

British Universities and Empire Development.

THE annual conference of the universities of Great Britain and Ireland took place at University College on May 10 under the presidency of Sir Donald MacAlister. The four subjects chosen for discussion were: (1) Directions in which universities might profitably develop, at the present time, were funds available; (2) the Ph.D. degree as an encouragement to higher study and research; (3) universities and research in relation to the development of the natural resources and the industries of the Empire; (4) interchange of university teachers and students.

In opening the discussion of the first subject, Sir Theodore Morison said that the task for which universities require funds most urgently at the present time is not an extension of the field of their activities, but the consolidation of ground already occupied. To discharge efficiently the functions they have already undertaken, resources which would have amply sufficed before the War are now totally inadequate. This is due not only to the large increase in the number of students, especially of students of science, but also, so far as the modern universities are concerned, to the fact that a very large proportion of them now come from humble homes and lack the traditions, standards, and the pocket-money which enabled the students of a bygone day to provide for themselves the essentials of a healthy social life. Under the new conditions, therefore, there rests upon the universities a much heavier responsibility than before in regard to such matters as the provision of hostels, club-rooms, libraries, and recreation grounds. The laboratory requirements of the science departments have grown year by year, and both staffs and equipment are much more costly than before the War.

The Vice-Chancellor of Oxford spoke of the needs of the Bodleian and the need of funds for endowing post-graduation studies, and Dr. R. S. Conway emphasised the value of scholarships for foreign travel both as correctives of provincialism and, particularly since the World War upheaval, on account of the direct and friendly personal relations with inhabitants of foreign countries which they lead to. Dr. E. Barker, Principal of King's College, suggested that the universities consider what preparations are necessary for the increase, which is almost certain to take place in the near future, in the number of students in their teacher-training departments, involving additional hostels, improved opportunities for research by teachers, and development of departments of psychology and fine art. Sir Alfred Ewing directed attention to the progressive character of old subjects and the necessity for continual adjustment of equipment to enable the teaching of the fundamental subjects to be maintained at university standard. In science, this involves from time to time very heavy outlays. He instanced the new chemical laboratories of Edinburgh, which have cost a quarter of a million pounds.

The second subject was introduced by the Master of Emmanuel. At Cambridge, candidates for the Ph.D. degree have during the past three years numbered 143, 179, and 209. Two-thirds of them come from other universities, hoping to find more facilities for research, better methods of training for research, and wider opportunities for association with other students, than their own universities afford. Dr. Giles quoted advice given by Sir Ernest Rutherford that research students should not lose sight of the importance of continuing their education, that occasional special lectures by great specialists are extremely valuable, and that the formation of

students' discussion societies should be encouraged. Prof. A. N. Whitehead reminded the conference that the foundation of the Ph.D. degree marked the beginning of a new era of co-operation between British universities, promoting the unity of British civilisation. The number of candidates for this degree in London had exceeded all expectations notwithstanding that ample precautions are taken for maintaining a high standard of qualification for admission. The most important aspect of the work of these students, and the aspect which should be ever present to the minds of their supervisors and examiners, is the extent to which it favours the development of creative knowledge, of ability to render knowledge available and applicable to concrete problems. Sir Richard Lodge argued that a relaxation of requirements in regard to residence is needed in order that students may pursue elsewhere studies begun in the universities in which they first graduated. In particular he advocated the "federalisation" of the London Institute of Historical Research so that other universities may contribute to its support and acquire the right to send students to it without severing their connexion with their own universities. He announced that the Council of the Institute had agreed to this in principle.

The third subject, the relation of the universities to the development of the resources of the Empire, was dealt with first by Principal Grant Robertson of Birmingham, who directed attention to the fact that the supply of men, other than medical students, who have been trained broadly in the biological sciences is far short of the present demand, whereas chemists and physicists have difficulty in finding employment. He suggested that the universities should adopt an agreed policy with the view of remedying this unsatisfactory state of affairs. Sir Frank Heath said that industry recognises that for further progress in research it is largely dependent on the universities. At the same time, universities are subject in this connexion to certain limiting considerations. It is inappropriate for them to undertake certain kinds of research which, owing, for example, to their involving an excessive amount of patient repetition of experiment, have but little educational value, or involve enormous expense spread over a long period of years. There are many industrial problems the investigation of which involves wide-flung team work whether owing to the nature of the problem, as in atmospheric, or to other causes. For the due co-ordination of the available agencies for research throughout the Empire, there is needed a central staff in close touch with the universities, the industrial research laboratories, and the laboratories of individual workers.

Sir Walter Fletcher, confirming the somewhat unfavourable comments made recently by Dr. Abraham Flexner on the subject of medical research in Great Britain, stated that our progress during the past twenty years cannot justly be described as satisfactory. Americans believe that the Dutch are more progressive. They contrast their energetic measures for the extirpation of the hookworm begun twenty years ago and financed mainly by Mr. Rockefeller, with our supineness in regard to the same disease in India. We are lacking as a nation, said Sir Walter Fletcher, in scientific staff work, and a conspicuous example of this is to be seen in the lack of intercommunication between the men in the field and the men in the university laboratories. In this connexion Sir John Russell said that visitors from overseas are constantly invited to visit the Rothamsted Experimental Station, and endeavours are made

to keep in touch with them after they go back. He thought that it would be a good thing if universities were to endeavour to establish contact with men engaged in industrial and administrative work in the outlying parts of the Empire. Sir Theodore Morison thought the Colonial Office should remodel its antiquated system of recruiting for scientific services.

