

Genetic manipulation: a myth or a reality?

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The scenes of a science fiction movie show presumably unrealistic scientific inventions. In today's world, time travel, cloning, and even light sabers are some of the countless topics that are seemingly unattainable and just ideas of the imagination. Saying that these events are feasible would be completely absurd. However, with recent scientific advancements, science fiction is now becoming more of a reality rather than a fantasy. Nevertheless, only about twenty-five years ago, genetic engineering fell into this same, idealistic category. Although genetic engineering was once a totally impractical thought, today, it is a prominent issue around the world. The most controversial subject of genetic engineering deals with the impact that the manipulation of humans will have on the earth. The genetic engineering of humans will negatively impact the world due to the resulting social issues, religious objections, and medical concerns.

Although some people may view cloning as a last ditch response to infertility, others may view it as a way of selecting the characteristics of a child.

Creating a designer baby will not attract those parents who value having a genetic connection with their child. The woman who gave birth to a clone of Rodger Federer would be no more genetically related to the clone than she is to the original

A major social consideration of genetic engineering deals with power of the parents and scientists to manipulate children's genes. Parents want what is best for their children, but oftentimes, with the social pressures to be perfect, feel as though their child must fit in to the qualifications of society's view of perfection, influencing the development of their son or daughter.

Genetic engineering is damaging to society because as more and more

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parents turn to science to create a child that will be seemingly flawless, other members of the general public who may have a disease, begin to feel exiled or looked down upon. Opting to use genetic screening to make sure your child is disease ridden disrespects those individuals who are living their lives each day with it (Lee). Lee supports the idea that “ the actions taken by those who choose to screen to avoid affected pregnancies are taken as an assault on what it means to be a disabled person” (Lee). While genetic engineering may start out being used for health issues, the restricted use of science will rapidly begin to be used for nonmedical purposes.

Physicist Richard Steve agrees that “ genetic manipulation of embryos will ‘ start therapeutically’ and later be used in controlling evolution” (Johnson 19). After more diseases begin to be engineered out of the human race, scientists and parents are going to look at more specific flaws of a person. Randolph Steve says that asthma has been classified as a disease that scientists are able to genetically alter (19). Whereas some parents do not want their child living with asthma, others believe it is acceptable to genetically engineer a child to replace one who has passed away. The Matersons family case is very notorious because if the family is granted permission to select the sex of their child to be another girl, they may neglect their child and envision her to be like their deceased daughter (Lee). A major debate among society questions the reliability of genetic engineering. Parents and scientists may overlook different aspects of the process in order to get the child they want. Many cases of animals who have been genetically engineered have not grown into the life they expected it too. A group of pigs who were genetically engineered to grow faster to be used for food, developed arthritis and grew

to be extremely skinny (Johnson 18). Parents and scientists do not always know what is best for a child. Although they may be trying to improve their lives, they may end up hurting them and causing more suffering to both the child as well as their family. Social objections are not the only disagreements when dealing with a case like the Matersons; in addition, the religious beliefs of citizens also disapprove of the idea of genetic engineering humans.

The genetic engineering of humans is an outstandingly divisive subject when dealing with religion. By using sperm and egg cells, scientists created a cloned human embryo to use for testing; however, they never allowed the embryo to grow, killing it after a mere twelve days. Genetic Engineering becomes extremely contentious when dealing with cases such as this because Christians believe once the egg is fertilized it is human, so killing the embryo is like abortion. In contrast, scientists support the idea that an embryo is not considered human until roughly the fourteenth day of fertilization, when the embryo develops a nervous system (Apple). Issues such as this present themselves frequently in the field of genetic engineering, especially when families opt for the use of in vitro fertilization; this process may be selected for a manifold of diverse motives including the hopes of having a certain sex child or to avoid passing on a hereditary disease (Agar). Performing in vitro fertilization requires the creation of numerous embryos so that scientists are able to choose the one with the genetic make-up that meets the specifications of the family to insert in to the womb (Agar). This unethical procedure destroys the leftover human embryos, all the while defying every aspect of Christian beliefs. Additionally, scientists now have the ability to manipulate the human embryo to rid a

