

Come, Let Us Create and Recreate Humans

A Paper About Genetic Engineering

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I. Introduction

I have watched a movie entitled 6th day. It tells the story of a man who came home just to find out that everything precious to him had been stolen, his wife, his daughter, his house, his car, and worst his identity. Somebody has violated a 6th day law, that is a human had been cloned. This man tried to win back his identity until he was entangled in a web of conspiracy that involves a laboratory where people are being cloned at a speed of two hours. Even a cell could be extracted from anybody's hair and be made into a perfect clone of the owner. Some clone became sports heroes, mercenaries, and the like but they were given a short life's span so that they will be under the power of the laboratory owner. The owner in turn amass large amount of money in this modus operandi. The man played by Schwarzeneger later found out that the man he thought was a clone was the real one and he is the clone.

The term "genetic engineering" encapsulates people's fear regarding future of science, since it is seen as having the potential to manipulate human nature. For some it is "playing God" in the most objectionable of

ways.¹ However the term is a multi-faceted subject and must be scrutinized holistically in order for us to render sound if not just moral and ethical judgment.

This paper will explain some of the major forms of “eugenics” and their respective ethical, moral, theological, and practical arguments on this issue. Since it is expected that I present my stand, I will at the latter part of this paper. It is however my prayer that as I supply you with the background of the subject, you will be able to make a stand of your own.

Although I know that as a nation we are technologically behind, the question begins to haunt many questioning minds. Whether I have admitted it or not, genetic engineering is an issue we need to wrestle with, in order for us to evolve to a higher level of enlightenment. I ask you to be open and serious as well in dealing with the issue.

II. Definition of Terms

Consider three cases:

Case 1: A couple contacted a genetic counselor. They had a daughter of 20, 2 sons in their teens, and twins aged 5. The twins were born afflicted with microcephaly, resulting in heads about two thirds of the normal size. Both were born blind, one was deaf, the other had a rare and difficult blood disorder, and both were prone to epileptic seizures. At age 5, continued to cry from 16 to 18 hours a day and weighed only 17 pounds. The parents, devout and conservative Catholics, indicated that their daughter was about to become engaged. If she married and had children, they asked, would this strike again?²

¹ New Dictionary of Christian Ethics and Pastoral Theology (Leicester England: Intervarsity Press, 1995) p.403.

² Leroy Augenstein, *Come, Let Us Play God* (New York: Harper and Row, 1969), p.17.

Case 2: In 1961, an Italian biologist, Danielle Petrucci, fertilized a human egg in his laboratory and kept it alive in vitro (in the glass) for 29 days. Although at that time it had a noticeable heart beat, he let it die because it was monstrously defined. Another of his test-tube embryos lived for 59 days before a laboratory mistake caused its death. The Vatican sternly condemned Petrucci for his experiments, and he agreed to curtail this type of research.¹

Case 3: A sperm bank is established where frozen sperm from outstanding people would be stocked. The sperm would be carefully catalogued for its genetic traits and will be retained for at least 20 years and until the donor is dead so that additional assessments of his qualities could be made. Prospective parents could then select the traits that they wanted in their offspring.²

The cases I have mentioned define the two general classifications of genetic engineering, Negative and Positive Eugenics. Eugenics as a science is concerned with the improvements of hereditary qualities. Negative Eugenics is the attempt to eliminate hereditary defects that have already occurred to individuals or to prevent those who carry defective genes from passing them on to their offspring. Positive Eugenics, however is concerned about improving the race through various forms of controlled reproduction.³

Genetic Counseling – As knowledge of genetic disease increases, more people need information about their risks and help in working out how to handle this information. Genetic counseling centers, usually hospital based, aim both to inform and to provide such help.⁴

Genetic Screening – This practice was revolutionized in the late 1970's by the advent of the recombinant DNA

¹ James B. Nelson, *Human Medicine*(ethical perspective on new medical issues) (Minneapolis: Augsburg Publishing House, 1973), p.97.

² *Ibid.*, p 98.

³ *Ibid.*, p. 100.

