

APPENDIX

A NOTE ON THE AIMS AND OBJECTS OF THE NATIONAL INSTITUTE OF SCIENCES OF INDIA

A note on the Aims and Objects of the National Academy of Sciences of India, approved by the Academy Committee of the Indian Science Congress Association, was issued with the letter of invitation dated the 18th of August, 1934, to those gentlemen who were invited to become Foundation Fellows of the proposed National Academy of Sciences of India.

At the meeting of the Academy Committee held at Calcutta, on the 15th and 16th of September, 1934, in the rooms of the Asiatic Society of Bengal, three representatives of the Indian Academy of Sciences founded at Bangalore, namely the President and the two Secretaries, were present, and as a result of discussion then undertaken, the object of which was to provide for co-operation between the proposed National Academy and the Indian Academy of Sciences of Bangalore, as well as with the two other Academies, the Asiatic Society of Bengal and the U.P. Academy of Sciences, certain changes were decided upon. For this reason it has become necessary to reconstruct the note on our aims and objects referred to above.

In the first place it was generally accepted that a more suitable title for the body to be founded by the Indian Science Congress Association would be 'The National Institute of Sciences of India' rather than 'The National Academy' on account of the fact that the activities that the National body is to undertake are somewhat different from those of an Academy as such.

The Committee consider that an Academy must be regarded as a society that deals with a variety of branches of knowledge rather than confining itself to a single branch of studies, or to closely allied branches of studies, such as is proper to specialist societies, *e.g.* The Chemical Society of India or the Mining and Geological Institute of India. They consider also that an Academy is otherwise similar to specialist societies, and exists primarily for the holding of regular periodical meetings for the purposes of reading and discussion of papers, of course, with a view to subsequent publication.

The broadest type of Academy is one that deals with all branches of knowledge. This function is already performed by the Asiatic Society of Bengal, which is, in fact, the oldest learned Society in India, and was founded before any of the specialist societies. This society comprises in its activities both Science and Letters. Until four years ago there was only this one Society of Academy rank in India, but since that date two other Academies have been formed, namely the U.P. Academy of Science founded in 1930, and the Indian Academy of Sciences of Bangalore founded in 1934. These two latter societies being Academies of Science only are of more restricted scope than the Asiatic Society of Bengal, whose activities comprise both Science and Letters. This completes the list of Academies at present in India. Each of these Academies has a membership that is not restricted to the province or region within which the headquarters of the Academy is situated, and to this extent each one of these Academies may regard itself as having all-India activities.

Each Academy, however, necessarily has its headquarters in a definite town or province, and to this extent it provides greater benefits to members resident at or close to the headquarters than the members of more distant residence. This fact is recognised in practice by the Asiatic Society of Bengal and the U.P. Academy of Sciences, which charge higher fees to resident than to non-resident members. Because, therefore, of the facts of geography, each of these three Academies must be regarded as having local

activities in addition to all-India activities ; and the proportion between the local and all-India activities of each Academy must necessarily vary according to its history and activities. The Committee consider, therefore, that the facts of geography necessitate the existence of more than one body of Academy rank in India, and that for practical purposes even these three Academies are not sufficient to meet adequately the scientific needs of the whole of India. Scanning the list of gentlemen who are being invited to become Foundation Fellows of the National Academy, gentlemen whose names have been selected after careful consideration, with due regard to the merits of each person and without reference to regional or provincial problems, it is seen that these Fellows can be classed into 5 groups, and that about 35% of them may be regarded as resident in the tract of which Calcutta is the natural centre ; about 25% of them in Southern India, of which Bangalore may be accepted as the natural centre ; about 13% within convenient reach of the United Provinces ; and, in addition, about 13% to whom Bombay or Poona would be the most convenient centre ; and about 13% for whom Lahore would be the most convenient centre.

The full development of Science in India on an Academy basis appears, therefore, logically to require the foundation of two new Academies with centres, say, at Bombay (or Poona) and at Lahore. In devising a scheme for a National Institute of Sciences of India co-operating with the Academies, we are prepared, therefore, for the possibility that scientists whose natural centre of activity is Bombay (or Poona) on the one hand and Lahore on the other may think it advantageous to the development of Science in their regions to establish Academies of Science.

