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The Indian Research Council.

THE appointment of the Marquis of Zetland as the Secretary of State for India may be used as an appropriate opportunity for reviving the question of the establishment of the National Council of Scientific Research. His Lordship, during his tenure of office as Governor of Bengal, evinced great solicitude in promoting the cultural advancement of this country, and in April 1933 he caused a circular letter to be issued to a select body of scientists and representative leaders of public opinion in India, offering assistance in case they should agree to co-operate with him in founding an Indian Academy of Sciences and Arts. It may be recalled that almost simultaneously, but independently, *Current Science* in its issue for May 1933 published an editorial in which cogent reasons were put forward for the institution of an Indian Academy of Sciences. Where His Lordship and this Journal contemplated a single authoritative institution, the movement initiated by them resulted in the inauguration of two scientific bodies, viz., The Indian Academy of Sciences and the National Institute of Sciences. Both on grounds of finance and of expediency we deprecate plurality of institutions, and one of our co-operators wrote to us as follows on this subject :

"The danger, of course, is that if we attempt to establish too many scientific bodies requiring support from Governments and Universities, we make it more difficult for existing institutions to continue: it must be remembered that at present we find it sufficiently difficult to obtain adequate support for the Indian Science Congress and for our journal—*Current Science*."

The existence of multiple scientific bodies of the Academy status must make it increasingly difficult for the Central Government to recognise the claims of any one of these bodies as the official expositor of scientific opinion in India, and must definitely retard all proposals for the establishment of a National Advisory Board of Scientific Research. In this connection, our co-operator from whom we have already quoted, makes the following significant observation :

"It so happens, however, that some three years ago, a committee of heads of scientific departments of the Government of India was called upon to advise

on the question of the formation of a National Research Council and of National Committees in India to adhere to and co-operate with the International Research Council and its Unions. We expressed the opinion that the formation of such a council was desirable although the conditions were not favourable for the institution of a National Research Council on lines analogous to those followed in most other countries for the reason that there was in India no body comparable to the Royal Society of London, the French Academy of Sciences, etc. The present position is that the project for the formation of a National Research Council in India is in abeyance for lack of funds; but ultimately when the financial situation improves and it becomes possible to consider again the formation of such a Research Council, it will be easier to form such a Council on lines analogous to those existing in other countries, if, in the meanwhile we have formed an Academy of Sciences in India of the nature projected in your (Editor's) circular."

At present we are confronted not so much with financial stringency as with a complicated situation such as few could have visualised in May 1933, and we are afraid that if it is not promptly and wisely handled, it is capable of postponing indefinitely the establishment of a Research Council in India. For, it is obvious that all the four institutions which claim to occupy the status of an all-India character cannot fulfil the functions which only a strong Central Body can perform. The confidence which such an authoritative institution enjoys will be sufficiently high, as the Marquis of Zetland pointed out in his circular letter, "to consolidate and expand the intellectual interests within its own sphere of influence; while the standard which it maintains must necessarily provide example and inspiration for scientific work of the greatest significance; and the estimation, in which it is held by the International Associations should make its membership to be coveted as a distinction of meritorious and important scientific investigations."

Those who have been following the trend of modern scientific progress in this country must have noticed two distinctive features. The first characteristic is that a close and steady co-operation between different groups of investigators,—medical men, physicists, chemists, biologists and engineers,—is almost indispensable for an adequate solution

