

[During the past fifty years many articles have been published in Current Science, covering a wide range of subjects and issues relating generally to the organisation and cultivation of science in the country. Some of these have been seminal in nature. The May 1933 issue of Vol. 1 carried an unsigned article entitled 'An Indian Academy of Science' which was written before the Indian Academy of Sciences and the National Institute of Sciences (now Indian National Science Academy) came into being. The general issues raised and the suggestions made therein are by and large refreshingly relevant even today. We therefore republish this article in this special issue which ushers in our Golden Jubilee Year-1982.—]

AN INDIAN ACADEMY OF SCIENCE

GENERALLY speaking the progress of scientific investigation is regulated by the generous enthusiasm of scientific workers and the financial support received from Government or the discerning public. In India it has attained a stage at which further advancement can best be secured by organising and co-ordinating the laboratory operations of official and non-official research departments. Although Indian science should command practically unlimited resources and actually has enlisted a band of competent and highly qualified investigators, it suffers from inadequate financial support and from the lack of an authoritative exposition of its achievements by a central responsible body which can speak on behalf of her scientific men for India as a whole. The conviction that research is civilisation, and determines the economic, social and political development of a nation has not yet been unreservedly accepted as part of the administrative policy of India, and we are disposed to ascribe the tardy and perhaps unwilling recognition of this fundamental fact to the absence of an all-India scientific organisation whose function would be to concentrate enlightened public opinion on the doctrine that science is material and spiritual wealth. Neither India nor the outside world has at present the means of receiving a complete picture of the total annual output of

scientific work conducted under the auspices of Government, the universities and other semi-official centres. Some of the results are found in journals and magazines published by governmental scientific institutions, all-India societies and the universities; but papers of outstanding merit frequently gravitate to foreign periodicals. It seems to us that the early establishment of a National Academy of Science should secure closer and better organised co-operation of activities among all research institutes in India, and exercise through its official journal a wider influence for the consolidation and promotion of the best interests of science.

It is true that individual scientific workers in India have by their indefatigable industry achieved great distinction for themselves, but the prestige of both official and non-official research is still slow in attaining that status of international importance reached by most European countries. This unsatisfactory position is in our opinion partly due to the tendency of many scientific men to export their more important contributions for publication in foreign journals, with a proportionate impoverishment of Indian archives. Perhaps if the resources of an all-India journal such as we contemplate in connection with the Academy of Science, had been available for giving Indian scientific work suitable

international publicity, the outflow of memoirs from this country would have been more restrained and less voluminous. Continuance of this practice will retard the process of building up a scientific tradition for India and keep her in a position of semi-dependence in the world of science. While the foundation of the scientific reputation of a country is established by the quality of work produced in its institutions, the superstructure is reared by the national journals which proclaim their best achievements to the rest of the world. Manifestly the edifice of science in India is incomplete. If scientific contributions from countries which possess national journals are also sent abroad, let it be remembered that they represent a surplus, broadcasting the embellishments of their own national organisations. It is true that the spirit of science and its service are international, but is it not also true that every nation has its own Academies, learned societies, magazines and journals? India will have to organise and develop her national scientific institutions before she can enter into the comity of international scientists. The achievements of Indian science are national assets, and an Academy which treasures and displays them collectively is assured of providing the necessary guidance and inspiration for the younger generation to put forth greater exertions in order to enrich and widen the usefulness of this great estate.

We believe that there will be a general concurrence of opinion supporting the speedy establishment of an Indian Academy of Science with an *Indian Journal of Science* as its official organ for the publication of papers having outstanding merit. Our proposals need not excite any apprehension as to the fate and fortune of the numerous scientific institutions and journals conducted under the auspices of Government, the universities and other unofficial bodies. According to our scheme these will continue to function as before, and the Academy which in some respects may be

regarded as their apex will assist rather than assume an attitude of unfriendliness towards them. Government are maintaining six scientific surveys besides ten or more research departments publishing their own journals and bulletins. Nearly all the eighteen universities provide facilities for research and some of them conduct journals. The UP Academy of Sciences is the official expositor of research work conducted in the regional universities of the Gangetic valley. The *Indian Journal of Physics*, issued by the Indian Association for the Cultivation of Science, is intended to reflect the scientific results obtained in all the universities. Nearly all the learned societies publish important papers in their journals and some of them have wide circulation. It seems to us that the ground has been thoroughly prepared and the foundation has been laid by these institutions and their organs for the establishment of a central body whose functions will not be permitted to overlap, but will aim at co-ordinating them by establishing cultural contacts. Most of the universities are interested in problems of pure science and through the influence of the Imperial Council of Agricultural Research, their active sympathies are enlisted by a system of special research grants, for the investigation of agricultural topics. The Academy of Science will be an authoritative body of scientists dealing with the more important papers, which they will discuss in their sectional meetings and publish in their proceedings or transactions for which the widest possible publicity will be secured. The scope and purpose of the functions of the Academy are therefore different from those of the Indian Science Congress which offers principally the advantage of human contacts while giving opportunities to discuss the preliminary stages of work still in progress. Thus the aims of the two institutions will be distinct, but complementary.

Among other functions which the Academy will exercise should be included the protection and advancement of the

professional interests of its members. It should acquire the necessary authority to advise Government, the universities and other institutions on all scientific matters and other problems referred to it for consideration and to negotiate on behalf of Indian scientific workers with similar institutions abroad. The weight and influence of the Academy may be also most usefully exerted in connection with securing an adequate statutory provision of grants for all the scientific departments depending on them. Financial stringency is often pleaded as an excuse for diminishing subsidies already insufficient, and although laboratory equipment is expensive, administrative authorities require to be convinced that the price of industrial prosperity is continuous and intensive research. The psychological moment for increasing the research grants appears to be the period when "depressions" overtake the country, for the history of industrial progress testifies that these depressions are due not only to political causes but to a lack of scientific imagination on the part of the industrialists and statesmen. Financial depression is a Handwriting on the Wall, and the only correct interpretation of this message is that scientific research has to be reorganised to cope with the wasteful industrial competition due to over-production. The nation which can foresee and make anticipatory provision is destined to tide over all depressions. It is in such situations that the services of the proposed Academy will be most appreciated, and the knowledge of the scientists will find opportunity for application in the economic, social and political regeneration.

The absence of a central consultative library which imposes a handicap on the progress of research is a subject for consideration by the Academy. At present

reference works from the universities are procurable through personal influence, but stringent rules enforced by other libraries reserve the usefulness of the books and magazines to the members of those libraries. The Indian Scientific Surveys lend books and journals to all recognised institutions and scientific workers but the inadequate funds at their disposal must necessarily limit the number of works they can subscribe for or purchase. The organisation of a central reference library under the auspices of the Academy and its administration will necessarily entail a heavy outlay including provision of a suitable building for housing the books and journals. Through its library the Academy will act as a bureau of information to be disseminated among its members. This is the principal direction in which the Academy will supplement the efforts of the existing institutions to further the progress of scientific investigations in the pure and applied branches of knowledge.

The Academy will be a company of thinkers, workers and expounders comprising members of the New Estate upon whose achievements the world must in future depend for the preservation and advancement of civilisation. Their professional spirit must be service, rendered with absolutely no thought of personal advantage. The amount of knowledge they place at the disposal of their country will determine its economic, social and political progress. An Academy of Science is not an ornament, but an indispensable institution for directing the destinies of the nation. We have no hesitation in thinking that its establishment ought to be the natural and legitimate ambition of a progressive government and an enlightened public who should unstintingly provide the institution with sufficient funds for its service in their cause.