⁴ New Dictionary of Christian Ethics and Pastoral Theology, p.402.

technologies, that in turn have led to the development of DNA probes for detecting large numbers of human genetic variants and genes with known functions.¹

In the genetic screening programs the focus shifts from the individual couple to the testing of whole groups of persons to determine carriers or actual presence of genetic disease. e.g. Screenings have detected sickle-cell trait and sickle-cell anemia among blacks, Tay-Sachs disease among Jewish groups, and phenylketonuria (PKU) in infants.²

Somatic Cell Gene Therapy – It was first tested in humans in 1989. It involves the correction of gene defects in patients' own cells, the cell in question being somatic cells (i.e. ordinary body cells). The strategy involves gene replacement, gene correction or gene augmentation, the genes being introduced via retroviral vectors. The aim of this form of gene therapy is to modify a particular cell population, and so rectify a particular disease in a particular disease (similar to organ transplantation).³

Germ Line Gene Therapy / Genetic and Fetal Therapy – This involves inserting the gene into the germ line (sperm, eggs and embryos), so that when modified individual reproduces, all offspring will have the inserted gene instead of the original defective one.

Germinal Choice – Artificial Insemination for Genetic Improvement. It involves the insertion of a gene in attempt to alter a particular trait of an individual. One example is the case no. 3 that I have given you.

Cloning: Carbon Copy People. "Clone" comes from the Greek word "cutting" and refers to a method of asexual reproduction. Sexual reproduction, whether in the forest, bed, or laboratory, requires the cooperation of both female and male, and the resulting offspring is genetically

¹ Ibid., p.404.

² J. Nelson, p 105.

³ New Dictionary of Christian Ethics and Pastoral Theology, p.404.

different from either parent. Asexual reproduction requires only one parent and produces a genetically-identical offspring¹. Biologist Leon R. Kass describes the process:

“The procedure is conceptually simple. The nucleus of a mature but unfertilized egg is removed (by microsurgery or by irradiation) and replaced by a nucleus obtained from a specialized somatic cell of an adult organism (e.g. , an intestinal cell or a skin cell). For reasons which are not yet understood, the egg with its transplanted nucleus develops as if it had been fertilized and, barring complications, may give rise to a normal adult organism.”²

Artificial Involuntariness and In Vitro Fertilization – It is the artificial insertion of an egg into a woman’s uterus or fallopian tubes. Technically it will be possible within the next few years to remove a fertilized egg from one woman’s body and to transplant it into a foster mother who could then carry the baby to term.³

AID (Artificial Insemination by Donor) – The woman is sterile, she receives a ripe egg from an anonymous donor. The egg is implanted in one of her fallopian tubes, and there it is fertilized by her husband through normal intercourse. Conception in this case is done through a normal coitus.

AIH (Artificial Insemination by Husband) – In this instance, the woman produces perfectly good eggs, but she has malformed oviducts and the sperm cannot reach them. The proposed solution is to remove several eggs from the ovaries by minor surgery, fertilize them in the laboratory with the husband’s sperm, grow the fertilized in

¹ J. Nelson, p.111.

² Ibid.

³ Ibid., p. 113.

a day or two, and implant one of them in the woman's uterus for normal development there.

III. Ethical and Moral Arguments

A. On Negative Eugenics

The proponents of negative Eugenics contend that due to the practice of genetic counseling and genetic screening, at least a thousand possible genetic defects are known. Prior to the late 1960's, most couples coming to the counselor have already produce one genetically defective child and wanted to know the likelihood of having another. Some came because of their ages or because of genetic diseases in their family histories. The genetic counselor then takes the detailed medical history of the family, and, after applying known genetic principles, quoting a risk figure to the couple.¹ Based on the result, the couple could then decide the most appropriate course of action. The process is very simple, it is called amniocentesis, a technique of withdrawing amniotic fluid which contains sex chromosomes of the fetal cells.

Almost seventy (70) disorders, most of them serious ones, can be detected with great accuracy through amniocentesis.

Some genetic counselors contend that there are no moral or ethical issues involved in what they are doing. However, the other camp maintains that even without the practice of gene augmentation and manipulation, just the practice of genetic screening and counseling involves lots of moral and ethical considerations.

One issue involves the counselor's responsibility to deal with the effects of genetic counseling upon the couple. Too often, the genetic diagnostic process is accompanied by considerable anxiety, marital stress and sexual maladjustments². If the genetic counselor restricts his

¹ Ibid., p. 100.

