

Genetic engineering today: the reinvention of frankenstein's lab? 10215

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Genetic Engineering Today: The Reinvention of Frankenstein's Lab?

“ Ever since James Watson and Francis Crick discovered the structure of DNA three decades ago, scientists have been experimenting with altering the genetic makeup of living matter to transform plants, animals, and microscopic organisms. There is no end to the positive things genetic engineering can accomplish” (McAuliffe 16). But are there more negative entities to genetic engineering than positive? This essay will examine the question “ What is genetic engineering?”, the moral issues concerning genetic engineering, and finally relate these topics to the formation of “ the creature” in Mary Shelley's Frankenstein.

“ Genetic engineering is a term applied to techniques that alter the genes (heredity material) or combination of genes in an organism” (World Book 85). Every living organism contains genes. All genes carry information pertaining to the organism's characteristics. By changing a gene in an organism, scientists can produce different traits in an organism and/or its descendants (World Book 85). Researchers have found many important uses for genetic engineering in such fields as medicine, industry and agriculture. Many new uses are predicted for the future (World Book 87).

“ With the arrival of human genetic engineering, humanity approaches a crossroads in its own technological history. It will soon be possible to engineer and produce human beings by the same technological design principles as we now employ in our industrial processes” (Rifkin 12). In other words, the final goal of genetic engineering is to perfect the human race. Although

genetic engineering has many benefits such as gene splicing (combining genes) to cure genetic disorders, it causes concern among many people. Some people oppose genetic engineering because they fear that harmful, uncontrollable bacteria might be produced accidentally. Others worry about possible environmental damage by the deliberate introduction of organisms whose heredity has been altered. In addition, many people question the morality of manipulating the genetic material of living creatures (World Book 86). Whom do we designate to play God? It is very likely that in attempting to “ perfect” the human species we will succeed in engineering our own extinction. Eliminating so-called “ bad genes” will lead to a dangerous narrowing of diversity in the gene pool. Since part of the strength of our gene pool consists in its diversity, including defective genes, tampering with it might ultimately lead to extinction of the human race (Rifkin 14). Whom do we entrust with the ultimate authority to decide which are good genes that should be engineered into the human gene pool and which are the bad genes that should be eliminated? And do we have the right to disturb the “ natural order” of the environment by eventually creating or manipulating human life? Some scientists say that genetic engineering will only benefit the human race, but others believe it will destroy.

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Genetic engineering and the experiments and studies of Victor Frankenstein are remarkably similar. The questions posed to one reading the book Frankenstein, are the exact questions posed to scientists today as they go forth with their genetic manipulations and engineering. Do we have the right to alter, or create human life? Victor Frankenstein did indeed take the role of God when he created "the creature." He used similar techniques to the techniques used by scientists today. If scientists today go forth with their studies and possibly create human life, is it inevitable that the outcome will be that of "the creature" in Frankenstein? Were Victor's endeavors of creation worth the risk of the results? His intentions were to end death, but instead the result was the formation of something that was hideous to the human eye and unaccepted by the human race. Victor definitely was not thinking of the creature itself when he created it. He didn't consider the ethical implications of his creation and therefore the outcome was not that of what he expected. "A mummy again endued with animation could not be so hideous as that wretch. I had gazed on him while unfinished; he was ugly then, but when those muscles and joints were rendered capable of motion, it became a thing such as even Dante could not have conceived" (Shelley 43). When comparing Frankenstein's work to genetic engineering today, it is almost frightening to think of the things that could occur. Very little has been discovered in the path towards successfully creating human life, but other experiments in that field have been conducted.

There is a parallel between Frankenstein and genetic engineering today. Genetic engineering is potentially a beneficial new technology when used in the right way. It can benefit the human race in the areas of disease

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prevention, the longevity of human life, and the production of foods. However, genetic engineering could potentially wipe out the human race if used incorrectly. Extreme examples include: biowarfare, toxic genetic engineered foods, or mutated viruses. What we don't want is Frankenstein's laboratory reinvented where the experiments are done in the dark, secretive, and with very little forethought or oversight. Genetic engineering today must be open, carefully scrutinized, and thoroughly tested before releasing its products to the public. Let's throw open the doors and turn on the lights in Frankenstein's lab.

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