

The Impact of Moral Values on the Promotion of Science

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Abstract

Science is viewed as a branch of knowledge or study dealing with a body of facts or truths systematically arranged and showing the operation of general laws. It may also be defined to include systematic knowledge of the physical or material world; systematized knowledge in general; knowledge of facts and principles; and knowledge gained by systematic study. In the ethics of science nothing is expected to be believed with more conviction than the evidence warrants. Ethics itself deals with values relating to human conduct, with respect to the right and wrong of certain actions and to the good and bad of the motives and ends of such actions. Although rightness embraces correctness or accuracy and propriety or fitness, it also implies moral integrity that demands soundness of and adherence to moral principle and character. Similarly, goodness may be described as the state or quality of being good, kindly feeling, kindness, generosity, excellence of quality, virtue, and moral excellence.

Key-words: Moral values; Science; Scientific value; Individual.

Introduction

Promotion of science along with the growth of moral values is necessary for human development. Ethics demands reporting authentic results rather than withholding relevant information. That is to say that scientists are expected to be honest. Another ethical requirement on the part of scientists is the proper treatment of living subjects, both humans and animals. This calls for checking and balancing mechanisms to ensure that the health and security of such subjects are endangered neither in research laboratories nor in their natural environment. Lusting after fame or recognition, egoism, greed, prejudice, snobbishness, racism, and political considerations have frequently resulted in immorality in the domain of science.

Research findings indicate that if science considers ethical values, then the lives of humans and other creatures are not endangered by destructive agents like atomic bombs and chemical weapons. Measures should be taken to avoid using science against humans. This can be achieved by promotion of scientists' moral values. A great number of scientists have been at the service of mankind mainly because of their belief in ethical values. Such scientists have saved the lives of countless people, animals, and plants. They have devised ingenious methods for the protection of the environment. In contrast, certain scientific findings have brought about the destruction of millions of people and animals, and the environment. Science can be productive or counterproductive. Hence, all nations are required to devise appropriate codes and control mechanisms to direct the scientific activities in their ethical path.

Scientific achievement portrays the dignity of the human being and his unique role in the world. In the distant past, critical scientific discoveries that had profound impact on the development of human societies occurred occasionally. Now, such discoveries are made more frequently. In the last few decades, humans have made more major advances in understanding physical reality than had been made during the whole prior history of the earth. Obviously, the development of science never ceases. It is wonderful to consider man's present knowledge of the building blocks of physical reality. Although almost all the mountains and rivers have been named, the ocean floors mapped to the deepest trenches, and the atmosphere transected and chemically analyzed, we should not think that the world has been completely explored.

Even though some 1.4 million species of organisms have been discovered and identified, the total number alive on Earth is estimated somewhere between 10 million and 100 million. No one can say with confidence which of these figures is the closer. Although scientists have given thousands of the species scientific names, fewer than ten percent have been studied at a level deeper than gross anatomy. The revolution in molecular biology and medicine was achieved with a still smaller fraction of discoveries. The emergence of new technologies and the generous funding of medical research have assisted biologists to probe deeply along a narrow sector of the front. It is now the time to be conscious about the study of biodiversity since species are disappearing at an ever-increasing rate through human action. It is estimated that one fifth or more of the species of plants and

animals could vanish or be doomed to early extinction by the year 2020 unless better efforts are made to save them.

Most scientists believe that one basic characteristic of science is that it deals with facts, not values. Science is objective, while values are not. Certain scientists see themselves as working in the privileged domain of certain knowledge. Such views of science are also closely allied in the public sphere with the authority of scientists. Recently, however, some scholars have challenged the notion of science as value-free, and thereby have raised questions about the authority of science and its methods. However, it is a wrong approach to consider science as being value-free or objective. In practice, science incorporates cultural values. Values, in turn, can be objective when they are based on generally accepted principles. Scientists strongly abhor fraud, error, and pseudoscience, while they value reliability, testability, accuracy, precision, generality, and simplicity of concepts. The pursuit of science as an activity is itself an implicit endorsement of the value of developing knowledge of the material world. Whenever science is publicly funded, the values of scientific knowledge may well be considered in the context of the values of other social projects.