² Ibid, p. 101.

function as that of the information provider alone and bracket these emotional and interpersonal factors as being beyond his/her concern is somebody who treats his/her counselee as medical cases more than as human persons.

The second consideration is the issue of privacy that affects the patient in a genetic program. Who owns the information? Is it the possession of the couple alone or does it need to be furnished to family members? To a family doctor? To an insurance company? To an employer? Or to a government agency?

A number of moral issues cluster around the central question of genetic counseling: is its aim strictly therapeutic (for the immediate family) or is its aim also positively eugenic (concerned about the wider society)?

“The question, like that of human experimentation, frequently finds expression in the ethics of the right in tension with the ethics of the good, the ethics of known present obligations versus possible future benefits.”¹ At least one country, Denmark, has decided that in such cases society’s rights transcend those of the individual: marriage licenses are refused to persons carrying certain genetic defects until one of the couple has been sterilized.²

Ethicists who are against genetic counseling and screening represented Reed and Lappe mounts two major arguments. First, it is scientifically erroneous to think that even if all of the genetic counseling presently going on were to proceed with positively eugenic purpose any appreciable effect on the gene pool would take place. Spontaneous mutation and admixture continually reintroduce bad genes into the breeding population, and the scattered “individual sifters” (counselors) can hardly affect this situation. Secondly, the physician’s prime responsibility is always to the welfare of the individual patients.

¹ Ibid, p. 102.

² Ibid, p. 103.

The couple has a right to know that the counselor has their welfare uppermost in his/her mind, that their immediate interests will not be sacrificed for some long-term social interests. Upon such trust the medical profession crucially depends.¹ In other words, even with the most zealous measures, we could not eliminate genetic diseases from our society. The regular rate of genetic mutations would see to that.

Another problem should not be left out. For example, if the disease which was discovered has no effective cure available, what then? Anxiety may well be created without the offer of any positive reassurance. The other argument is, early knowledge of the disease for some families might give them time to adjust emotionally to the problem so that the diseased person might be treated with helpful human support rather than dehumanizing pity. Second, by detecting persons who are carrier of the disease, they can be assisted in making informed choices about having children.²

The strongest argument of those who are skeptical to gene therapy is the fact that "scientists are less optimistic that this can be done safely."³ Thomas Murray, hasting director affirms that "if you make a change in one area, it may cause very subtle changes in other areas."⁴ UCLA neurobiologist Jeremy Riffkin said: "Everything comes at a price, very often when there is a genetic change, when we improve or modify something, something else gets hit by it, so it's never a clean thing...we maybe on the road to programming our own extinction."⁵

While it is true that genetic and fetal gene therapy can detect and remove or augment cell that are potential carrier of cancer, hemophilia and diabetes or other forms of defects, gene therapy remains to be complex and the

¹ Ibid, p. 102.

² Ibid, p. 105.

³ Ibid., p. 108.

⁴ Time Magazine, September 13, 1999 issue, p. 20.

⁵ Ibid.

consequences can be incredibly serious. Even if the process will be flawless, which definitely is not, no one can give a guarantee that the “future offspring of the patient will not suffer genetic repercussions.”¹

But even if the treatment were to cure the diabetes problem, it is possible that the offspring of those treated might be afflicted with schizophrenia. Thus, even before the trouble was suspected, a whole generation of persons would have been produced with extensive genetic changes.

“Doubtless, the manipulation of human genes for therapeutic purposes will be undertaken. In fact, in one case this has been attempted already. However, in the present state of the art moral wisdom lies with those who insist upon a moratorium on any further human use until such time as the risks are much more fully known and controlled.”²

B. On Positive Eugenics

Paul Kurtz, the author of “Humanist Manifesto II” and “The Forbidden Fruit” wrote:

“We, not God, are responsible for our destiny. Accordingly we must create our own ethical universes. We should seek to transform a blind and conscious morality into a rationally based one, retaining the best wisdom of the past devising new ethical principles and judging them by their consequences and testing them in the context of lived experience.”³

Secular humanists express their support on abortion, Euthanasia, suicide and Eugenics among others. They speak glowingly about technology and emphatically deny that there is any God in control, “No deity will save us; we must save ourselves.”⁴ They affirm that “moral values de-

¹ J. Nelson, p. 108.