The discussion of the fourth subject, the interchange of university teachers and students, was opened by Sir Henry Miers. A mode of exchange which has recently been tried with success by Cambridge and Manchester is as follows: a professor of university A obtains leave to spend a term at university B, where he is received on the footing of supernumerary professor and obtains a thorough insight into the working of the department without undertaking responsibility for its administration. Afterwards a return visit is paid by a professor of the same department of university B to university A. Inter-university visits of junior teachers and graduate students have been successfully arranged, and nothing but the cost of crossing the Atlantic prevents the development of a very extensive interchange of such visits between Great Britain and America. It is desirable from an imperial and international point of

view that interchange, especially of young teachers, both between the home universities and those in other parts of the Empire and between British and foreign universities, should be systematically encouraged, as it is by governments or associations in other countries. Sir Richard Lodge praised, in this connexion, the work of the Student Christian Movement. Dr. Hickson of Manchester thought it important also to encourage interchange of teachers between the home universities. Dr. Duniway, of the American University Union, remarked that American universities are eager to *provide facilities* in the form of part-time employment for visits by young British university teachers and other graduates, and that the administrators of American universities look upon the whole civilised world as their recruiting ground for their summer school staff. Two visitors from Australian universities recommended that steamship companies be approached with the view of obtaining concessions for graduates visiting Australian universities from Great Britain similar to those already in force for visits in the opposite direction.

A full report of the proceedings is in preparation and will be issued from the Universities Bureau of the British Empire, 50 Russell Square, W.C.1.

The Sir William Dunn Institute of Biochemistry, Cambridge.

ON Friday, May 9, the recently completed Sir William Dunn laboratories in which the Cambridge School of Biochemistry is now housed were officially opened by the Earl of Balfour, Chancellor of the University. Upwards of 400 guests, a gathering representative of all faculties of the University of Cambridge and of many outside academic and public bodies, were present when the Chancellor rose to call upon Sir Jeremiah Coleman, the chairman of the board of trustees of the late Sir William Dunn, to make his statement.

Sir Jeremiah Coleman explained the circumstances in which the trustees had allocated the money which Sir William Dunn had desired should be devoted to the alleviation of human suffering, to found this great institute in Cambridge, in the opinion that this was the most fruitful way in which the testator's wishes could be carried out. For the erection of the building and its endowment the sum of 210,000*l.* had been given. (In addition, Sir Jeremiah himself has made a generous private gift toward the endowment of the library of the School.)

The trustees' formal statement having been read by Sir Jeremiah Coleman and the building thus handed over to the University, the Chancellor gave his address. After thanking Sir Jeremiah and the board of trustees as the discerning agents of this great bequest, he recalled the earlier benefactions by which the beginnings of biochemistry in Cambridge had been made possible, and without which the present munificent gift could never have been made. The great object towards which the testator had desired that his estate should be applied could not have been better approached than in the direction which the body of trustees had chosen, that of the foundation of a great institute of research and teaching which should deal with the fundamental problems at the meeting-place of chemical and biological science, with the solution of which the well-being of the race, both now and in the future, was so intimately bound up. He instanced cancer, the scourge which had for many years defied the utmost clinical efforts, as being one of the urgent fields of work which might well yield up its secrets, to the immense benefit of humanity, in such a laboratory. The new foundation was particularly happy in having the genius of Prof. Gowland Hopkins to inspire and

direct the endeavours of the devoted band of workers that was now gathered under his leadership.

The building was then declared open, and the guests were invited to visit the numerous demonstrations which had been arranged in the laboratory, illustrating the principal lines of research work which are being carried out at present in the School.

A three-storey edifice of dark red brick, the building was designed by Sir Edwin Cooper and built by Messrs. William Saint and Co., of Cambridge. It stands on land which was bought by the University from Downing College, has a frontage on Tennis-court Road, and overlooks part of the grounds of Pembroke College. Facing as it does somewhat south of west, every room in the building has the advantage of at least a portion of the day's sunlight. Behind, it shares with the School of Agriculture two sides of what will eventually become the second court of the group of natural science laboratories on the south side of Downing Street.

The library, the nucleus of which was built up in the vestry whilst the School of Biochemistry pursued its adolescent life in what had previously been a Dissenting Chapel, is now lodged, in the new building, in the more congenial oak of the southern ground-floor room, which contains four wood-carvings in relief, of Mayow, Liebig, Graham, and Pasteur. The library crosses the building from east to west, and is balanced by a lecture-room of similar dimensions at the northern end of the building, in which room may be found the earliest chemical lecture-room bench to be used in Cambridge, presented to the School by St. John's College. The offices and cloak-rooms are on this floor, together with six research and lecturers' rooms and another room where a not unimportant part of the day's routine is carried out from 4 to 4.30 P.M. On the first floor are Prof. Hopkins's private room and laboratory, another large room specially designed for bacteriological research, and eight research rooms. The second floor is taken up by one large laboratory for elementary, and a smaller one for advanced students, together with the necessary preparation rooms, and a lecturer's room. The basement contains service and store rooms, the workshop, engine-room, animal houses, and two research laboratories.