

# Transhumanism and the Future of Humanity

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Genetic engineering has taken a pivotal role in the future of our society. As science progresses, the applications of gene editing in medical technologies expand, modifying DNA information to come up with medical solutions that could considerably improve our style of life. As intellectual and rational beings, we should not overlook the solutions this technology could bring.

Engineering genes can be broken down into a process of three basic steps: take specific DNA fragments from a donor organism; splicing said DNA fragment into a vector genome; and monitor the growth for any new changes in the appropriate host (“What Are Genomic Editing And CRISPR-Cas9?”). Some examples of new changes could include, but aren’t limited to: enhanced vision, increased bone and muscle density, and a reduced or eliminated risk of developing disease owing to prevention of genetic defects. These applications offer intrinsic benefits, improving quality of life. In the paper, “Ethical Issues in Human Enhancement,” Nick Bostrom, a modern philosopher, and Rebecca Roache point out the steps we take to ensure our children are born healthy. They give an example of how “pregnant mothers can take folic acid supplements which, whilst not affecting the genetic composition of the child, can affect the epigenetic expression of their genes. Young girls receive inoculations against rubella in order to avoid the risk of later giving birth to a child with brain damage and other problems associated with congenital rubella syndrome.” Moreover, we already improve the strength we possess naturally, without any form of training: “Increasing one’s inherent strength would dispense with the need to spend hours working out at the gym or exercising with a physiotherapist, freeing up time for other activities.” Bostrom extrapolates that the purpose of engineering genes is to create a human with a set amount of such desired physical features, in order to improve or extend life. Best of all, neither the woman or her genetically enhanced child would feel any side effects.

However, the ability to alter genes can have both negative and positive effects. In the article, “Infant Possibilities,” by Melinda Moyer, we are told a story about Kira Walker, the daughter of a recovering heroin addict who was born with health complications. There weren’t any local doctors who knew how to give her the correct treatment or medicine, so they sent her to Children's Mercy Hospital. This hospital is “one of a handful in the U.S. that can sequence babies’ whole genomes in just a few days” (Moyer 2014). Despite this, doctors learned that Kira had “inherited a mutated copy of a gene known as ABCC8 from her father” (Moyer 2014). The mutated gene caused her to secrete excess amounts of insulin, a hormone used to remove sugar from the blood. The doctors were able to cure her by removing the

cells that were harming her, while keeping the healthy one intact. This could be a possibility for anyone: “People are going to be able to come in and say, ‘I don't want my baby to have Down Syndrome...I want my baby to not carry the breast cancer gene’” (Moyer 2014). This technology is a blessing for only the ones who can afford it, because this “procedure can cost upwards of \$18,000” (55 Moyer 2014). Now that people have the possibility to pick and choose genes, a new concern arises in the community. Is a new age coming when we can design our child? With improper use of this technology, would we lose part of our identity?

As in every science, bioengineering is backed with ethical components that must be taken into account during its practice. It involves improvement and alterations at the gene level or protein levels to achieve the targeted goal. The changes, made in the embryo, bring genetic alterations in the DNA of the organism. This could lead to the goal of developing an ideal baby, but can also stimulate the loss of genetic diversity. Therefore, people’s ethical concerns must be balanced with people's aspirations to take the best and proper path. Peter Singer’s ethical point of view is that we should only edit genes when it is absolutely necessary, for healthy reasons. That could save many lives and avoid much pain for many families that could benefit from this technology (Singer 2017). Singer also deals with the possibility that alterations to genes might fail and termination of the child’s life be required. He suggests that children should not be declared alive until sometime after their birth. That way, if parents decide to dispose of them, they would not face legal consequences. However, the proposition of a proper application of gene editing technology would avoid all these kinds of social trauma for many parents, giving the child the opportunity of enjoying a regular and healthy life.

Ethics determines how we should act for the benefit of society and nature. This is no different in bioengineering, a science that enables modifications in the nature of living organisms. To experiment and work on a living being, whether for a greater good or not, brings up questions of ethics. This begs the questions: How far are you willing to go to improve a child’s life, and at what point do you draw the line? Should we be messing with human nature? In this light, Bostrom argues that genetically edited posthumanity is feared for two main reasons. One is that some may think it degrading, in a way that it may come back to harm us in the long run: for example, making one race look more like another. Also, genetically enhanced posthumanity may pose a slight threat to “ordinary humans.” Many people believe that such change is not good progress. Bostrom acknowledges that inheritable genetic modifications might split the species into “enhanced” and “natural” humans (“In Defense Of Posthuman Dignity”) in the worst case scenario.

Indeed, even with the benefits such technology can bring to our society, many philosophers still dismiss its application. Francis Fukuyama, for example, is a philosopher alert to the many dangers this technology could bring. In *Our Posthuman Future: Consequences of the Biotechnology Revolution*, Fukuyama states, “The most significant threat posed by contemporary biotechnology is the possibility that it will alter human nature and thereby move us into a post human stage of history” (2002, p. 7). He warns that benign consequences of this technology might veil its possible negative impact. Fukuyama alerts us to the social issues that would be aggravated by applying biotechnology to improve a child’s intelligence, height, eye color, etc.

However, are such issues a reason to deprive many kids born with disabilities, or dying at young ages due to illness, of the possibility of a joyful and healthy life? The

responsible application of this technology could be a great solution. Besides, as Fukuyama states, “Pessimism about the inevitability of technological advance is wrong...Many dangerous or ethically controversial technologies-weapons and nuclear power, ballistic missiles, biological and chemical warfare agents...are subject to effective political control and thus cannot be freely developed or traded” (“Gene Regime”). Therefore, enforcing restrictions for this technology, the same way as done on missiles and weapons, may avoid the fears of many. The knowledge and prediction of such possible outcomes should give us a hint of what path to take. A child could need genetic engineering to eliminate their disease. Perhaps we shouldn’t be afraid that he would get “too smart” or “have different colored eyes or hair” if it means saving and improving that child’s life.

There seem to be clear benefits from using this technology for our children. Humanity has always pursued the best solutions for our benefit, whether to increase our lifespan or to cure diseases like measles and cancer. Everyday technology can be used with the wrong purposes, such as destroying nature and creating nuclear weapons. However, it may not be fair to not save a life, or deny a child an opportunity to have a healthy life, because of assumptions about wrong usage. As with any science, genetic engineering and bioengineering should have its ethics and moral practice. But evidence suggests that, despite what society can or cannot become due to immoral and negligent actions, that should not be prioritized over giving an innocent newborn the opportunity to enjoy life.

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