

# Genetic engineering: boon or bane?



**ASSIGN  
BUSTER**

Some are well-grounded and advise caution; others are the product of misinformation, religious bigotry, or madness. Religious objections assume the existence of some creator whose will is defied by genetic engineering and secular objections assume that life in its “natural” state, unaltered by human intention, is inviolable because of its inherent dignity. <sup>1</sup> One of the biggest concerns of genetic engineering is that should we determine our evolutionary future? Have we reached such a peak of humanity that we can create and modify lives without fear of exploitation, abuse or neglect? Perhaps.

There has caused a great hullabaloo over genetic engineering. Some advocate it, saying that, in time, scientists may be able to remove from the cell certain sections of the chromosome that contains genes that are defective and replace them, thereby refurbishing or repairing the cell. This would prevent parents from passing on to children genetically transmitted diseases. At the present stage of this new experimental process, such manipulation of the human cell is becoming more evitable. See modification of the genome as the ‘jenny-out-of-the bottle.’ It cannot be unlearned. Science is an ever forward science.

It looks back only to see where it went wrong and learn from that. Science is a discipline that will not and cannot be stopped. The quest to ‘know’ is innate in the human species. Human cloning has become one of the most controversial debates about reproduction in Western civilization. Human cloning represents asexual reproduction, but the critics of human cloning argue that the result of cloning is not a new individual who is genetically unique. There is also awareness in the scientific community, including the

medical community, that human cloning and the creation of clones are inevitable.

Psychology and other social sciences, together with the natural sciences, will need to find ways to help the healthcare system, to be prepared to face the new challenges introduced by the techniques of human cloning. 2 Since the development of powerful microscopes that allow men to probe deeper into the world Of life, the cell, and to see features that they never before knew existed, some researchers and psychologists and even philosophers have theorized that men may be able to ascertain the complete genetic code, even the “ secret of life. They extend their suppositions, even conjecturing that, by genetic manipulation; e will be able to treat successfully or even cure hereditary diseases and defects and, conceivably, make a race having superior bodies, aptitude and intelligence. The question is will genetic engineering advance the human race? This is a matter I would be troubled with. Do we want ‘ super humans’ in amidst of so-called less ‘ sopped up’ human race? I would be apprehensive with how a mixed society of mankind would be able to intermingle. M not suggesting take a stand against it, rather, we need to anticipate the effect and be prepared to modulate and acclimatize them. There are moral implications that we should consider carefully. First, ethical concerns, religious and secular, about the intrinsic morality or immorality of genetic engineering; second, the potential prescient or damning consequences of genetic engineering and where it will lead. This potential for genetic engineering of enhancements to complex human traits has been the subject of vigorous debate from physician, clerics, scientists and even philosophers for a number Of years.

Most of the debate has centered on the possible moral and ethical consequences of pursuing enhancements, especially those that might affect multifaceted behaviors and components of personality. Much is in play to be found on the actual method of implementing this technology. This is a ; thought experiment about the likely form of final preclinical testing for a technology to enhance intelligence as a prototypical multiplex trait.

The significance and the potential dangers of implementing enhancements in humans, especially the highly valued traits such as intelligence, would mandate a meticulous and methodical program of testing in lower forms human primates. <sup>3</sup> Finally, bioengineering has the potential to transform our lives in many costive ways. Dismissing this new technology on the ground that it is aberrant or innately immoral is unwarranted and seems to be based on little more than an intuitive adverse reaction. To simply suggest we will develop a society of ‘ machines’ is simply gibberish and complete nonsense.

Biotechnology is an expression of already well-established techniques. There are risks involved with this new technology, but provided that it is appropriately regulated, its positive benefits will exceed dreams of a well addressed society. It would be a mistake to employ set of laws that supportability restrict implementation of genetic engineering. Existing machinery that ensures the safety of testing code of behavior should be decade Tate for somatic genetic psychoanalysis for humans. As we attend the progression of indubitably new and expansive gears of protection will be set in place.

Gremlin modification for humans should not be absolutely prohibited, definitely not in advance of their accessibility. Given the special risks created by human gremlin alterations, each proposed modification needs to be carefully assessed and evaluated, not simply with respect to erect benefits and harms, but also regarding the effects that the proposed alteration would have on our collective structure and the allocation of society. Some have compared genetic engineering to the discharging all the ills of humankind into the world.

If legendary and mythological similarities are appropriate, an appropriate comparison to the gift of fire from Prometheus would be applicable: genetic engineering can provide enormous benefits provided it is used cautiously, prudently and carefully. 4 The book *Rationality and the Genetic Challenge* discusses the ethics of human genetic modification ND the bioethics rationalities that inform the different ethical conclusions. It is aimed at correcting the belief that “ only one rationality exists or one morality exists; that those that disagree [with them] are unreasonable or evil. HΓyr argues that there are multiple rationalities, and that even though ethical issues may have solutions within individual rationalities, disagreements that have their root in separate rational approaches cannot be universally solved by intellectual arguments. In debates about the ethics of using new biotechnologist to genetically modify human beings, the normal Tate is one of fundamental disagreement over almost all of the anticipated uses to which the technology could be put.