² Ibid., p. 109.

³ Norman Geisler, *Christian Ethics* (Michigan: Baker Book House, 1989), p. 174.

⁴ Ibid.

rive their source from human experience Ethics is autonomous and situational, needing no theological or ideological sanctions.”¹ All secular humanists believe in biological evolution. In fact many believed that because humans have a duty to guide the future evolution of the race. “For some the hope goes beyond a bionic man to genetically engineered humans ...gene splicing holds the promise of creating and patenting new animals. Sperm banks, artificial insemination and surrogate mothers now make it possible to breed superior human beings. The ultimate goal is a human being totally engineered to specification, the creation of a superior breed.”²

There is no longer a question on whether they ought to be done. But do we really need to create a superior breed of human beings? Is it scientifically viable?

The late Nobel laureate Dr. Herman J. Muller expressed his deep concern about the deterioration of the gene pool coupled with increasing need for more persons of intelligence and cooperation in our time. He envisioned a program of germinal choice. Sperm banks could be stocked with frozen sperm from outstanding men – with the likes of Leonardo, Descartes, Lincoln, Pasteur and Einstein.³ Ethicists and Scientists both shared Muller’s concern for the quality of future life and also raised host of others. First, unknown but injurious recessive genes might become widespread throughout the population; present day children of geniuses do not seem to validate the idea; temperamental compatibility and the psychological adjustments of the father could be acute; and the mutation rate of frozen semen is still unknown.... It is seriously debated whether the types of character traits which Muller wished to foster are all that inheritable.⁴ James F. Crow contends that “many of the traits of greatest im-

¹ Ibid.

² Ibid.

³ J. Nelson, p. 110.

⁴ Ibid., p. 109.

portance have a low heritability.” J. Scott maintains that experimented evidences show “the lack of congruence between genes and complex behavior characters. Hudson Hoagland adds his voice by saying, “We know too little about the human genotype to feel confidence in our ability to do anything to modify it in favor of desirable traits.”¹ There is now a question of scientific viability in the vision of the secular humanists.

Granting that their vision is scientifically viable, they still have to answer question of moral and social viability. Questions like: “Do we have the wisdom to determine what qualities are best for future human generations?” or “Are we prepared to use it as a general practice when couples have no natural barrier for prevention – thus radically sundering baby-making from the act of love-making? And what of the moral questions surrounding social policy?

Theodosios Dobzhansky said:

“Are we to have, in place of Plato’s philosopher-king a geneticist-king? And who will be president of the National Sperm Bank? What checks and balances are to be imposed on the genetic legislature and the genetic executive powers?” To us the words of Marcus Aurelius: “Who will guard the guardians?” Paul Ramsey’s suggestion is that it must be out rightly rejected “because of its massive assaults upon human freedom and its grave violation of the respect due to men and women now alive and to human parenthood as such.”²

The proponents of cloning would argue that it offers a more reliable way than sperm banks for genetic improvement, for superior persons could be exactly duplicated. Body-cell banks could replace sperm banks, and genetic copies of dead individuals could be made from

¹ Ibid. p. 110.

² Paul Ramsey, *Fabricated Man* (New Haven: Yale University Press, 1970) p. 5.

their frozen cells. Sets of genetically-identical persons could be produced for special tasks which require intense communication and certain physical characteristics such as astronauts, soldiers, and underwater explorers. Parents may choose the genotype of their prospective child: someone famous, a departed loved one, or even one of the parents themselves. And of course, the sex of the child could be chosen. The generational gap could be overcome, at least between those persons who were genetically identical. And finally, organ transplants between cloned pairs would create no problem of tissue rejection. Such are the arguments.¹

Opponents of cloning raise several morally significant scientific issues. Natural sexual reproduction ensures the genetic adaptability of persons to changing environments, and it is not at all clear that cloned persons would be comparably adaptable. Further, if cloned persons should suddenly return to reproduction with members of the opposite sex, an accumulation of deleterious recessive genes and mutation might be dumped into the genetic pool. Another objection, what about the mishaps and mistakes created in the cloning process?