With reference to the existing Academies, a scheme of co-operation with the National Institute of Sciences of India has been devised. This scheme provides for the representation of the existing Academies upon the Council of the National Institute in the form of an additional Vice-President and an additional Member of Council for each Academy elected by the respective Academies from amongst the Fellows of the National Institute who are also members of the respective Academies. Should the scientists interested decide that it is desirable to found Academies of Science at Bombay or Poona and at Lahore, the National Institute will be prepared to offer them also an additional place as Vice-President and an additional place as a Member of Council, provided the Academies so founded contain a minimum number of Fellows of the National Institute.

It appears to be unnecessary to found a new Academy in Calcutta, as the Committee hope that the Asiatic Society of Bengal will be prepared to develop its activities on the Science side in order that this may be avoided. The Academy Committee make this recommendation with the hesitation and deference which is necessary to a body of such a distinguished past and long career as the Asiatic Society of Bengal.

The fact that an existing Academy undertakes to co-operate with the National Institute for particular purposes will not, in any way, detract from its independence or dignity, or prevent it from continuing to have all-India interests and activities.

Assuming that the three existing Academies will be prepared to adopt the scheme of co-operation with the National Institute outlined at a meeting of the Academy Committee held on September the 15th and 16th, and also that the two suggested additional Academies, if formed, will be prepared to cater for the general interests of all scientists in their natural sphere of influence, irrespective of juniority or seniority of members, it is unnecessary for the National Institute to enter into competition with them in this respect. For the National Institute we need only a body of Fellows elected for their eminence, whose general duties will be to co-ordinate scientific effort throughout India.

It is proposed that at present we should start with 125 Foundation Fellows, of whom 100 have been selected by the procedure devised by the Academy Committee, and that these 100 Fellows shall select the remaining 25 Fellows in accordance with the Academy Committee's quotas. Ten new Fellows will be elected in the first year after the formal

constitution of the Institute, and 10 annually thereafter. The latter figure is not, of course, an inflexible figure, but one to which it is proposed to adhere for the first few years.

Although it is not proposed to make it compulsory that every Fellow of the National Institute shall also be a member of one of the three or more Academies, yet it is hoped that the majority will so belong. It is recognised, however, that there are likely to be a few Fellows left over who, for geographical reasons, cannot benefit by membership of any Academy, and for this reason it is not proposed to make such membership compulsory.

The proposal is that the dues required from Fellows should be an admission fee of Rs. 32 and an annual subscription of Rs. 36. If the existing Academies enter into the scheme of co-operation, it is proposed that the National Institute shall contribute to the Academies Rs. 12 per member per National Institute Fellow towards his membership subscription of his Academy. In the case where a Fellow is a member of more than one Academy, he will be asked to name the Academy to which he elects to have Rs. 12 of his subscription transferred. In the case of Fellows who do not belong to any Academy, the National Institute will retain the whole subscription.

Concerning publications, it is proposed that the National Institute should publish a summary of papers read before the co-operating Academies in order to enable the National Institute to issue a consolidated *Comptes rendus* of papers read before all the Academies. In addition, the National Institute propose to publish an Annual Review of the Progress of Science in India, dealt with subject by subject. Thirdly, in cases where Academies are unable, for financial reasons, to publish large and expensive Memoirs, the National Institute propose to undertake this duty when so requested. On the other hand, it is expected that the Academies will publish their own Journals with papers read at their meetings. Should any Academy, however, find itself financially unable to publish papers read before it, the National Institute will be prepared to consider their publication.

Concerning meetings of the National Institute, it is not the intention to hold regular periodical meetings for the reading of papers, as this work is regarded as the prime function of the Academies. To commence with, therefore, and for business purposes, two meetings only per year will be necessary, one at the headquarters of the Institute, say, during the monsoon season, and one perhaps at the city selected for the meeting of the Indian Science Congress of that year. Additional meetings for business and other purposes will be held when necessary. Proceedings of meetings of the Institute will also be published.