HΓyear’s point is that such a state of affairs is not necessarily due to a lack of reason because there are many, equally valid, ways of being reasonable. 5

Most of us have heard the term ‘ designer baby. The term invokes images of couples with a catalogue gathering and selecting features, characteristics and traits one at a time; intelligence, sex, eye and hair color, height, various talents. The idea is equally exciting and terrifying and rife with ethical issues.

The term ‘ designer baby’ is ally incorrect or inappropriate, a closer term might be ‘ selected baby’. The scientific truth is far removed from the media passion. You can select, off the shelf, an embryo with the right chi Romeos to produce the child of your chosen sex or have the embryo screened for a possible inherited genetic disorder, everything else is pure conjecture. As our technical abilities progress, citizens will have to cope with the ethical implications of designer babies, and governments will have to define a regulatory course.

We will have to respond to some elemental questions: How much power should parents ND doctors have over the design of their children? How much power should governments have over parents and doctors? These decisions should be made based on facts and on our social beliefs. The debate is certainly fired with intensity on both sides. People have been in search of the ability to create ‘ designer babies’ for some time. Character and trait selection hasn’t always been done using scientifically proven methods but it has been around for as long as the human race has been procreating.

In many respects human nature seeks to choose those characteristics which we find most attractive, e choose the partner we wish to breed with, someone who has the features we like, someone we approve of, has traits or characteristics we desire in our children. Now this process does not

necessarily takes place on a wholly conscious level but let's not fool ourselves into thinking it all pure chance. In prosperous societies we have few misgivings about transforming ourselves whether it is desires or happiness. Why is it so strange that we should desire to fill our offspring with such things?

The protagonist argues that whatever techniques are available to help prevent certain genetic diseases will protect children from suffering debilitating diseases and deformities. If we want the best for our children, why shouldn't we use the technology? The majority of techniques accessible today can only be used by parents who need the help of fertility clinics to have children; shouldn't they be entitled to a healthy one? A great many naturally conceived embryos are rejected from the womb for defects; by screening embryos, we are doing what nature would normally do for us.

Imagine the reaction nowadays if organ transplantation were to be forbidden or even legally prohibited because it is "unnatural"—even though that is what some people called for when transplantation was a medical novelty. It is hard to see how the replacement of a defective gene is any less "natural" than the replacement of a defective organ. The major difference is the entirely beneficial one that medical intervention need occur only once around the time of conception, and the benefits would be inherited by the child and its descendants.

I think a child with greater capacities to improve human society would be ascribed to man. Over time, all of these means of genetic change have resulted in the current form of humans. The process of tuition, responsible

for the emergence of genetic diseases, is also the underlying mechanism of evolution. Evolution is the process of genetic change over time, as some of these changes result in a fitter version of the species more apt to survive than others, and these advantageous traits are then passed on to succeeding generations. Then there are the antagonist who would argue once we start down the 'slippery slope' of eliminating embryos because they are diseased, what is to stop us from picking babies for their physical or psychological traits? There is always the looming shadow of eugenics... Hat included forced sterilizations, selective breeding, and racial hygiene. There are major social concerns—such as: will we breed a race of super humans who look down on those without genetic enhancements? Will these new technologies only be available to the wealthy—resulting in a lower class that will still suffer from inherited diseases and disabilities?

Will discrimination against people already born with disabilities increase if they are perceived as genetically inferior? Tampering with the human genetic structure might actually have unintended and unpredictable consequences that could damage the gene pool. Many of the procedures related to designing babies involve terminating embryos; many disapprove of this on moral and religious grounds. 7 Here we would employ the ethical advantages and disadvantages on a rigorous and meticulous standard. Certainly, compassion, empathy and understanding need be externalities.

What was once so deeply disturbing now seems to many people just another part of the modern world. Will the same be said one day of children with genetically enhanced intelligence, endurance, and other traits? Or will such attempts—? if they occur at all—? lead to extraordinary problems that are



looked back upon s the ultimate in twenty-first century hubris? (Stock, 2006. ) Soon we may be altering the genes of our children to engineer key aspects of their character and physiology. The ethical and social consequences will be profound.

We are standing at the threshold of an extraordinary, yet troubling, scientific dawn that has the potential to alter the very fabric of our lives, challenging what it means to be human, and perhaps redesigning our very selves. We are fast approaching the most consequential technological threshold in all of human history: the ability to alter the genes we pass to our children. Finally, the problems of religion with all its factions and divisions could be eliminated. We could genetically produce a society of humans with morals that would supersede any paranormal holy book.