

HUNTER COLLEGE READING/WRITING CENTER  
**WRITING ACROSS THE CURRICULUM**  
**The CUNY Proficiency Examination : Task 1 Practice Readings 2**  
(with sample question)

## **I. Sample Reading A**

### **The Perils of the Biotech Century (excerpts)**

by Jeremy Rifkin

from *newstatesman.co* 6 Sept. 1999

After more than forty years of parallel development, the information and life sciences – computing and biology – are fusing into a single, powerful force that is laying the foundation for the biotech century. Increasingly, the computer is used to decipher, manage and organize the vast amounts of genetic information that will be the raw resource of the new global economy.

The biotech century promises great riches: genetically engineered plants and animals to feed a hungry population; genetically derived sources of energy and material to build a "renewable" society; wonder drugs and genetic therapies to produce healthier babies, eliminate suffering and extend the human lifespan. But a question will haunt us: at what cost?

The new genetic commerce raises more troubling issues than any other economic revolution in history. Will the artificial creation of cloned, chimeric and transgenic animals mean the end of nature and the substitution of a "bio-industrial" world? Will the mass release of thousands of genetically engineered life forms into the environment cause catastrophic genetic pollution and irreversible damage to the biosphere? What are the consequences of the world's gene pool becoming patented intellectual property, controlled exclusively by a handful of corporations? What will it mean to live in a world where babies are genetically engineered and customized in the womb, and where people are increasingly identified, stereotyped and discriminated against on the basis of their genotype? What are the risks we take in attempting to design more "perfect" human beings?

The question is not about the science but about how we apply it, and the great debate of the biotech century will be about which of two broad alternatives we choose to adopt.

The first is the Baconian view, with which we have become so familiar that we forget that there are any other approaches at all. Francis Bacon saw nature as a "common harlot" and urged future generations to "tame," "squeeze," "mold," and "shape her so that "man" could become her master. Many of today's best-known molecular biologists are heir to the Baconian tradition. They see the world in reductionist terms and themselves as grand engineers, continually editing, recombining and reprogramming the genetic components of life to create more compliant, efficient and useful organisms that can be put to the service of humankind.

Others, equally rigorous, take a different approach. The ecological scientists see nature as a seamless web of symbiotic relationships and mutual dependancies. They see the Earth and its living things as a single organism – the biosphere. They favor more subtle forms of manipulation, which enhance rather than sever existing relationships.

Agriculture offers a good example of these two different approaches. Molecular biologists insert alien genes into the biological code of food crops to make them more resistant to herbicides, pests, bacteria, and fungi. They envision these engineered hybrids living in a kind of genetic isolation, walled off from the larger biotic community, and ignore the environmentalists' fears of genetic pollution.

Many ecologists, by contrast, use the new genomic information to help them understand how environmental factors affect genetic mutations in plants. Instead of genetic engineering, they use the new scientific knowledge to improve classical, sustainable farming methods such as breeding, pest management, crop rotation....

So one approach – the hard path – uses the new genetic science to engineer changes in the very blueprint of the species. The other approach – the soft path – uses the same genetic science to create a more integrative and sustainable relationship between existing species and their environments....

Society could choose to accept some uses of the new genetic science and reject others, just as we have done with nuclear technologies. For example, we could make a solid case for genetic screening – with the appropriate safeguards – to predict the onset of disabling diseases, especially those that can be prevented with early treatment. The new gene-splicing techniques could also lead to a new generation of life-saving pharmaceutical products. But we could take quite a different attitude toward the use of gene therapy to make hard-path corrective changes in human sperm, eggs and embryonic cells. These techniques, we might say, would affect the evolution of future generations and, therefore, carry far greater and more unpredictable dangers.

It needs to be stressed that it's not a matter of saying yes or no to technology itself, and never has been – although many in the scientific establishment like to frame the issue this way, leaving the impression that anyone opposed to their particular technological vision must be anti-technology. Rather, the question is : what kind of biotechnologies will we choose in the coming biotech century?...

The biotechnology revolution will affect us all more directly, forcefully and intimately than any other technological revolution in history. Yet until now, the debate has engaged a narrow group of molecular biologists, industry spokespeople, government policy-makers and critics. With the new technologies flooding into our lives, the moment has arrived for a much broader debate, one that extends beyond professional authorities and experts on both sides and includes the whole of society.

