

Bureaucratisation of Science in India

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Prime Minister, Atal Behari Vajpayee, coined a new slogan after the successful Pokhran nuclear exploration : *Jai Jawan, Jai Kisan, Jai Vigyan*. At the presentation ceremony of S.S. Bhatnagar prizes on 25 May, 1998, the Prime Minister promised to back this motto of *Jai Vigyan* with action. He elaborated some salient features of his action plan as follows.

"We must make science and scientific temper an integral part of our national life and culture. Administrators and government officials should be facilitators, and not masters, of scientists. They should create conditions that encourage young scientists to do research and not push papers. The progress of science in India is being hindered not so much by lack of money but by the bureaucratisation of the institutions that we have created in free India. We need to accord greater recognition to highly talented scientists in India. There is a need to make scientific research in India more and more application-based. We must overhaul the system of science education in the country to base it on knowledge and creativity and not on memorizing and examinations".

The Prime Minister urged the entire Indian scientific community to deliberate on how to harness the full potential of science for nation-building. He assured of full and most enthusiastic support to its implementation. Let us hope the sleuths in the Ministry of Science and Technology prepare an action plan to implement the recommendations made by the Prime Minister. Otherwise like all political slogans, *Jai Vigyan* will end up as a mere political rhetoric.

Bureaucratisation is a necessary evil. Its overdose kills creativity and initiative. When Pandit Jawahar Lal Nehru created a chain of CSIR laboratories under the direction of Dr. S.S. Bhatnagar and set up Atomic Energy Commission under the Chairmanship of Professor H.J. Bhabha, the scientists were accorded a status higher than the IAS bureaucrats (Secretaries) and they were answerable directly to the Prime Minister. The apron strings of bureaucracy were not allowed to hinder the progress of research projects. Over the years, there has been a vast expansion in the number of

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research laboratories in India and a corresponding increase in the budgetary allocation. To manage the affairs of science and technology, a full fledged ministry was created in 1980s. Fortunately, scientists have been at the helm in this ministry and it adopted the American model of funding the research projects. Department of Science and Technology (DST) in the ministry is a nodal agency to monitor the progress of research projects in the defined thrust areas. Other agencies like CSIR, UGC and Department of Atomic Energy also provide research support to the university scientists in the form of research projects.

Despite liberal funding by various nodal agencies, the research output and its quality is showing a rapid decline in India. What ails Indian Science? Some recent articles in the Tribune (Science Tribune, 23 April) and Current Science journal have highlighted the ills of the system including too much bureaucratisation at all levels. Recently, Punjabi University, Patiala has constituted a high power committee to suggest measures to improve the lot of research scholars and promote research activity in the university. Since this malaise is wide spread all over India, it needs a national debate to rectify the situation before we reach a point of no return. On the basis of my own experience and standing in the field, I offer my suggestions as follows:

- (i) The research project investigators should be given full financial and administrative powers to carry out investigations under the project.
- (ii) Research scholars must be recruited on the basis of an aptitude test in the field of research . NET may be abolished for entry into research stream as already relaxed by some funding agencies.
- (iii) Research scholars must be paid stipend equivalent to the salary of a lecturer and they should be involved in teaching theory or laboratory . courses.
- (iv) A research scholar must be assured of a teaching/research assignment before completion of his Ph.D. thesis.
- (v) Research supervisor should be paid remuneration for guiding research or he should be compensated by reducing his teaching work-load.
- (vi) The evaluation of research supervisor may be done alongwith his research scholar by peer review.

(vii) Research supervisor should be provided infrastructure by the university or the funding agency before the project is undertaken.

(viii) The results of research investigation should be published in refereed journals before the Ph.D. degree is awarded to the scholar.

(ix) All the projects should be assessed at the national/international level. Research investigator must be made accountable for the success or failure of his project.

(x) Research projects in basic science must be encouraged along with those of applied nature.