

## Notes

### AGEING OF SCIENTIFIC INSTITUTIONS

A study of the history of major scientific institutions in the country shows that most of them undergo a process of ageing over the years.

In the first stage, which may be called the *Primary Stage*, the institution is largely composed of young talent. It is led by an eminent person of high stature, who is accepted, not merely by everyone in the organisation but also by outsiders. The organisation enjoys a high degree of autonomy and is dynamic in every sense of the term. Its minor faults are not exaggerated and it is judged by its overall performance. As examples, one may cite the case of Atomic Energy in the 50s and 60s and of the Space Organisation in the 70s and up till now.

After about 15 years or so, the institution passes into the second stage, which may be called the *Secondary Stage*. Most of the scientists are middle-aged. The eminent primary leader leaves the scene. This is followed by personality-clashes at the top, leading to formation of cliques in the organisation. Performance naturally suffers and there are complaints and mutual charges. This leads to Government intervention and introduction of systems and procedures, which tend to bring about rigidity. As examples, one may cite the case of Atomic Energy in the 70s and of CSIR in the 60s.

After another 15 years or so, the organisation enters the third stage, which may be called the *Tertiary Stage*. In this, as a result of the decline in the secondary stage and further ageing of the scientific personnel, the Reports of Commissions of Inquiry and the like, the organisation becomes almost like a Government Department. Functional autonomy is severely curtailed and scientific work itself is of a routine nature. The hierarchy is well-structured in the form of Directors, Joint Directors, Deputy Directors, Assistant Directors and so on, but the scientific output tends to be of a low order. Examples of these are the CSIR in the 70s and several other University Research establishments.

After a number of years in the Tertiary Stage, scientific institutions seem to enter a final stage, viz., the *Post-Tertiary Stage*. In this, the process of rigidity is complete and the institution becomes, in all respects a Government Department. The hierarchy is well-established and one is keen only about climbing the ladder in successive stages. Hardly any scientific work is done. In other words, in form, structure and content, it becomes a department of government. Examples are the Botanical Survey of India, the Indian Meteorological Department and similar organisations which were dynamic scientific institutions in the earlier years of this century.

In the developed countries of the west, scientific institutions and universities—many of them centuries old—manage to be up-to-date and to be eternally young in spirit and performance. How is it that our scientific institutions go through a process of ageing? What is to be done to keep them all the time in the primary stage? This is the challenge that has to be faced and appropriate solutions found.