

Social Awareness to Science and Technology

– A Study on Public Opinion Survey –

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2nd Policy-Oriented Research Group

1. Social Consciousness and Concept of Science and Technology

A survey on public opinion on science and technology conducted in March 1987 indicated that the majority of the people surveyed, or 52.4 percent, responded that they were interested in science and technology. Regarding the advantages and disadvantages of scientific and technological developments, the number of people who valued advantages over disadvantages represented 54.3 percent, far exceeding the numbers of those who considered that the advantages and disadvantages to be almost equal and who considered that the disadvantages are greater than the advantages, representing 28.7 percent and 8.3 percent respectively. Regarding the possibility of science and technology, however, 85.5 percent of the respondents denied the possibility of scientific and technological developments solving human psychological problems and 63.8 percent were skeptical about the possibility of scientific and technological developments solving most of the economic and social problems confronting the human, indicative of the widespread skepticism about the view that science and technology can solve anything.

Reflecting upon their own lives, 73.5, 39.9 and 45.5 percent of the respondents said that the scientific and technological developments improved their living standards, working conditions, and satisfaction in personal life, respectively. On the reverse side, 49.5 and 43.0 percent said that the working conditions and satisfaction in personal life, respectively, did not change or even deteriorated. Regarding the morality of people, only 5.2 percent of the respondents considered that the scientific and technological developments contributed to enhancement of morality while as many as 42.2 percent of the respondents considered them to have deteriorated the morality of people.

The survey also revealed that people are concerned about adverse effects of the scientific and technological developments. As many as 82.8 percent of the respondents are concerned about the danger of abuses or accidental misuses of scientific and technological developments. Those who are concerned that scientific and technological developments would make the humans physically weaker and less active represented 69.5 percent, and as many as 65.7 percent expressed concern about the possibility of science and technology becoming too diversified and specialized for outsiders to understand.

People showed interest in the directions in which the science and technology would develop. Those who wanted science and technology to develop in a manner to support the life of senior citizens and the handicapped accounted for 56.8 percent. Advancement of psychology and psychiatric medicine for supporting healthy mind was advocated by 36.8 percent of the respondents. The options supported highly included developments of artificial organs for transplantation, food resources and household information system, representing 38.5, 24.7 and 24.3 percent, respectively. People are generally interested in the development of science and technology in the fields which are deeply related with their own lives.

2. Trends in Public Opinion

(1) Trends in the Interest in Science and Technology

The surveys traced trends in the public interest in science and technology. The survey of 1976 showed that the sum of those who said that they were very interested and those who said that they were a little interested represented 62 percent. In the survey of 1981 the corresponding figure was 52 percent, those with great interest at 9 percent and those with a little interest at 43 percent. This figure declined in the 1986 survey to 47.5 percent, with

the former group at 10.0 percent and the latter group at 37.5 percent. This figure slightly recovered in the 1987 survey to 52.4 percent, with the former group at 9.9 percent and the latter group at 42.5 percent.

In all these surveys, the male showed higher percentages than the female. In the 1987 survey, for example, the corresponding figure was 68.1 percent for the male and 38.6 percent for the female. The surveys also indicated that people with higher school education showed higher percentages in the interest in science and technology.

(2) Opinion regarding the Relation between Environmental Conservation and Economic Growth

The surveys also traced the relation between the interest in economy and industry and that in environmental conservation, the two major issues closely related with each other. In the first half of the 1970s, in the survey of 1971 for example, more than 40 percent of the respondents said that pollution should be accepted to a certain limited extent and with reasonable compensations for the sake of industrial development. During the period from 1975 to 1985 and onward, those who valued economy and industry in preference to environmental conservation decreased. Such a trend may be noted in the decreasing support for economy and industry in preference to environmental conservation, becoming increasingly evident in the responses to the surveys, represented by the opinion of the 23.6 percent in the 1980 survey that conservation of nature and living environment were important but stagnation of the Japanese economy should be avoided, 11 percent of the 1982 survey saying that economy should grow even though the environment was sacrificed to some extent, and 6.9 percent of the 1988 survey with the opinion that economic growth should have priority over environmental conservation.

(3) Other Aspects

The public opinion on the change of society has been surveyed since the survey of 1981 in a question whether the nation is heading in the right direction or in the wrong direction and in what ways in either case, in which question the respondents could select answers from multiple items. The outcomes of the surveys showed that people thinking Japan was heading in the right direction are more than those thinking that Japan is heading in the wrong direction in a nationwide average. In the 1986 survey for example, the former group and the latter one represented 37 percent and 35 percent, respectively. In the 1987 survey the former and the latter respectively represented 43 and 29 percent. Those who feared that the Japanese society was heading in the wrong direction occupied substantial portions of the population, from a little less than 30 to a little less than 40 percent. In the field of science and technology, those who valued scientific and technological developments steadily increased from 22.4 percent in 1981 to 28.5 percent in 1987, while very few people had a bad image of scientific and technological developments, peaking in 1986 at 1.2 percent. In the field of economy, although 30 to 40 percent of people accepted the economic development as being in the right direction, a significant portions of people considered it to be heading in the wrong direction, 16.7 percent in the 1982 survey and 14.6 percent in the 1986 survey, in marked contrast to the evaluation of the scientific and technological developments. On the issues of resources and energy, the portion of those who accepted them as heading in the right direction always remained low at four to five percent while those who thought them heading in the wrong direction showed a sign of decrease as represented by a decrease from 26.6 percent of 1981 to 14.6 percent in 1987.

3. Conclusion

The outcomes of these surveys indicated that the Japanese people as a whole had a relatively high interest in science and technology and generally accepted the scientific and technological developments as contributing to betterment of the living standard of people, while paying due attention to the adverse effects of science and technology. It may be noted from these surveys that the Japanese people want the scientific and technological developments to take place in the fields where people are directly involved, health care and medical treatment for example.

NISTEP will continue opinion surveys on the general public and professionals to further consolidate the understanding the relationship between the social problems and science and technology. This study made use of the results of the public opinion surveys conducted by the Public Relations Office of the Office of the Prime Minister of the Government of Japan.