The above indicates the extent to which the Institute will act as a body for publication. In addition, one of the major activities at which the National Institute should aim is the organisation of a National Research Council and of National Research Committees for India when so desired by Government. Such organisations would contain not only representatives of the National Institute, but of the Academies and of the relative specialist societies, as well as of the various scientific services, and in this way co-operation will be ensured between the Institute, the Academies, the specialist scientific societies, and the Government as represented by scientific services.

The scheme of co-operation also includes that the National Institute should arrange for discussions and symposia on special topics of general natural and scientific interest as is done by the Royal Society and the Faraday Society.

Another object which we have to keep before us in accordance with the resolutions of the Indian Science Congress Association is the preservation by the Institute of a liaison between Science and Letters.

We consider that for the present this portion of our aims should be kept in abeyance and that the Institute should first be brought into being and activity as a purely Science

Institute; when this has been effected, we shall be in a position to consider what form of liaison, if any, with Letters is desirable and practicable.

With reference to finance, we shall require from the beginning funds to pay the salary of an Assistant Secretary and the expenses of an office, and for purposes of publication. We are hoping that in view of the All-India status of our National Institute, and now that concord has been established with the existing Academies, the Government of India will be prepared to contribute a suitable sum annually towards the fulfilment of our regular annual programme. In addition, the National Institute will be prepared to administer funds entrusted to it for particular scientific researches and investigations. Further we hope that wealthy men in India who have the cause of Science at heart will think it suitable to make donations towards the funds of the Institute.

Draft rules are being prepared to provide for the above objectives. Although the objects of the National Institute are thus national and co-operative in type, it is proposed to constitute its Council by direct election by the Fellows from amongst themselves. But to provide for co-operative relationship with the Academies, it is proposed to offer one additional Vice-Presidency and one additional Membership of Council to each Academy to be elected by the Academy from amongst its members, who are Fellows of the National Institute. It is proposed that all elections to the Council shall be conducted by postal ballot.

There is, of course, no intention that the existence of our Fellows should prevent Academies from continuing their own Fellowships where such exist, or to start their own scheme of Fellowships if they think desirable. There is, in fact, as will appear from this note, no intention or desire on the part of the National Institute to interfere with the activities or internal organisation of the Academies.

With reference to the revised title, in which the word 'Institute' has been substituted for the word 'Academy', it has its analogy in the *Institut de France*, to which are related five Academies, including *Academie des Inscriptions et Belles-Lettres*, and *L'Academie des Sciences*.

There is, however, a fundamental difference, namely that the French Academies are all branches of the Institute of France. In our case no such subordination or affiliation is proposed. The relationship of the Science Academies in India to the National Institute will be one of co-operation of independent bodies. There is further this difference that whereas the Institute of France is in relationship with Academies for various branches of knowledge, our National Institute is for the purposes of co-ordinating and co-operating only with the scientific activities of Academies.

This change of title necessitated discussion in the Academy Committee whether our terms of reference from the Indian Science Congress, which were to found an Academy of Sciences, would permit us to take this line. It was, however, decided that the instructions of the Indian Science Congress Association referred rather to the general problem and did not really impose on us any particular title, and that provided the organisation we propose to form carries out the objects which the instructions of the Indian Science Congress placed before us, there can be no objection to the proposed change of name.

With reference to the location of the National Institute, if a scheme of co-operation had not been devised, it might have been better to avoid locating the Institute anywhere in order to prevent any form of jealousy. This might have been arranged by means of a scheme in accordance with which the headquarters moved periodically, say every two years, from one headquarters to another. Such proposals for a peripatetic Institute would, however, have prevented the full development of the Institute and would have been contrary to the dictates of business which require that the Institute must have an office somewhere. The Committee propose to leave the choice of the headquarters to the vote of the Foundation Fellows.

As regards procedure, although the Academy Committee propose in accordance with their mandate to take all steps necessary to found this National Institute, they also propose, in accordance with the pledge given at the meeting of the General Committee of the Indian Science Congress Association held in Bombay in January, 1934, to defer the final step of actual registration until the formal ratification by the General Committee of the Indian Science Congress Association to be held in Calcutta in January, 1935. It is proposed also to hold the inaugural meeting of the National Institute during or close to the same meeting of the Indian Science Congress Association.