## II. Sample Reading B

### Mounting the Slippery Slope

by Charles Krauthammer

from *Time* 23 July 2001

If we are to embark on stem-cell research, we must first guarantee its integrity.

I favor federal funding of stem-cell research, but now I am scared to death – of my allies. The case they (and I) have made is simple: stem cells, possessing in theory the capacity to replace almost any damaged or defective tissue in the body, have a great potential for good. Although deriving stem cells may require destroying a five-day-old human embryo, this “blastocyst” is usually taken from fertility clinics, where it is going to be discarded anyway. It’s not as if—or so we have been saying—we are wantonly creating human embryos only to destroy them for research.

Not so. It turns out the Jones Institute for Reproductive Medicine in Norfolk, Virginia, has been doing exactly that: taking volunteers’ sperm and eggs to create a human embryo for the sole purpose of dismembering it for its stem cells.

Two things are disturbing here. First, while this research did not become widely known until July 11, it had been reported to fellow scientists back in October. Yet for nine months, stem-cell advocates have been repeating the “only discarded embryos” mantra. What did they know, and when did they know it? Second, and equally disturbing, is the stem-cell supporters’ response to the Norfolk research. John Gearhart, one of the original stem-cell pioneers, told the *New York Times* that he was “perplexed” by this development because “we don’t think it’s necessary.”

Unnecessary? Had we not all agreed that it is unethical, a violation of the elementary notion that we don’t make of the human embryo a thing— to be made, unmade and used as a mere instrument for others? Dr. Michael Soules of the American Society for Reproductive Medicine was even more appalling. He saw nothing wrong with the procedure, except the “timing.” Meaning, I suppose, that it would have been better if this news had remained hidden until President Bush had decided whether to fund stem-cell research, believing, falsely, that only discarded embryos were being used.

The other reassurance my side had been giving is that stem-cell research is not about cloning. A day after the news from Norfolk we learned that a laboratory in Worcester, Mass. (the very same lab that three years ago produced a hybrid human-cow embryo) is trying to grow cloned human embryos to produce stem cells—but could be used to produce a full or (even more ghastly) partial human clone. What other monstrosities are going on that we don’t know about?

Yes, some people oppose stem-cell research because they believe human life begins at conception. But you don’t have to believe that to be apprehensive that stem-cell research may legitimize the mechanization of life, the making of the human fetus into the ultimate guinea pig. People are horrified when a virgin hill is strip-mined for coal; how can they be unmoved when a human embryo is created solely to be strip-mined for its parts?

What next? Today a blastocyst is created for harvesting. Tomorrow, researchers may find that a five-month-old fetus with a discernible human appearance, suspended in an artificial womb, may be the source of even more promising body parts. At what points do we draw the line?

Let's draw it right where it is and hold it. It is a reasonable moral calculus to use and thus derive some good from an already doomed, fertility clinic blastocyst. Moreover, federal funding would for the first time permit the procedure to be regulated.

But if we do decide to give society's imprimatur to stem-cell research, it must be with open eyes and a troubled conscience. These new disclosures of human cloning and the creation of embryos for their deliberate destruction are well-timed reminders of how easily moral barriers can be violated. Federal regulation must therefore be strict and unbending.

- No human cloning. At any stage. For any purpose, even research. Congress should criminalize it.
- No embryos created solely to be harvested.
- Stem-cell production permitted only from otherwise discarded fertility-clinic embryos or from fetal cadavers.
- A radical increase in federal support for research into adult stem cells, which present fewer moral problems and which might prove to be more genetically stable and controllable than fetal-derived stem cells.

Stem-cell research will one day be a boon to humanity. We owe it to posterity to pursue it. But we also owe posterity a moral universe not trampled and corrupted by arrogant, brilliant science. It is precisely because of the glittering promise of stem-cell research that we need great care, great vigilance and great restraint as we mount the slippery slope.

### **III. Sample Writing Assignment**

With these reading selections by Jeremy Rifkin and Charles Krauthammer in mind, write an essay in which you discuss the dangers inherent in recent advances in biotechnology. In your essay, summarize what Rifkin says about the two basic ways of looking at the relationship between humankind and nature. Draw a relationship between Rifkin's thinking and what you have just read in "Mounting The Slippery Slope" about the moral dilemmas posed by advances in stem cell research. In light of the reading selections, discuss your own knowledge or observation of concerns about recent advances in biotechnology. Discuss the degree to which your perspective reflects the ideas of either or both writers.