

Human Engineering: A Christian's Concern

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In 1932, Aldous Huxley published a novel called *Brave New World*. In the early chapters of the book he describes the baby hatchery of this brave new world.

“Next to the Liners stood the Matriculators. The procession advanced; one by one the eggs were transferred from their test tubes to the larger containers, deftly the peritoneal lining was slit, the morula dropped into place, the saline solution poured in . . . and already the bottle has passed and it was the turn of the labelers. Heredity, date of fertilization, membership of Bokanovsky Group— details were transferred from test tube to bottle.”

“On Rack 10 rows of next generation's chemical workers were being trained in the toleration of lead, caustic soda, tar, chlorine. The first of a batch of two hundred and fifty embryonic rocket-plane engineers was just passing the eleven hundred meter mark on Rack 3. A special mechanism kept their containers in constant rotation: ‘To improve their sense of balance,’ Mr. Foster explained. ‘Doing repairs on the outside of a rocket in mid-air is a ticklish job. We slacken off the circulation when they're right way up so that they're half-starved and. . . learn to associate topsy turvydom with well-being; in fact, they're only truly happy when they're standing on their heads.’ ”

When Huxley wrote this book in 1932, it was science fiction about 400 years in the future. Later, in another book *Brave New World Revisited*, his prediction was only a hundred years in the future. As events have proved he was still off about 50 years. Many of the science fiction ideas expressed in his book are no longer science fiction but reality. They have already happened.

The geneticist is not attracting a great deal of attention as yet but he is taking prodigious leaps in the area of biochemistry (living chemistry) or genetics. Things are happening so fast that in 1975 geneticists called a stop to their work to have a moratorium or discussion on how to regulate their work and safeguard humanity. Never before had scientists agreed to do something like that. They have, to a large extent, discovered in the genes and in the substance called D.N.A. (for deoxyribonucleic acid) the very key to life. They practically hold the power of God over life in their own hands. Dr. Robert Sinsheimer, professor at Cal. Tech, in California has said, “For the first time in all a living creature understands its origin and can undertake to design its future.” He continued by adding “Who can know what man may become as we choose our way across the endless future? The next step for evolution is ours.” p. 350 *Ethical Issues in Human Genetics*.

The work of geneticists today covers the broad field of research known as and called “genetic engineering”. According to the Oct. 22, 1979 issue of “*The Business News*”; “The most potent tool in genetic engineering is recombinant D.N.A. By itself D.N.A. stands for deoxyribonucleic acid, the family of immensely complex molecules that carry the genetic code common to all life forms. Recombinant D.N.A. is produced when genetic material from one living organism is combined with that of another. The ability to move genes from one organism to another, allows biotechnologists to give organisms. . . capabilities that they do not have in nature.”

Genetic engineering has moved ahead so fast that there isn't a book printed about it that is current. (The books that I've been able to find, copyrighted as late as 1977, are outdated). What the most recent of these books in substance have predicted has already come to pass. This becomes abundantly clear when one reads recently printed periodical articles.

By using recombinant D.N.A., scientists have “already accomplished some startling feats and accomplished them much sooner than even the most optimistic predictions of a few years ago.

Bacteria have been induced to make for us two human hormones we have not heretofore been able to synthesize: human growth hormone and insulin.” (The Nation, Oct. 13, 1979, p. 326) Geneticists predict that in the near future they will be able to produce plants that will fertilize themselves, eradicate genetic defects and disease from human fetuses and a host of other unbelievable wonders.

Through the manipulation of genes by the recombinant D.N.A. method, scientists have produced a multicolored mouse that has six parents; a mouse with three parents— a father, a mother, and a cancer; seven mice with only one parent, conceived without a father; a cloned frog and who knows what else by now. Dr. Robert Sinsheimer has said, “that a human clone will be produced by 1980.” (Genetic Revolution: Shaping Life for Tomorrow, D.S. Halacy Jr. p. 164). I don’t believe this prediction has come true.

The whole field of genetic engineering is extremely broad and complicated and has many ethical implications. My chief concern is the field of Human Engineering. This is but one facet of the whole and of tremendous importance to us as Christians.

Scientists are quick to point out the ‘blessings’ of human engineering.