of all social and economic problems. The second is that scientific discoveries in any one branch of science, whether theoretical or applied, find direct and ready application in apparently unrelated branches of knowledge. We have several research institutions in India equipped and maintained by Government subsidies, and it is obvious that investigations in them should proceed uninterrupted by the fluctuations of financial assistance and the inhibitions of departmental influences. There is therefore a great need for a central agency for the prevention of overlapping of effort and the duplication of expenditure of national revenues. It ought to be one of the functions of such an institution to secure the intimate co-operation of the medical, agricultural, industrial and forest research departments and stress the importance of a clearly defined policy of scientific investigations in these departments for the promotion of the national health and the economic efficiency of the country. It seems to us that the functions of the Research Council should not be restricted to the encouragement of co-ordination of research work alone, however important and necessary it may be for the intellectual advancement of the country. In a sense and perhaps for some time to come, this body must occupy the status and fulfil the functions of the Parliamentary Science Committee in Great Britain. It should seek opportunities for establishing a link between science and Government on the one hand, and on the other, between science and society. It ought to assume the responsibility of promoting discussions in the Council Chambers of Federal India, on scientific subjects in their application to economic policy and national well-being. It may even be necessary and desirable to arrange for occasional addresses by scientific authorities to the principal political parties of Legislative Assemblies and to assist the Government in all measures and acts which involve the application of modern scientific method. The usefulness and importance of the Research Council will, to a large extent, be tested not merely by the scientific prestige to which it might attain, but also by the measure of confidence which it induces in the Central Government on whose bounty it has to depend, and the extent of influence which it exerts on national affairs.

Such a conception of the functions of the representative scientific organisation was recently elaborated by our contemporary

'*Nature*,' and was also emphasised by Sir Mirza M. Ismail in his opening address at the inaugural ceremony of the Indian Academy of Sciences.

This is not, however, the first time that proposals for the formation of the National Council of Research have been put forward. At the first University Conference held in Simla in 1924, Sir C. V. Raman moved the adoption of a resolution for the establishment of a Central Advisory Board of Scientific Research, since the Board of Scientific Advice consisting mainly of the heads of various scientific departments which Government had brought into being was willingly permitted to become defunct in 1920. In September 1930, the Government of India addressed a letter to the Secretary to the Government of Bengal conveying their decision that India should join the International Research Council and its Unions (1) Geodesy and Geophysics, (2) Geography, (3) Astronomy, (4) Biological Sciences, and (5) Radio-Telegraphy, and further stated that provision was made in the budget of the Secretary of State for India for 1930-31 for subscriptions to these bodies. In the same letter Government pointed out that, as they were not aware of the existence of a representative scientific organisation to which adherence to the Council and its Unions could be entrusted, they had arranged for the time being to act as the representative of this country. The annual cost of India joining the Council and the five Unions, calculated on her population basis, is £548-13-4. The Inter-University Board at its conference in 1931 appointed a sub-committee to investigate and report on a scheme for the formation of an Advisory Board of Scientific Research. The Government of Bengal which consulted the Asiatic Society of Bengal on the subject of the letter of the Government of India dated September 1930, received in 1932 a memorandum embodying the considered views of that learned body; and other scientific institutions which were also consulted, submitted by that date their replies, generally favouring the establishment of a Research Council in India. It seems to us that the Indian Research Council when it is formed must be the only scientific organisation which by its representative character and prestige could be entrusted with the responsibility of adhering to the International Research Council and its Unions. It is not financial stringency that now stands in the way of creating this body

so much as the confusion produced by the multiplicity of scientific institutions which within a year have come into existence. The Government of India were looking forward, as is manifest from their letter of September 1930, to the foundation of a strong and authoritative scientific organisation which would be willing and competent to advise them on the formation of the Indian Research Council. The position in 1935 is not more hopeful than it was in 1930 and so long as scientists in India permit the existing state of affairs to continue, the Government of India will also continue so long to remain in a state of perplexity. A definite movement should be initiated to remove the anomaly of four scientific bodies, each trying to function as an All-India organisation, and claiming to represent the national scientific interests. We could put forward a scheme for an All-India Organisation which would be thoroughly representative and satisfactory, if there were any indication that the conditions were propitious.

