

Biotechnology and Ethics: Comments on "Genome: Moral Choices and the Polity"

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There is absolutely no question that the article reflects commonly held sentiments among many people in the community at large and is therefore of some significance. I disagree with many of the expressed fears, observations, and suggestions, however, and will restrict my comments to a few general observations on the entire set of issues, which may provide a useful context for further discussion.

The role of technological innovation in societal change.

Contemporary advances in genetics and biotechnology are only a piece of the rapid changes in human technology generally. Technological change has driven portions of societal change, and the context of ethical argument, for generations and even millennia. As only one relevant (but extremely important) example, declining rates in perinatal mortality, largely the result of advances in public health, have changed our ideas of infant rights and "personhood" during the past century in the urban west, and during the past few decades in the world's human population more generally. In the last generation in the Solomon Islands, for example, where perhaps 40% of newborns died before reaching their first birthday, babies were not named until they could walk, and their deaths were not treated with great sadness prior to that time. Infanticide was often practiced when twins were born (only one could possibly survive at the breast) and in other situations. That has all changed during the past generation, in large measure because newborns are now expected to survive. They are regarded as more fully 'persons' in that society. Very much the same thing has taken place in European societies, where orphanages in the 19th century used to be known as "angel makers" - unwanted children were left there with the expectation that they would die - 90% did, without much of an outcry from the general public. I submit that today's 'right to life' movement, which thinks of itself as ethically very conservative, is in fact a by-product of our newfound abilities to sustain life earlier and earlier in the developmental stages. In the same way, the notion that a cell might have rights of ownership derives directly from this technological

confusion. A person's urine and feces contain cells that can be used in DNA analysis, and might be used in some future time in organ transplant technology. One might therefore become concerned about the disposition of one's excrement the way our forbears were concerned about protecting them from sorcery.

The power (and fear) of the unknown.

Genetic technology is currently regarded as particularly threatening and powerful because a) it is not easily understood by most non-scientists, b) it involves a critical part of living things, and c) has been trumpeted by some geneticists as having great promise for understanding human development and alleviating human disease, in large part to obtain funding. The Human Genome Project, when lobbying for federal funding was most intense, was said by one of its most vigorous proponents to hold out the promise of providing "all of the information required to make a human on a C.D. disk - from the genetics side." This is, in an extraordinarily restricted sense, could be taken as accurate, especially with James Watson's qualification that making sense of the deciphered information would be like reading a very difficult poem - it would take a thousand years to accomplish, he opined.

This effort did achieve large scale funding, and it also has further alarmed many people about the possibilities of this new technology. In these respects, it reminds me of the awesome power and fear (as well as promise) of atomic energy in the 1950's - with the difference that the power of genetics, and the possible payoff, is minuscule by comparison. To date, genetic surgery has been remarkably unsuccessful. While we can identify people at risk for certain genetic disorders, there is often little to be done except explain the risks to the individuals tested. The breast cancer gene story is typical at this time, as is the cystic fibrosis situation. Gene therapy is not going to offer fast answers to many human illnesses - understanding, perhaps, but cures and treatments are going to be difficult and costly - and hence only the wealthiest segments of society are going to gain anytime in the foreseeable future. The projects underway are not enormously

expensive (compared to, say, a space shot or a B-2 bomber), and their impacts are not going to be revolutionary any time soon - not like antibiotics, DDT, or public sewers. Thus far, this is a great deal of sound and fury signifying rather little in terms of the public welfare.

"Take it to the nation."

Fitzgerald's prescription for approval of the Human Genome Project is, I believe, naive on a number of points. You can't forbid human gene sequencing. It goes on all the time. And the issue is not just the Human Genome Project, but many interrelated biotechnology developments and issues (that a federal advisory committee is already attempting to address). Exactly who? The Nation? This remains a major problem for the US and other cosmopolitan societies. The hope of achieving informed consensus on rapidly developing ethical dilemmas assumes homogeneity in the populace with regard to an entire host of issues: religious, educational, ethnic, gender, and otherwise.

Roe v. Wade is our latest classic. Simplicity in a proposed set of solutions sounds attractive, but simply won't help.

These are only a few comments I would offer. Manipulation of human life has gone on for centuries and millennia - it is a question of what sorts of manipulations can be accommodated by our ill-defined and ever-changing social mores, and which are repugnant.

Notes

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