

# Genetic Engineering

The thing that's interesting about Christians and their "Intelligent Design" theory is that it is more likely in our future than in our past. The human race is on the verge of taking over our own evolution. We are at the point where we can engineer our future generations. And even though some of what I am about to write about are things we can't do today, many are things that we are about to be able to do in the next 10, 20, 50 or 100 years.

We already have the technology to do cloning. We can make a copy of existing life forms that are just like an identical twin of the original. As of the time I write this, human have not been cloned, but it is generally accepted in the scientific world that we could do it if we wanted to. No one has had the nerve to actually make it happen. But the fact that we can, makes us have to decide if we will or not.

And - we also have the technology not just to clone, but to make genetic improvements. Among these new creations are cantaloupe and yellow squash containing genes from bacteria and viruses, potatoes with chicken and wax moth genes, tomatoes with flounder and tobacco genes, corn with firefly genes, and rice with pea genes. These are essentially new custom life forms that we manufactured. All of this is just the beginning. This is the Frontier of Knowledge and we are just scratching the surface. We are making (what we believe) are better life forms. It's still the same species - but we have made a jump beyond evolution.

So far mankind has to what I would call "Assisted Natural Evolution" which is referred to as breeding. In pure evolution it's all about survival and reproduction, natural selection over billions of years. But thousands of years ago humans started to take control of the evolutionary process by selecting ourselves which animals to breed and we control what individuals survive and reproduce base on our own needs. In many cases we are creating species for the purpose of making them food. This is also true of crops. We have made huge advances in controlling the evolution of plants that we use for food and medicine. But so far we have done it through traditional reproductive means.

Humans are just another animal in the world of genetic engineering. Anything that is possible to do to animals will probably work on humans as well.

With genetic engineering we are changing the rules and speeding up evolution in ways that never could occur naturally. We are combining things that would not otherwise be combinable. This new way is far faster because we don't have to deal in generations and randomness anymore. We can just take the pieces we want and just put them together.

I believe that in the near future, when we can replicate any genetic sequence we want, and when we really understand genetics, we will be able to make any life form we choose with whatever characteristics we want, including custom versions of humans. The genetically superior race of super humans is not too far off in our future, and what we are today might be replaced but what we decide we are going to become, assuming that we make the choice, doesn't happen by accident.

We are already working towards using Gene Therapy to "fix" genetic disorders. If a person has a genetic defect, a gene that "normal" people have that is not functioning correctly, what is the harm in "fixing" it? But - what does fixing mean? Suppose that we can make a fix that improves humans beyond what any human has achieved through evolution. For example, we fix the genetic disorder we all share that causes aging. With the repaired gene we can live to be 150 years old. It might actually reverse the aging process allowing older people to become younger again, or partially younger in some tissues. If that were available today, would I go for it? You bet I would!

Some people would argue that humans weren't meant to live to be 150 years old. But we are already cheating nature with the technology we have now. If we went back to "natural" we would have to give up all our medical science and we would go back to living half as long. Do we want to do that? I surely don't think so. So I'm not afraid of medical science getting better than it is today --as long as that progress really is better

Getting back on track - what does repairing genetic problems entail and when does it become genetic improvements? And - is that an issue? For example, suppose we could fix a gene that increased the sensitivity of our eyes to light, allowing us to see in the dark the way a cat can. Should we do that? Should we give people that choice? And if we do - that trait might be passed on to future generations. What about stronger bones? With genetic engineering, we might put the penis enlargement industry out of business, and maybe get less junk email. We could add cancer resistance, disease resistance, weight control, cure baldness, color blindness, Alzheimer's, ALS, stronger, taller, faster, smarter ... who can argue with that?

And then - taking it to the next level. What if we start using genes from other species to create humans with claws? Might come in handy if you work for the telephone company and are climbing poles all day. I think a lot of people might choose to have fur. Something like that might make living in Canada more attractive and might eliminate the need for clothing. The ability to digest cellulose might help ease world hunger providing a new source of nutrition. Or - we might even go to the next level and skip animal genes and just design new genes on computers. Once we figure it out, we could build a new form of life that is superior to us. And that life form would then do the same to make something that takes it to the next level.

Would this be a good thing? It sure seems like it. Unless, of course, there is a down side, and will we figure out the down side if there is one? And surely there will be problems that we have to deal with. The Church of Reality has the responsibility of making sure that reality is part of the process and that those who develop this technology think things through as we move forward. We need to ensure that there are safeguards in place so that we don't accidentally do something, like when we created "killer bees", that we are going to regret.

If we can choose what we will become, then let us make the best choice possible.

The technology is coming. Unless we destroy ourselves soon, the decision will be before us. We take the position therefore that it is not too early to start thinking about it and debating it. We can at least make some science fiction movies about it and scare the public into wondering, if we can choose what we will become, what is it that we would want to be. For better or for worse - we will soon have to make that choice. Let us then commit ourselves to that we will make a good choice and that we will put forth the effort to ensure that we choose as carefully as we can to do the right thing.