ETHICAL ISSUES IN TECHNOLOGY

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Developments in technology usually do not in themselves raise ethical or moral issues. Instead it is the use to which these developments are put which raises basic questions, and from the perspective of history almost any use of a product of technological innovation can be made into a moral issue. A good illustration of this is the button which developed in the late medieval period. On the surface the button seems harmless enough, yet the Old Order Amish felt it was wrong to wear buttons because they were not mentioned in the Bible. Wearing or not wearing buttons became a moral issue for them.

Fortunately few people adopted the attitudes ofthe Old Order Amish. Moreover the Old Order Amish, like most of the rest of us, were inconsistent. The horse drawn plow is not mentioned in the Bible, neither are buggies, nor iron pots for cooking, iron stoves, or chimneys, neither glass windows nor any number of other things developed after the Christian Bible was committed to writing. The point of this illustration is to emphasize that we, both as individuals and a society, select the kind of technological issues on which we take a stand.

What kind of ethical issues should we be concerned with? One such issue is the traditional one associated with technological change and which goes by the term Luddism. The term originated from a series of disturbances in Yorkshire in England in 1812 when croppers (shearmen) endeavored to stem the rapid rise and installation of the cloth dressing machinery. Though the Luddites ultimately were unsuccessful in preventing technological innovation, and the name often seems to imply a kind of blind unreasoning opposition to technological change, it is often forgotten that they had good reasons for their hostility. Though we regard the devices about which they were protesting as ultimately helpful, we forget that a single spinning Jenny displaced some nine or ten warp spinners and thirteen or fourteen abb (weft) spinners while a scribbling engine displaced fifteen or sixteen scribblers. One man using a gig mill could do what a dozen shearmen had done before, while the shearing frame made an additional three or four shearmen redundant. Scribblers and shearmen each accounted for around IS percent of the pre-industrial adult male work force in England, and so the result was a massive displacement as the men involved in such situations found their skills useless and their labor superfIous when new machinery was introduced. This, to my mind, raises a moral issue which no humanist can ignore, although it is not the introduction of the technological developments which raise the moral issue, but the lack of concern over what happens to the people involved. Technological development tends to imply change, and often this ultimately is for the better, but we need to be concerned about what happens to the individual during such a period of change.

The Luddite problem is a continuing one, and is very much part of the American scene today as computers, robotics, and other developments, are forcing rapid

technological change in traditional American industries from printing to the manufacture of steel, from mining to agriculture, from retailing to the professions. Humanists need to put forth both sides of the dispute, and emphasize the necessity of reeducation and compensation for those displaced. Sometimes technological change will probably be slower than we want it to be.

Our moral concern is with the victims of technological change. Some uses of technological innovation have the possibility of having many more innocent victims than others. A good example has been the use of nuclear technology. It has great potential for helpful uses and also for tremendous harm. The moral issue is clear, at least in my mind. We oppose those developments which have the potential for killing vast numbers of people, and try to make certain that the so called "peaceful" uses of atomic power have enough safeguards to prevent contamination of the environment and the people in the area.

Another two-edged-sword is the euphemistically called biotechnology. A number of moral issues are raised by this about which humanists probably see no moral issue. A good example of this is in vitro fertilization. Though some religious groups have opposed this as contrary to the teachings of their religion, for humanists the issue does not pose a dilemna. Women unable to have children and willing to undergo in vitro fertilization through their own choice in order to do so, should be able to do so.

Similar to the nuclear issue, however, is the problem of gene splicing. The danger here is that bacteria in the process of being altered to meet some expected or anticipated problem might develop more harmful effects. Since the potential of great profits is involved, it is essential that humanists be alert to the moral implications of various decisions. At this writing, two different government groups are directly involved in most of the biotechnology problems; The U. S. Department of Agriculture sets the ground rules for biotechnology of plants and the Environmental Protection Agency for other forms of life. When humans are directly involved, there are also other agencies such as various Human Use Committees. Still humanists have to be on the alert since the potential for great profits leads some groups to cut corners. For example the Environmental Protection Agency has twice moved against Advanced Genetic Sciences in Oakland, California, for violation of policies and for falsifying data. So far, there are major restrictions on experiments in order to try to confine them to labs.

As the techniques improve, however, other issues will quickly be raised. If we can eliminate diabetes by modifying genetic makeup in utero should we do it? We now do testing for some of the traditional hereditary diseases and negative results often lead to induced abortions. It is now possible, however, to make modifications in the genetic structure. Should we do this instead of aborting? I see no reason why not to intervene if we can in such cases but this is where there might be considerable disagreement. I think it is much too early to make hard and fast rules of what to do.

The problem is that new innovations in any field often have sequellae which we cannot always foresee. We should err always on the side of caution. Even when we know the long term effects of technological innovation are probably beneficial, we have to always consider both the human and environmental

factors. Though humanists are strong advocates of an open marketplace for ideas and innovations, we also strongly believe in upholding the rights of individuals. We insist that both man and the environment be given serious account in putting any technological breakthrough into the market arena and that those which pose serious physical dangers be carefully controlled and regulated. We also believe that there are a number of moral and ethical dilemnas out there for all of us and humanists have to be alert to focusing attention on them. We have done so in the past and will continue to do so.