The value and usefulness of the proposed Indian Research Council must naturally depend not only on the readiness of the Government of India to utilise its services and to support it financially, but also on the willingness and preparedness of Indian Scientists to co-operate with one another, and with governments and their scientific departments. The spirit of exclusiveness and the provincial outlook, which unfortunately overtake scientific achievements only too often in India, must be fatal to the growth of public institutions and to the creation of expert scientific opinion, capable of influencing the policies and projects of Government. It is true that almost all the practical problems of administration involve scientific factors, and it is equally true that the absence of a representative organisation, which could provide Governments with a reasonably adequate unanimity of expert opinion on the control and administration of the life of the community, must account for much useless expenditure of public revenues. If the scientists would show any disposition to set their house in order and also their willingness to reach agreed settlement in matters relating to their departments, then the Government of India may be expected to appreciate the value and need of advice from those who by their foresight, character and capabilities acquire a right to be consulted. The one essential factor for the establishment of the

Indian Research Council is a modification of the existing policy, spirit and outlook of public scientific bodies, which must merge into a single representative organisation, so as to command the esteem and confidence of Governments, Universities and the general public.

The new Secretary of State for India who, as Governor of Bengal, had, more than any other administrator, evinced the greatest practical concern in the promotion of the cultural life of this country, and whose interest in the scientific progress of its people had never abated even in the midst of his other pre-occupations, may be expected to use his rare influence in establishing a right relationship between science and Indian administrative problems. Professor F. O. Bower once acknowledged that it was owing to the energy and enthusiasm of Lord Balfour that science was welcomed into the inner circle of Imperial Administration; and India may confidently hope that the critical and constructive mind of the

Marquis of Zetland may formulate a plan which would ensure a reasonable appreciation of the value of science in the administrative departments of the Government of India. We hope that an atmosphere favourable for initiating a movement for the establishment of the Indian Research Council will soon be produced by scientists in India who, by reason of their knowledge and capabilities, are entitled to exercise a greater control over such administrative problems of the country as fall within the range of scientific influence. These problems should no longer be permitted to be entrusted to the hands of those who have no first-hand knowledge of science, and the first step in this direction is to remove the reproach that India is practically the only civilised country without a National Research Council, to which the Government of India could look up for advice and guidance in all practical measures affecting the moral and material advancement of the people.

The Educational Advisory Board.

IN 1923 the Government of India abolished the Bureau of Education as a measure of retrenchment and the Hartog Committee deplored this act of Government in order to save a few thousand rupees. When a few months back Sir G. S. Bajpai referred in the Legislative Assembly to the intention of Government to revive the Central Advisory Board of Education in accordance with the recommendation of the Committee, the Assembly suggested postponement of the proposals in view of the forthcoming reforms in the provincial and central administration. If the proposed Advisory Board is to fit into the general framework of federal administration, it is obvious that the Indian States should be adequately represented, for education, which is at the basis of all progress, must always remain as an all-India subject. The Hartog Committee points out that education as a provincial transferred subject has during the past fifteen years made little progress especially in the field of free and compulsory elementary education. The Simon Commission, of which the Committee was an auxiliary body, viewed the problem of education as one concerning the entire political and social destiny of the Indian Empire and the question of the extension of franchise and that of the reconstruction of rural life

depend largely upon the amount of benefit which a carefully devised scheme of higher elementary education confers on the general Indian population.

The value and usefulness of the Board do not depend so much on its prestige as on the amount of expert knowledge, experience and industry which its members will ultimately bring to bear on the problems entrusted to them for investigation and advice. The existence of the Board consisting of eminent educationists and representatives of public opinion can be justified if Government recognises the need for advice and provides adequate funds for giving effect to its recommendations. Proposals for the rapid extension and improvement of the educational schemes in India are frequently made in the Legislative Chambers and Governments have frequently pleaded inability to accept the proposals of people's representatives on account of the limited provision they could make for education in their annual budget. The realisation that money spent on people's education is in the nature of public investment, must be the foundation of the financial policy of Government, whose first and last line of defence must at all times be a contented, prosperous and homogeneous population.