Would the rejection of sexual reproduction in cloning threaten the whole meaning of human parenthood and add more threat to that crucial personalizing institution, the family? Would the cloned person's dignity and worth be threatened by having been deliberately denied a unique genotype? And would there be a dehumanizing effect upon the scientist himself, inasmuch as in the increase of his mastery over human genesis he is subverting the sense of mystery and came in the face of human creation?² These are the arguments of Kass and Ramsey. But to Sederberg and Fletcher these questions seem rhetorical. To the latter men the real question is whether

¹ J. Nelson, p. 112.

² *Ibid.*, p. 112.

or not cloning contributes to the fulfillment of human need, the rest is relative.¹

What about InVitro fertilization or to use the most common term “test tube babies”? An alternative applicable to perfectly healthy woman who does not want to interrupt her career with pregnancy’s inconveniences, or women who want to bear children but fear pregnancy, or women who are medically unable to experience pregnancy either because of health, might be seriously endangered, or because she lacks a uterus though is otherwise reproductively normal. In such a case, the egg would be fertilized by the woman and her husband through normal intercourse and then transplanted to a voluntary host mother who would carry the fetus to term, bear the child, and hand it back to the original couple.

But what are the risks involved? Any transplant handling of the fertilized egg runs the risk of chromosomal damage or the embryo. What if the host mother (whether mercenary or unpaid volunteer) becomes psychologically attached to the baby? What if the genetic mother who has good intentions at the start of the procedure later finds out that she is psychologically incapable of accepting the child she did not bear? How would such procedure alter the whole fabric of parent-child relationship? What is the child’s response to the discovery of his/her extraordinary origins?²

After presenting some of the arguments from both sides, we are still left with so many questions that none of us can answer objectively. Genetic manipulation can either be good or evil. The opponents of genetic engineering would say that even though bio-medical advancements would be good for society, still, there are many reasons why we should say “no” to it. One of them is the argument that it violates certain intrinsic human value. Its proponent however would say that genetic policies must

¹ Ibid., p. 113.

² Ibid., p. 115.

always be judged by the social consequences they produce. Fletcher for that matter would put his vote on the latter argument. What then?

IV. Theological Reflection

Genetic engineering is not a remote possibility; it is here and will always be here. It is now a subject of heated arguments between medical practitioners, ethicists, and theologians. These thinkers know that it is no longer a question of whether they ought to be done, and if they are done to what extent.

In the course of my study, I have come across two prominent positions, that of the secular humanist and the believers of the Judeo-Christian tradition. The former contends that God is not sovereign over life, man is. Human beings are the sole judge of their destiny. They believe that because human beings have reached the technological heights they have a duty to guide the future evolution of the race. Human actions need not be founded on theological and moral standards that often sound rhetorical, but many times not practical. The latter however, points to the nature of man as the springboard of their arguments. James Gustafson said, "There is both grandeur about human nature: we are capable of quite selfish moral wisdom, and we are prone to short-sighted and distorted, self-willed judgments. There is room then for both optimism and pessimism about your genetic future."¹ For the Judeo-Christian adherents, man has no grasp over life as what the humanist would say, for regardless of their seemingly endless conquest of science and technology, there are still things that are beyond their comprehension. God is the creator of life (Gen.1:21,27), and he alone sustains it (Acts 17:28), God has the power over it (Job 1:21, Deut. 32:39). Contrary to the secular

¹ James Gustafson, *Basic Ethical issues in the Bio-medical Field* Vol.LIII (Summer 1970) p. 153.

humanists point of view that man is the master of his destiny, Judeo-Christian adherents believe that God is. In spite of our scientific advancement, we have not created life. Humans have not just produced “some biologically interesting chemicals (e.g. amino acids), spliced and crossed some existing forms of Life. But humans have not created from scratch their own new living things, to say nothing of a full-pledged human being”.

We cannot control death, there are diseases we cannot comprehend, much more prevent and cure. Human limitations then prompt us to weigh everything with utmost care. If we can do it, it does not mean that we should do it.

