

combined with and in part the cause of an inadequate provision of funds, is responsible for failures in maintenance, an insufficiently high standard in staffing, both as to numbers and qualification, and a lack of energy in administration, which has failed to keep abreast of museum development in other countries, while allowing exhibits to deteriorate and perish through neglect of proper care and attention. Unless immediate steps are taken, the report says, proof of India's cultural greatness in past time, of her technical and artistic skill in perishable materials, will vanish for ever from India itself and will only be found in the vast repositories of Europe and elsewhere.

Notwithstanding the illiteracy of the population, generally estimated at ninety per cent, the inadequacy of the museum cannot be excused on the ground of the lack of interest of its public. It is stated that during a recent festival in Madras, no less than 130,000 individuals passed through the Museum in one day, while the Mysore Government Museum, Bangalore, has 260,000 visitors annually.

As is indicated by the directory of Indian museums, which forms Part 2 of the report, the character of the Indian collections on the whole is sufficiently varied. The predominant place is taken by exhibits illustrating the archaeology, history and art of India whether in specialized institutions or as part of a larger institution. The variety and extent of the fauna of India are well shown in the famous collections of the Indian Museum, in the Prince of Wales Museum, Bombay, and the museums at Madras, Nagpur and Darjeeling. The Geological Survey has four galleries in the Indian Museum, which are fully representative of the geology of India. One deficiency

to which attention is directed is the inadequacy of the ethnological collections illustrating the culture of the varied peoples of India, although the collections demonstrating the culture of the aboriginal tribes at Lucknow, Calcutta, Nagpur, Madras and Trivandrum are noted. The importance of agriculture and forestry in India is responsible for the efficiency of the Forest Research Institute at Dehra Dun, with its world-famed collections devoted to botany, silviculture, entomology, timber and other forest products, while systematic botany is covered by the Herbarium of the Royal Botanic Gardens, Sibpur, where there are more than 2,000,000 specimens. There are also agricultural museums at Coimbatore and Lyallpur. The Indianization of the staffs is now virtually complete.

Of the recommendations appended to the report, the most important is that the Government should appoint immediately an Inspector General of Museums with European experience, and an assistant to be trained overseas. Further, that the constitution of the Indian Museum should be reorganized to permit the appointment of a director with full powers and freed from other duties. In view of the criticisms of the standard of staffing and of the lack of general appreciation in museum administration of advance in technique and development of museums as centres of cultural organization, special emphasis should be laid on the recommendation that the Standing Committee on Museums and Museum Conferences should be revived, and funds provided to meet the cost of Committee, travelling allowances and printing; while the provinces and municipalities are advised to provide more funds for maintenance and also adequate and competent staffs.

The Service of Unified Knowledge

MR. H. G. WELLS'S recent discourse* on the disastrous inco-ordination and waste of modern knowledge and thought concluded with a warning that "without a World Encyclopædia to hold men's minds together in something like a common interpretation of reality, there is no hope whatever of anything but an accidental and transitory alleviation to any of our world's troubles".

To Mr. Wells's appeal to the learned world to set its house in order comes an answer from Prof. A. B. Dobrowolski, director of the Meteorological Service of Poland, president of the Warsaw Geophysical Society and professor of pedagogic sciences in the Free University of Warsaw. Prof. Dobrowolski, while recognizing the potential value of Mr. Wells's project, suggests that it does not go deep enough. If men's minds are to be held together in something like a common interpretation of reality, it is essential that they should have sufficient general culture for an insight into and appraisal of the rich and complicated life of the civilized world of to-day.

This means that there must be a revival of the ideal of a liberal education and efficacious means for realizing it at a level higher than that of the secondary

school. A boy or girl leaves school with a certain capacity for self-education. This capacity ought to be cherished and utilized as a means towards higher general education; but encouragement and support are needed. Society ignores the need. The universities are concerned to form, not cultivated men and women, but specialists. Such general culture as is acquired after school-days are over is derived from no systematic cultivation of the arts of observing and thinking, with study to understand and appraise the observations and thoughts of others; but from a purely haphazard succession of experiences, chance readings, conversations, attendances at exhibitions, public meetings, concerts. So, in the vast majority of cases, the intellectual worker's conception of the civilized world, his philosophy of life, if such it may be called, which will determine his reactions to circumstances throughout his life, is the haphazard product of a series of accidents, a thing of shreds and patches.

