

Tasks before the Indian Scientists

The present generation has a special veneration for science. No doubt science cannot solve all the problems yet we know that it is the basis for progress and catalyst for change. So it is essential to give special importance to the advancement of science and technology in India. We have had a very long and distinguished tradition in science from the earlier period associated with the names of Aryabhata, Bhaskara, Charaka and many others to the modern period of Homi Bhabha and C.V. Raman. Even today Indian scientists have been able to make significant strides in the domain of science; controlled nuclear explosion has been successfully conducted, scientific satellites have been successfully launched and many varieties of new seeds have been discovered. All of this progress will give sound foundations to the economy of the country and also to the political structure in the country. All major achievements of the Indian science have been for peaceful purposes and not as a spin-off of defense requirements.

The true contribution of science is to endow the nation with competence and confidence. The work done in agriculture is to be consolidated and extended. Even the grains production, with our present infrastructure can easily meet our demands. But the production of several kinds of protective and nutritive foods should be augmented similarly. In nuclear energy, our acknowledged capabilities should be directed to obviate the supplies from abroad.

Science must also make itself felt in the entire territory of industry. The average levels of performance, capacity utilization, maintenance and productivity must increase. We must expedite the transition from a hierarchical culture in our administration to a culture which will be result-oriented and would encourage team work. Clearly our objective is self-reliance. This does not mean that we should make everything ourselves, rather it needs that we should have the capacity to do so. No foreign power should be in a position to put pressure on us or to exploit our shortages. The more self-reliant we become, the less vulnerable we are.

The administration of our science departments, laboratories and institutions leaves too much to be desired. Scientists often complain about the bureaucratic procedures and details. But scientists have not suggested any change in the administration. Modern management has learnt from science to try to induct scientists and technologists into management. Lord Snow used to say that a scientist in department is worth two in a laboratory. So they should organize the scientific departments and agencies so that they may become effective.

Scientists do not live in their own world. They are an integral part of general society. It is for them to discern what is socially relevant and vital. A very few people are original and still fewer can give new structure to knowledge. The vast number are engaged in applying knowledge to problems and surroundings. There are many problems and challenges in our midst calling all scientific research of the highest order. In attempting to find local solutions, major discoveries have been made so scientists should take up the problems of farmers, housewives and others.

A scientist's best reward is the excitement of the working at the very frontier of extending knowledge, the satisfaction of his intellectual curiosity and the joy of creative activity. Scientific research is characterized as scientific truth which has universality and is accepted as the scientific fact as a whole.

The greatest problem which India is facing is that of poverty. By changing the economic order, it may not be possible to solve this problem because something more than this is to be done. It is scientific research and development which can give better opportunity of employment, cheaper houses and cheaper food for the common man. In other words if we go on importing technology from the European countries it will be a costly affair and the problem of poverty may not be solved. We will have to adapt our technology and scientific research to the Indian conditions geographic, social and economic.

Another domain which the Indian scientists have not explored is the domain on ancient medicine, ancient engineering technology which was used in ancient India. They will have to carry on search to find and develop ancient system of medicine and the engineering technology in order to suit the modern conditions. It has been said that Indian medical science which was popular in the ancient times is one of the finest medical sciences in the world. Architectural marvels created and the great engineering feats performed by the ancient Indians are an enigma even today. If we develop our ancient sciences perhaps we may be able to lead the world in scientific development. Similar is the case with our science and mathematics. If we revive our ancient mathematics perhaps we may be able to lead the world in this science as well.

Indian scientists should not follow the beaten track rather they should try to carve their own path. They should also try to give new direction to the scientific research and technology. If we go on adopting technology of the developed states we will never become self-sufficient. Only scientists and not politicians can make the nation strong because only scientists can provide solid basis for our nation.