Secular humanists seem so confident that we are on our way in creating a superior race through eugenics, and to the extreme. With religious fervor see themselves as “messiah” who will bring about genetics awakening. The other camps are totally skeptical if not indifferent to eugenics. Conservative ones would immediately dismiss it as a “wolf in sheep’s’ clothing”, or something that is described in the proverbial maxim as “the way which seem good to men but to the end thereof is destruction.”

But as I sit beside the hospital bed of my hemophilic friend as he was undergoing blood transfusion, as I stare at his very pale face and frail body, and as I ponder upon the fact that hemophilia is an incurable disease, I cannot help but feel the deep sorrow for my friend who will go through this painful order the rest of his life. I have talked with his doctor who told me that hemophilia is a genetically-caused disease. His mother might be the carrier of the defective genes which might have been transmitted by her ancestors many generations back which she has passed to her offspring as well. The female offspring are potential carriers and most likely 50% of all the male offspring will manifest the disease. The process of passing the defective genes will go on and on unless of course aborted by no other than germ line gene therapy which is one of the many facets of genetic engineering. In

spite of what they say about genetic engineering, I ask the question of whether there is a divine and providential process guiding the genetic future. When I ask the question I exclude the idea that genetic engineering is now being used in food production which they say is one of the solutions to famine and poverty caused by overpopulation. Genetic engineering will ensure that the produce will not only be bountiful but of superior quality as well. I also exclude the idea that it is used in animals for various practical reasons. For example, in the importation of superior breed sheep, cows, horses and goats, genetic engineering is being used. To minimize expenses and to ensure ease in handling the delivery, the embryos of these animals are transferred to the fallopian tube of a rabbit. Upon arrival to their respective destination, there is a simple operation of removing the embryo and transferring it to a surrogate mother which will carry it to term. My reflection is only centered to human application of genetic engineering.

Is it not divine will that my friend's defective genes that carry a deadly disease will no longer be passed to his offspring? Does God oppose the idea that many deadly and agonizing diseases among fetuses will be detected through genetic screening and corrected through genetic alteration? Is it not within the orbit of His divine project of "wholeness" or salvation for that matter? Does God hate the idea that couples who can not bear children because of some factors, a heart problem for instance, are now given the chance to have children through AID or AIH? Some ethicists lean too hard on one side or on the other. Paul Ramsey for instance would maintain that regardless of the good effects of these bio-medical innovations they must be rejected because they break some intrinsic value. Joseph Fletcher on the one hand, would push that the matter be judged in the light of the social consequences they produce. We need to hear both voices but I believe that both of them even if joined together, are not sufficient. There are times when our focus is only

on the individual rights and values that we failed to see the changing and pressing needs of the human community. "There is relativity and a historicity about our notions of human rights that makes them less-than absolute."¹

What then is my stand on the issue of genetic engineering? My conviction is to allow its practice or application on human beings. But to what extent should we allow its practice? Some would say that there is no limit to the pursuit of their scientific prowess, but I believe that we are not fated to do everything genetically even though we have the power and the capacity to do it. Some would ask questions like: "What is human limitation? How do we know that humans have already achieved their limitations? If humans can still do it, it means that they have not yet achieved their limits."² Freedom for scientific research is an important value, but it is not absolute. If the aim of genetic engineering is to correct and not to create life as in the case of negative eugenics, I believe it is consistent with the aim of Christianity which is wholeness. There is no biblical imperative that says that we can not work to correct these imperfections. In fact, the Bible recommends medicine (I Tim. 5:23) and prayer for healing (James 5:14,15). "Jesus manifested his approval of a medically corrective ministry by spending much of his time healing the sick". He gave his apostles the ability to heal the sick (Matt. 10;8). There is a significant difference between correcting imperfect humans and creating perfect ones of our own. Since the aim of negative eugenics is the alleviation of the disease, it does not deviate from the Christian goal. However, in its practice, scientists should see to it that side effects should be studied thoroughly so as not to worsen the case. The fact that they can do it does not mean that they should do it; it should

¹ Ibid., p.153

² Questions and comment raised by F.Neil G. Jalando-on during class discussion.

be scrutinized and weighed from all angles so that the desired goals are achieved. Goals, which are for the betterment of the individual. In this business sometimes individuals are treated like guinea pigs to be studied and experimented upon, this is not the aim of medicine.

