such as Alzheimer's could take centuries through natural selection but only decades through genetic manipulation (Coates, Mahaffie, and Hines 175-177). Health professionals are ultimately estimated to identify, treat, and prevent 4, 000 or more genetic diseases and disorders. These <https://assignbuster.com/ethical-issues-of-genetic-enhancement-in-humans-philosophy-essay/>

diagnostics include both specific diseases such as Down Syndrome AND behavioral dispositions, such as depression (Coates, Mahaffie, and Hines 180). Behavioral dispositions are another thin line to draw, because I wouldn't consider them life-threatening or necessarily harmful. My diagnosed depression has made me who I am today and I can't imagine not having that "behavioral disposition", but others with anxiety, attention deficit disorder, and more, may find it a huge impairment to their life.

To examine the ethics of genetic enhancement is to examine the issues with genetic engineering and decide for one's self whether those issues are ethically incorrect. Dov Fox introduces a study in his article that 70% of American respondents disapprove of the use of safe technologies to select for non-disease traits in human offspring, so there is clearly some widespread issues preventing support for genetic enhancement (Fox 174). First of all, genetic modifications will be expensive and unequally distributed. This gives additional advantages to the rich and further disadvantages the poor, widening the gap between the rich and poor to an insurmountable division (Phillips 119). Some argue that this is not so different from the expensive and currently widely accepted environmental enhancements like college test preparation and private musical training (Fox 175). I argue that these environmental enhancements are increasingly less expensive and available to all through school systems, social services, and mentors. The financial gap for genetic enhancement, on the other hand, would be hard to close. This issue is lesser in genetic treatment because treatment for disease already is known to be expensive. Those with permanently ill or diseased

children must pay large sums for treatment, so genetic technology does not change that factor.

An important question raised is whether those who would attempt to enhance human abilities by genetic modification should be trusted with that power. A very elite group of geneticists would suddenly be the shapers of humanity. There has to be some estimate or criteria of virtue and wisdom one would require to even want to be put in this demanding, high-stress position (Phillips 119).

The issue of personal identity arises commonly in discussing bioethics. Genetically modified individuals would be “ de-natured”, and their capacities to pursue the truth, build relationships, and preserve their health would be obstructed (Murphy 196). One’s knowledge of having emerged from someone else’s design would lead to feelings of genetic confinement as well. Genetically modified people may be confined to a project or pursuit they may have little passion about, or they may not consider themselves as free to shape their dominant values and ends. Some argue that this is irrelevant because it’s not like the child could have chosen for themselves who or what they wanted to be (Fox 176), but that is a weak argument. Many “ designed” children would have severe conflict with religious beliefs and being created in the image of God for his purposes. Others may have nonreligious issues with destiny and self-discovery that was altered by their parents’ choices. Still others argue that the personal identity crisis can be avoided by way of fertility clinicians advising parents to not disclose the genetic enhancement to their children, so the children never know (Fox 176). That proposed

solution encourages lying to children, which could lead to not only confusion and pain for the children, but a lifetime of deep burden for parents to bear.

Human bodies are furthermore like the product of an engineering genius—each one a delicately balanced, completed, well-functioning masterpiece. There is no evidence that these delicately integrated natural bodily powers will take kindly to such impositions (Powell and Buchanan 7). After all, “like that familiar car, whose design shows the touch of an intelligent maker, so are the systems built into living creatures also wonders of design” (Richards 103). Humans are not just animals that respond instinctively to our appetites. We are actual objective beings capable of perceiving how things ought to be and conforming ourselves to that reality (Phillips 115). It is a shame to take intricate beings and discuss or treat them as non-complex objects meant to be controlled and manipulated.

Talents and abilities are sometimes personified as a “natural lottery”, with those not born with many talents or abilities as “victims” of the natural lottery. In this frame of mind, using genetic engineering to raise intelligence or increase talents of these victims would be to compensate for their lack of luck in the natural lottery (Holtug 139). Some also suggest that as long as individuals have the choice of whether- and how- to use genetic technologies, then it’s okay (Sparrow 32). However, the individuals that are making the choices of how to use the genetic technologies are making it for their children, so the decision is not that of the child itself, it’s the decision of the parents. And in that case, genetic technologies are not ethical, period.



An issue arises in the invasion of the mother's body and the risks associated with her compared to the benefits of the child (Hammond 165). It's easy to consider treatment cases of little invasion and great benefit as ethical, but it gets tricky when the procedure is highly-invasive to the mother yet there are clear benefits for the child. A woman may prefer to avoid pain, inconvenience, expense and risks of a medical procedure as well as the emotional ordeal of undergoing a procedure. This may compromise her moral, religious or superstitious beliefs as well, which could cause her long-term suffering and adversely affect her relationship with her child (Hammond 166). This tough conflict between mother and child risks and benefits would have to be evaluated case by case for ethical solutions.

Those who favor genetic enhancements provide some disturbing reasons and opinions. Some claim that parents are morally obliged to pursue enhancements or to produce the best children possible (Sparrow 33). Yes, these are common expectations regarding parenting, but to incorporate gene therapy as part of these expectations is taking it to the next level, especially when gene therapy is still very new and very risky. Furthermore, some pessimists worry about elders being warehoused in communities or homes for the "genetically impaired" (Coates, Mahaffie, and Hines 180). Even the consideration of labeling those born naturally and unique without genetic modification as "genetically impaired" is disturbing.

Genetic enhancement can be classified as behavioral or physical. Physical enhancement is not ethical in that each person was created the way they are for a reason. If it becomes possible to genetically modify height, eye color, and more, then humans will become more and more alike. Individuality will

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ultimately be completely eliminated and mankind truly will become robots, living in uniform. For those who believe that people with physical “ inferior” qualities have a disadvantage because they are looked down upon, the proposed solution should focus on social engineering to teach people to be less judgmental and less biased as opposed to genetic engineering.

Behavioral enhancement, first of all, does not seem possible. It’s claimed that by taking genes from two honest parents, the offspring would be honest. Honesty, trustworthiness, kindness- all these traits that are considered in genetic enhancement- are not chromosomes that are installed into people. They are traits that a human develops over time and based on their surrounding. If people want children to develop these outstanding characteristics, genetic intervention is not the answer. The answer is again social engineering- teaching children to develop these traits through discipline and example (Walker 90).

The concern with social engineering is that it would take a long time to see change (Holtug 140). Genetic engineering, however, is also going to take a while with many, many more risks and down sides. Genetic engineering only affects those people who can afford it while social engineering goes viral and is free to all. Scientists spending all this time and resources on genetic engineering could instead study how humans best respond to learning social responsibilities and then implementing effective curriculum into schools, organizations, and families. After all, if social engineering is improved upon, these traits will be passed to future generations through parenting in the most natural, nurturing way.

An overview of genetic engineering displays many useful, practical techniques to improve upon aspects of this earth. When it comes to human genetic modification, however, there must be a clear establishment between treatment and enhancement and individuals must stand up against enhancement and instead encourage and practice positive social engineering.