Lack of talented students in science

The editorial ‘Higher education in science’ (Curr. Sci., 2002, 82, 241–242) is a subject on which a lot has been said and written. The editorial rightly points out that any conversation amongst scientists drifts to a discussion about the rapidly diminishing interest and the declining number of good students for pursuing a scientific career. There was another editorial ‘Teaching research students’ (Curr. Sci., 2000, 79, 262), which also highlighted the same situation. Wishful expectations from the research institutions to reconstitute higher education and teaching programmes for undergraduate and postgraduate classes to attract the best of students, is far from solution to the problem. The scientific career has much less to offer in respect of emoluments, prospects and opportunities compared to that in engineering, medicine, finance and commerce, but the greatest single factor discouraging the option for a scientific career is the long time taken to complete one’s study and to get a remunerative job. Sometime ago a national talent search scheme was started to offer scholarships right from the undergraduate to doctoral study to attract talented students to the science stream. Later, engineering and medical students were also included in the scheme, and the purpose for which the scheme was started, was defeated. Partial arrest of the flow of talent to engineering and medicine can be achieved through a highly competitive procedure after higher-secondary level in the form of integral study up to Ph D and a secure job in a cadre like the IAS in research institutes of the country (Curr. Sci., 1999, 77, 1227–1228). The drifting of talented students away from science cannot be effectively checked so long as incentives, privileges, facilities, freedom, etc. are not envisaged for the scientific career. Even with all this the number of scientists reaching top positions will be very small compared to students who opt for engineering, medicine, business management, etc. We should not be pessimistic about the number of students opting for a scientific career. Some fifty years ago, the faculties of Arts and Commerce also faced the same problem when most of the students opted for a scientific career. One wonders whether the country has sufficient developmental programmes to absorb the larger number of engineering graduates in the industries and engineering projects. In a few years many of the engineering colleges may have to close down for want of students. Consequently, the number of students opting for a scientific career would increase and with it the quality of students would also improve.

It may not be out of place to consider the ethics of the question: Why should we want more students for science in higher education? At present higher education seems to have degenerated into mass education. Do we expect excellence from mass education? Whatever be the political compulsions for diverting the unemployed youth for another three to five years, treating higher education as a means, is no solution. It is a waste of human and material resources at the cost of real excellence in the research institutions, national laboratories and some of the teaching universities. There is yet another aspect to the above ethical question. Are our science graduates suitably employed in scientific jobs at present? If not, why do we cry for a larger number of them? However, the other problem, want of talented students in the science stream is real and challenging.

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The plight of geoscientists

Hetu C. Sheth has correctly pointed out the sad state of geosciences in India (Curr. Sci., 2002, 82, 243). As he has rightly mentioned, there is a lot of potential for geoscientists to conduct research in a diversified country like ours, especially with reference to recent earthquakes in India, the Barren Island volcano in the Andaman Islands, the Ophiolites Belt in the Andaman Islands, desert geology, geology and tectonics of Himalayas and a host of other projects. The Geological Survey of India does recruit geologists but in recent years it has stopped recruitment. Even the recent fellowships provided by the Department of Atomic Energy do not include geoscientists. The government today is spending a lot on atomic energy, but there is rarely any recruitment or at least some projects from the Atomic Minerals Division to encourage geologists to participate in exploration of atomic minerals. The saddest thing is that we as Indians can easily get a journal from the Geological Society of America, but cannot get one from the Geological Survey of India.

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