In the case of positive eugenics which aims for the improvement of human race, I would like to raise some important questions: do we really have a duty to create superior human beings, humans made to specification? Do we really have the power to create perfect humans? And if we have, do we have the moral muscle to resist the temptation to use this power to manipulate God's creation, to play God? Do we have the power to undo the possible damage it could create? What side-effects should we tolerate? Harvard historian Donald Fleming notes that: "the attitude of many biomedical scientists is condescending toward religion, and yet they share an attitude towards their own work and destiny which is clearly religious in character." They believe that the biological revolution will save humankind. "They are men of hope and vision. They are also men who come perilously close to the view that in their particular hopes and visions is the path of human salvation."¹ The problem still lies in the ambivalent human nature. Human beings are capable of adhering to noble ideals, and as well to venal dispositions. From a Christian standpoint genetic engineering which aims at the creation and improvement of the human race is playing God and not serving God. It is violating the fundamental principle that we are only custodians of human life and not its creators. "It is the ultimate in human presumption and pride, man's technological tower of Babel (Gen.11:1-2)."² Sometimes human beings have

¹ J. Nelson, p. 121.

² N. Geisler, p. 190.

To be honest, I am giving artificial in ovulation and in vitro fertilization, being part of positive eugenics, a benefit of the doubt. In the case of AIH for instance, both eggs and sperms belong to the wife and husband and wife respectively, so the moral impediment is lesser. In

this tendency to think that there is no limit to what they can do. Human history would however, tell us that humans are capable of creating some things that pose as threat to human existence. And when the adverse effect of what has been done becomes a clear and present danger, he finds out that he is unable to undo its complications. Take for instance, the discovery of atomic energy, its main purpose was for the good of humanity but humans used it as element of destruction, genocidal weapon, and an agent of domination. It is used to instill fear among peoples and races. In spite of the advancement in science and technology, man is still unable to stop death and the spread and prevention of deadly diseases like AIDS and cancer. There are still human limitations in the understanding of life, which restrains him from doing anything that seems pleasing in his sight. There are still mysteries that can not be fathomed by human understanding, and these mysteries make us human, and in this truth is the foundation of my conviction that only God is sovereign over life. Our human knowledge must be used to serve God and not to play God. It is hard to be absolute in your stand in this issue, especially with its ambivalent nature and multi-faceted ethical and theological implications, but with Nelson, I also believe that a:

“Hopeful Christian vision of what makes human life truly human will encourage those genetic efforts which are now relieving much suffering and contributing to human wholeness. On the other hand, a wise Christian realism will challenge the biological engineers who are not content with humankind, but are

AID, although the egg does not belong to the wife, but the fertilization is done by the husband and wife through normal coitus. So the argument that adultery has been committed has a weak ground. As long as they are done not for human convenience but to help couples fulfill procreation. However in cases where couples have no problem in procreation, I oppose their implementation.

ambitiously intent upon improving the race. Without ingratitude to the brilliance of their genetic achievements, some of us believe that salvation lies beyond any human revolution and that human movement which claims ultimacy for its own vision breeds tragedy. Such is the posture of hopeful realism.”¹

I close by saying that God’s will is not devoid of common sense and justice, and I can not help but raise the broader issue of fairness. Will such enhancement be available to all or only for those who can afford it? In the case of cloning, for instance, many parents would want it. Who would not want a hazel-eyed blondie with superior I.Q and sports prowess, towering height, not to mention good looks? But who will have access to it? Will it not create a new form of discrimination? How would it affect our decision to marry – those with altered genes or without? What sort of parent would I be if I have not mortgaged the house in order to have a cloned child? Would my child accuse me because I did not make him/her as beautiful and smart as the others? Granting for the sake of argument that it is accessible to all, having a human cloned is just as cheap as removing a wart, would you still want it? Ethicist Elizabeth Bounds of Emory University’s Candler School of Theology echoes my fears when she said:

“I find this frightening. We run the risk of sharing a much more homogenous community around certain dominant values, a far more engineered community...at the moment nature orchestrates our diversity. But human nature resists leaving so much to chance if we have a choice. Maybe this issue would help us to make some room for reflection on the question like when better is not necessarily good.”

¹ J. Nelson, p. 122.