Among the things valued that promote the ultimate goal of knowledge are the methods of evaluating knowledge claims. These include controlled observation, confirmation of predictions, repeatability, and statistical analysis. Such values are generally derived from our experience in research. People tend to devalue the results of any drug that is not based on an experimental design. Today, methods of evaluation and institutional forms are essential to teaching science as a process. Unfortunately, social values or research ethics are not always followed in science, but they remain important. Ideally, science is about “is” and ethics is about “ought.” Yet, the disparity between the ideal and the actual merely poses challenges for creating a way to achieve these valued goals through a system of checks and balances. The codes for reviewing research proposals on human subjects, for monitoring the use and care of laboratory animals, or for investigating and punishing fraud represent efforts to protect wider social values in science. The topics and use of results of research and the methods or practice of science are also the province of ethical concern and social values. In weapons research, in research into better agricultural methods aimed at alleviating hunger, or in low-cost forms of harnessing solar or wind energy in poor rural areas, the researchers are ethical agents responsible for the consequences of their actions.

Individuals express the values of their cultures and particular lives when they engage in scientific activity. That is why in countries where women or minorities, for instance, are largely excluded from professional activity, they are generally excluded from science as well. Where they have participated in science, they have often been omitted from later histories. It is also a well-known fact that the conclusions of science in many occasions have been strongly biased, reflecting the values of its practitioners. For example, late nineteenth-century notions of the evolution of humans developed by Europeans claimed that the skulls and posture of European races were more developed than those of “Negroes.”

Scientists need to integrate scientific values with other ethical and social values. Obviously, science can help identify unforeseen consequences or causal relationships where ethical values or principles are relevant. In addition, individuals need reliable knowledge for making informed decisions. Scientists can articulate where, how, and to what degree a risk exists. But other values are required to assess whether the risk is acceptable or not. Communicating the nature of the risk to non-experts who participate in making decisions can thus become a significant element of science.

Where one expects scientists or panels of technical experts to solve the problem of the acceptability of risk, science is accorded value beyond its proper scope. Scientific knowledge and new technologies, however, can give rise to new ethical or social problems, based on pre-existing values. Science can bring about novel situations that require us to apply old values in significantly new ways. A case in point is awareness that scientific research is parallel with new concerns about ethics and values in decisions to couple the human genome initiative with funding of research on the humanistic implications of the project. Thus, science and technology can introduce new problems about values that they cannot solve. Yet these consequences are a part of a complete consideration of science and its context in society.

Conclusion

There are certain moral values, such as concern for people, empathy, and kindness that are important in setting research priorities in science and in determining the uses of science. There is a need to incorporate these humanitarian values into the science and technology spheres, while maintaining and reinforcing the intrinsic values of science. In the quest for scientific and technological development, ethical values should not be neglected. The humanitarian values found in moral education can complement the intrinsic values found in

science, such as objectivity, rationality, practicality, honesty, and accuracy. The problem of ethics and morality is the concern of all mankind. While mankind might agree on the general moral principles found in religions and moral education, differences may arise when we deal with specific issues and problems because of differences in the structures of our moral systems and in the priorities and specific needs of our respective cultures.

References

- Wilson, Edward O. "Building an Ethic." *Defenders Magazine*, Spring 1993.
- *Values and Ethics and the Science and Technology Curriculum: A Source book*. United Nations Educational, Scientific, and Cultural Organization, Principle Regional Office in Asia and the Pacific, Bangkok: 1991.
- Gould, S.J. *The Mismeasure of Man*. W.W. Norton, New York: 1981.
- *Crossing the Divide, Dialogue among Civilizations*. United National Conference. School of International Relations, Seton Hall University, South Orange, NJ: 2001.

