A LOOK AT PHILOSOPHERS LOOKING AT TECHNOLOGY

I was privileged this past July 11 and 12 to be a participant in a conference at the University of Delaware on "Scientists and Social Responsibility". Noted philosophers from various universities (Delaware, Montana, Florida, Indiana, Stanford, Boston, Georgia, etc.) took a hard look at technology and told it as they saw it.

The philosophers examined sundry problems connected with the impact of technology on today's world. They raised alarming questions on the role, status, and power of the scientific and technological community and attempted to formulate a framework for discussing the issues relating to a philosophy of technology.

Unfortunately, most of the philosophers ignored a very basic tenet of philosophy: to define terms. From my mass of notes, I have been unable to extract a meaningful definition for "philosophy of technology". It was quite obvious from almost the very beginning that the philosophers and scientists marched to different drummers.

In talking about technology, the philosophers tended to ignore or confuse the continuum of science and technology and to allude to the work of engineers and inventors and the effect of Madison Avenue on selling their products to society. They viewed technology as ravaging nature, degrading humans, and impoverishing civilizations. They viewed scientists engaged in technological pursuits as people without a sense of values. One philosopher's example for the dehumanizing effect of science and technology was the automobile assembly line.

An assembly line, however, is neither science nor technology. It is merely a method of assembling parts to make a product. How parts are assembled is a problem in economics: the availability of labor and the cost of labor relative to the investment cost of the assembly line. Working on an assembly line is monotonous and intellectually unrewarding. But so is picking strawberries on a farm, which, in addition, is back-breaking work with a considerably lower financial reward than enjoyed by the person on the assembly line. The science of the automobile plant relates to the discovery of thermodynamic principles and relationships; the technology relates to the development of the internal combustion engine. Should we exhume Carnot, Rankin, Gibbs, and others to stand trial for failing to examine the potential consequences, the social, ethical, and humanistic implications, of their work? Or should the finger of guilt be pointed to mass production, big government, the educational system, the press and TV, etc.? Scapegoats are easy to find, but placing blame, even if correct, provides no solution; it does not necessarily define the problem.

If we are to evolve a philosophy of technology, and I hope we can, then we need to consider where it fits into the trichotomy of philosophy—natural, moral, or metaphysical. I suspect all three will be invoked. The philosophers, however, tended to concentrate their thinking on moral philosophy. The tough part will lie in our being able to establish what can be categorized as the truths and principles in the philosophy of science and technology. The way to begin is not to assume that science and technology are contrary to the well being of humans and of human societies. This assumption, most assuredly, will result in a new Dark Age.

History, if it tells us anything, tells us that humans became differentiated from their kissing cousins by their ability to discern and comprehend the laws of nature, to use animals to replace human power, and to devise tools and machines to do what humans could not do with their hands and feet. Most importantly, history definitely is clear in divulging the advancement of technology, not years, but centuries, before there was a science. It is not correct for philosophers to conceive of science as the antecedent to technology. For most things in this world, humans have learned to do before they have learned to know. This is because humans have tended to meet the challenges of life by trial and error, i.e., by experimentation, not by intellectualization. Humans tend to be problem solvers by fitting pieces in a jigsaw puzzle, not by argumentation over how many angels can meet on the head of a pin to formulate the philosophy of technology.

Another truth in history is that society, i.e., the social structure or the moral and religious structure of a society, affects and sometimes controls the level of scientific and technological advancement. For example, the Orient many centuries ago was far in advance of the Eastern World, but the Orient failed to go beyond a relatively low scientific and technological plateau, primarily because of political and cultural factors. The Dark Ages of Europe were prolonged considerably by a powerful church that had all the answers. What I am trying to bring out is that moral considerations and ethics are part of a two-way communication and control system. At no time in history has science and technology constricted the flow from the political, economical, ecclesiastical, or what-have-you sector. Can the reverse be said?

I am all for developing a philosophy of technology. But I am not sure I am willing to let the philosophers do it for me. Certainly not the political and moral philosophers. Possibly those we should seek for this study are those who appear as philosophers to scientists when among scientists and as scientists to philosophers when among philosophers. The study must cite the work of scientists and technologists, not only philosophers. If we take the holistic approach, which I favor, then the study needs to consider not only science and technology in terms of social responsibility but the social responsibility of every factor, political, educational, religious, economical, sociological, psychological, etc. Regardless of the genius of Madison Avenue in selling the monstrosities of Detroit, the buyers ignored their social responsibility in supporting the products. Social responsibility, like disarmament, is a two-way street. It cannot be a unilateral movement.

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