

BIOETHICS AND LIFE EXTENSION

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Members of IS and CI have a vested interest in matters related to biotechnology. In particular, we should be especially interested in how government and government advisory bodies are looking at biotechnology. Whether we like it or not, our future is in the hands of government and the individuals and organizations that attempt to influence government, which ultimately determines what is or is not permitted through legislation and regulation. A good example of how legislation and regulation impact us as individuals is the Food and Drug Administration (FDA) [See <http://www.fdareview.org/>]. This agency literally has the power of life and death over each of us through the exercise of its authority to regulate what we consume whether it is nutritional or medicinal in nature and without regard to what our personal wishes may be. For example, the FDA has denied terminally ill patients access to experimental drugs because they may have dangerous side effects. What could be more dangerous than a terminal illness? Recently, I spent some time on the site for the President's Council on Bioethics (See <http://www.bioethics.gov/>) because I think that this advisory body will significantly impact future legislation on and regulation of biotechnology.

One area that has been a concern of and subject to the attention of the President's Council on Bioethics (PCB) is the divide between what it terms *enhancement* as opposed to *therapy*. This distinction is made in a book length report on ethical considerations in biotechnology (<http://www.bioethics.gov/reports/beyondtherapy/index.html>) that was released in 2003. Therapy is viewed as current and future interventions directed at curing or controlling diseases (e.g., AIDS) and correcting defects (e.g., cystic fibrosis) as traditionally understood. Enhancement on the other hand is viewed as potential interventions directed at improving natural conditions (e.g., life span) and abilities (e.g., memory). The PCB does not specifically address cryonics

and reanimation. It does address age-retardation and life extension in a working paper prepared for its members

http://www.bioethics.gov/topics/ageless_bodies_index.html

Since most of us view cryonics as a last resort in our personal goal to achieve life extension, what the PCB has to say on life extension has the potential to impact our personal efforts to extend our lives and the outcome of our choice to use cryonics for the purpose of life extension.

One of the concepts mentioned in the discussion of bioethics by the PCB is the *precautionary principle*. “Over the past few decades, environmentalists, forcefully making the case for respecting Mother Nature, have urged upon us a “precautionary principle” regarding all our interventions into the natural world. Go slowly, they say, you can ruin everything. **The point is certainly well taken in the present context...** (Emphasis added)”

The precautionary principle asserts that any action or policy that is potentially harmful, especially to the environment or to human health, should not be taken unless there is a scientific consensus that there is no danger. Thus, the burden of proof is on those who propose an action. Critics of this principle point out that since science cannot prove a negative, the criterion stipulated in the principle would essentially give regulators absolute discretionary power. Thus, a powerful tool for blocking scientific progress in many areas, including biotechnology and nanotechnology would be placed in the hands of groups with political and ideological rather than scientific motivations.

We should be alert to attempts to incorporate the precautionary principle into legislation and regulations that bear on research and development in biomedicine and related fields. If this principle should become the guiding light for government regulation of biotechnology research, it may be much longer than any of us have imagined before the techniques for reanimation and radical life extension are developed and implemented, if ever.

As second, distinction made by the PCB is between the impact on individuals and impact on society of life extension. The Commission admits that there is likely much potential good to be gained by an individual from biotechnology. “Powerful as some of these concerns are, however, from the point of view of the individual considered in isolation the advantages of age-retardation may well be deemed to outweigh the dangers.”

However, the Commission goes on to take the view that the impacts of life extension and biological enhancement in the aggregate of individuals comprising society is another matter altogether. A society composed of citizens who are the beneficiaries of life extension may suffer as a whole even though each individual is personally benefited. “...If individuals did not age, if their functions did not decline and their horizons did not narrow, it might just be that societies would age far more acutely, and would experience their own sort of senescence—a hardening

of the vital social pathways, a stiffening and loss of flexibility, a setting of the ways and views, a corroding of the muscles and the sinews...”

The Commission spends some considerable time lamenting the possible corruption by biotechnology of what it means to be human. The essence of this concern is captured in these comments from the conclusion to the working paper referred to above, “...Is human life, as our ancestors understood it and as our faiths and our philosophies describe it, really just a problem to be solved? The anti-aging medicine of the not-so-distant future would treat what we have usually thought of as the whole, the healthy, human life as a condition to be healed. **It therefore presents us with a questionable notion both of full humanity, and of the proper ends of medicine** (Emphasis added).”

Because of space constraints this essay will be continued in the Jan-Feb issue. As will Marta Sandberg's, whose essay was to be concluded in this issue