baby of diseases that may be present, by using a process of gene therapy and cloning. In doing so, the scientists would clone the cells of the embryo, except the “ bad” cell, replacing it with a “ good” cell. The process may seem flawless, but one has to consider what happens with the faulty embryo. The procedure violates the morals and ethics of many Christian people, as well as other religious followers, because the original embryo, a human life, is destroyed to create a more perfect begin (Bohlin). Scientists argue the genetic engineering of humans will “ better and improve man’s physical lot in life” (Apple), yet, “ they are willing to kill unborn children and destroy human embryos in pursuit of giving life to others” (Apple). The destruction of a human life violates the many principles the Bible teaches religious supporters.

From a religious perspective, God creates everything, including every person, with a purpose. The words of the Bible tell God’s people that God designs each individual the way He envisions them to be. Man did not create himself to be placed on this earth, but rather, God brought man in to life (Apple). The teachings of the Bible ensure to its people that man relies on God for existence. Due to the fact that, “ God is infinite in love...He wants what is ultimately best for all mankind” (Apple) and “ because He is infinite in knowledge God knows what we need” (Apple). Genetic engineering defies the laws and beliefs of religion and therefore, brings about various debates among society surrounding the principle that God creates life, and only He can create life (Apple). Genetic engineering threatens to alter the creations of God by influencing the way a person is meant be by removing, changing, or cloning the cells of a human embryo. “ In becoming our own “ gods”, we

shut out the God and Creator of the universe” (Apple). While those who support the religious stance that genetic engineering is unethical, many also worry over the medical issues that arise with such a risky procedure.

Many of the arguments supporting genetic engineering utilize the idea that manipulating genes will help cure diseases. However, genetic engineering techniques such as gene replacement are found to have a fifty percent failure rate in animals; unexpected mutations also occur five percent of the time when the gene has been effectively replaced (Bohlin). Moreover, there are always consequences to the manipulation of genes; most genes control the characteristics of more than one trait in a human being, so, by attempting to change one characteristic, other side effects are also likely to occur (“ Genetically Engineered”). Scientists hoping to increase the intelligence of a human being will be unable to do so by replacing a single gene in the DNA structure of a human; intelligence, like many other human characteristics is controlled by the collaboration of numerous genes (Agar). Unforeseen consequences of gene manipulation can be seen in experiments conducted through plants and animals, which are likely to indicate irreversible effects similar treatments would have on human beings. A case in which scientists influenced the genes of petunias to produce red buds had an unpredictable consequence when there was extremely hot weather causing the colors of the buds to change (“ Genetically Engineered). The results of experimental mishaps such as this foreshadow complications likely to occur when genetically engineering humans.

Gene therapy is a form of genetic engineering in which scientists often use a weak virus to transfer a new gene to tissue with the most obvious signs of disease in an attempt to help relieve a patient of pain. In 1999, this method was used on a patient, Jesse Gelsinger, to help aid her in fighting an enzyme deficiency. Shockingly, a mere four days later, the University of Pennsylvania sadly announced that their gene therapy procedure had failed and Gelsinger had died due to a severe immune reaction to the virus that was supposed to help transfer a new, helpful gene (Bohlin). Medical catastrophes such as this are likely to occur more regularly if the genetic engineering of humans continues to progress.

Social, religious, and medical concerns all arise when confronting the genetic engineering of humans. Despite the fact that parents want what is best for their children, they often overlook what is most important in life. God creates an image for every life, and every person, with flaws, because no one is perfect. Scientists and parents are trying to create the ultimate human being, in the process, lessening the value of the individual and everyone's own, unique talents. Science does not fully understand the human body and all of the possible outcomes, increasing the risks of unanticipated medical concerns.

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