By using a recently developed technology called amniocentesis, doctors are able to test a fourteen to sixteen week old fetus for genetic diseases. This test can conclusively spot quite a large number of genetic defects including Mongoloidism. When these tests prove positive, the mother and father will be advised to abort the fetus. They will also be advised to submit to a tubal ligation to prevent the birth of any other defective children. Theologian Ramsey says that anyone who would opt to have such defective children are “genetically imprudent and that such imprudence is immoral.” Obviously, the so-called ‘blessing’ of this advance, is enjoyed by the parents and the world community. It’s also a ‘blessing’ for the unborn aborted fetus. Apparently one of the geneticist’s chief concerns is to do away with the effects of the curse and produce the perfect human being. To me such information is a curse because it would bring with it the very real temptation to rationalize the way the scientist does and permit an abortion. What a terrible decision to have to make and then under extreme social pressure.

Joseph Fletcher—a Massachusetts moral philosopher— at a recent National Symposium on Law and Genetics said, “The right to reproduce is a privilege. Our gonads and gametes are not private possessions.” (Science News, “Questioning the New Genetics” by Joan Arehart Treichel) He also “flatly asserted. . .that those of us with genetically defective pedigrees do not have the right to reproduce.” Under such conditions of pressure should we allow our wives to submit to amniocentesis?

A couple of years ago I read, for the first time in my life, the word “clone”. I didn’t know what it meant. I discovered that to clone means to reproduce genetically an exact replica of another organism. In the magazines and books I’ve read in regard to this subject, most scientists are convinced that they will be able to clone humans. They’ve already done so with frogs and bacteria. Dr. Robert Sinsheimer, as I quoted earlier, said that a human clone will be produced by 1980. His colleague, Dr. James F. Boemer predicted in 1971 that “human mass production would be possible within fifteen years”. (Genetic Revolution p. 163) That gives us until 1986. Lord Louis Rothschild, an English scientist, says, “The cloning of humans is a near possibility soon to be realized.” (Genetic Revolution, p. 163) The process is a fairly complicated one but most of the needed technology is already available. Apparently all that would be necessary is to transplant the nucleus of a body cell of the person to be cloned into a newly fertilized egg cell after removing its nucleus and before the egg cell begins to divide.

We should face squarely, in this regard, the question: is cloning ethical? What about the

soul? Would such a cloned creature share the soul of the person he cloned? I'm assuming that cloning will become an eventuality soon but maybe it really isn't possible. Will God really permit man to go this far? Another question we could face is—What does it mean to be created in God's image if man selects and shapes human intelligence and personality?

Finally, I'd like to consider the idea of in vitro fertilization. This means fertilization that takes place in glass test tubes. We already have a number of test tube babies in this world. There are at least ten hospitals or university facilities in the U.S. that could carry out in vitro fertilization and are anxious to begin. So far they do not have the technology to raise the fetus for nine months in a glass jar but some scientists are confident that these problems will be solved in the near future. An Italian scientist kept a human embryo alive for fifty-nine days outside the womb and the Russians have claimed to have kept a fetus alive for six months.

In the book *Genetic Revolution: Shaping Life for Tomorrow*, Mr. Halary Jr. says "The artificial womb is a reality. . .a chamber filled with synthetic amniotic fluid. . .has kept lamb fetuses alive for two days. . .An enlightened female should not put up with nine months of physical suffering to produce a child, one argument, goes. . . . Procreation. . .would be replaced by clinical techniques for joining sperm and egg in an artificial womb and would take place where it could be scientifically nourished and carefully monitored to guarantee a perfect product." (p. 154) Women would now be saved not "in child bearing" but by the mighty god Science. Again we see an obvious attempt and effort on the part of man to do away with God's curse.

What do we as God's people say about all this? Do we close our eyes, ignore what's going on and try to convince ourselves that these things will never happen?

As children of God we must certainly marvel, as we alone can, at the mighty creative work of God. As each new mystery about life is unraveled before our eyes we bow in humble reverence and awe before Him.

We are going to have to take a stand either for or against the various advances that are being made. We had better be knowledgeable on the subject. I predict that if God allows man to proceed and to accomplish what man has set out to do, that in the near future our consistories, classis and Synod will be forced to grapple with the moral, ethical, spiritual issues that these advances force upon us.

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