Prof. Dobrowolski suggests that the remedy lies in creating, in every university, a new 'faculty of general knowledge', the function of which would be to arouse, especially among the young, a lively sense of the value of higher general culture and to stimulate and guide efforts to attain to it through self-education. The mere existence of such an institution would be,

* Delivered at the Royal Institution on November 20 and published as a Supplement to NATURE of November 23, 1936, under the title "The Idea of a World Encyclopædia".

already, a most effective piece of propaganda. Among its activities would be, in addition to classes, discussions, exercises, seminars and individual counsel and advice; also publication of specially prepared handbooks for aspirants to self-culture, since the popular manuals now on the market do not meet the case.

Prof. Dobrowolski has won for his ideas the support of a group of some fifteen of his colleagues, and a working model of the suggested university faculty has been brought into being under the significant name "Universitas Rediviva". For eight months, thirty students of varying ages and professions have taken part in this experiment. The work is organized in two stages: first, evening classes and exercises extending over four semesters (two years) and occupying eight hours a week; secondly, tutorial counsel given, orally or by correspondence, by various specialists, and group discussions.

The subject-matters of the course range over the widest fields: the art of thinking, general history of ideas, science and technology, art, literature, psychological sciences, economics and sociology, education, the use of leisure, ideologies and criteria of values. In practice, they are divided into six groups: (1) physics, chemistry and astronomy, with mathematics; (2) natural and geographical sciences; (3) psychological sciences; (4) social sciences; (5) pedagogic sciences, and, in relation thereto, the technique of intellectual work, conceptions of the world, philosophies, etc.; (6) art and literature.

Embracing, though it does, the whole of civilization, the programme is intended to be taken in its entirety by every student, and, in order to ensure unity of treatment the professors keep ever before themselves their common aim: the acquisition by the student of the capacity to judge, to appraise, to estimate.

Association of Teachers in Technical Institutions

THE twenty-eighth annual conference of the Association of Teachers in Technical Institutions was held in Coventry during Whitsuntide. On May 17, the president for 1937-38, Mr. W. E. Park, principal of the Technical School, Luton, was installed by Mr. W. T. Maccall, of Sunderland Technical College, who had filled the presidential office during 1936-37. A civic welcome to the Association was accorded by the Deputy Mayor of Coventry, the chairman of the Education Committee and the chairman of the Technical Schools Sub-Committee of Coventry.

"In no town more than Coventry," said Mr. Park in his presidential address, "can we see so well exemplified the changes which are so rapidly taking place. Its industries, built up on the tradition of skilled craftsmanship, are being adapted to the means of the defence of our realm, and as the adaptation proceeds the serious shortage of skilled workers and trained technicians is being realized". It is the business of technical educationists to solve such problems as these, Mr. Park continued. But it must be remembered that, whatever the needs of the immediate present, the fundamental business of technical education is to serve the industrial and commercial civilization which is ours. To that end, the system must be carefully and scientifically planned. For this reason, he emphasized the value of a report on "Co-operation in Technical Education" recently prepared by a conference of representatives of the associations of local education authorities and the London County Council and issued by the Board of Education. Mr. Park directed special attention to the passages of that report which recommended consultation between authorities in regard to the provision and planning of new buildings, and the need for co-operation in connexion with the distribution and delimitation of different stages or types of instruction. Association between authorities to deal with problems of industrial regions as a whole facilitates negotiations with industrial and commercial organizations for the region, and will enable

possibilities in connexion with the utilization of teachers, particularly with those possessing high qualifications of a specialized character, to be examined much more carefully than has hitherto been the case.

Mr. Park insisted that technical education will fail its ultimate purpose if it neglects training for citizenship. Merely to train technicians either for the purposes of re-armament or for the bare needs of industry and commerce would lead to the creation of a nation of robots. Hence the Association's activity in conjunction with its sister associations in producing a "Report on Education for Citizenship" which was discussed and accepted during the Conference. Whether 'citizenship' be taught directly or indirectly in technical colleges, the question of "bringing politics into the college" must be faced. It is important in this connexion to remember three things: First, that in the initial stages the social sciences are mainly descriptive and non-controversial; second, that the average teacher is conscientious and knows that he can and must distinguish between facts and his own opinions; and third, that if a scientific approach to social and political problems is not taught in the class room, young people will be left completely unprotected against propaganda in later life.

Among the resolutions passed by the Conference was one which urged the release of technical teachers, after seven years' teaching service, for further periods of industrial service without loss of salary or superannuation rights. Another resolution urged the advisability of increasing facilities for the attendance of young persons at part-time day technical classes in preference to evening classes. This arrangement the Conference held to be in the best interests of students, physically and mentally, and ultimately to be most beneficial to the nation and to industry. In a resolution dealing with the Factory Act, the Conference expressed the view that no overtime should be worked by young persons less than eighteen years of age.