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SCIENCE AND THE HUMANITIES IN THE UNIVERSITIES

THE debate on university education in the House of Lords on May 14 was noteworthy for an important speech by the Lord Chancellor, Viscount Jowett, and for a contribution by Lord Cherwell which men of science should find of special interest. Lord Cherwell, in a cogent argument dealing with the dangers of central control of the universities, made a plea for the safeguarding of their autonomy in the increasing dependence of the universities on the Government for financial support; and he urged again the vital importance of not divorcing research from teaching, or teaching from work on the frontiers of knowledge. Speaking of the importance of the student having an opportunity of both studying the advance of knowledge and having it expounded and explained by those who were themselves working on the frontiers of knowledge, Lord Cherwell formulated admirably the function of a university teacher. This, as he sees it, is to develop in young people the habits of exact and logical thought, to show them how and where the underlying facts can be ascertained on which our conclusions are to be based, to indicate to them how the great minds of the past have tackled problems, to show what conclusions they have reached and how they have justified them; and, above all, to arouse the students' curiosity and interest and to stimulate them to spend laborious days and nights in an effort themselves to contribute something towards the advance of knowledge.

That is a fine ideal which must be kept in mind as we seek to formulate more specifically, as was urged in the recent British Association Conference held at Manchester (see *Nature*, May 24, p. 638), our ideas as to a general education for scientific workers. A further contribution to that end is to be found in a discussion of the relations between science and the humanities to which the greater part of the current issue of *The Universities Quarterly** is devoted. In that discussion, as in his speech in the House of Lords, Lord Beveridge makes a powerful plea that the social sciences should indeed be regarded as sciences and not as a branch of the humanities. They should be placed in their right relation to the other sciences, studied and taught not in isolation but together, and those who devote their lives to these studies should practise emotional detachment—above all from political controversies and the organisation of parties. This conviction leads Lord Beveridge to the view that the establishment of a science of human society should now have first call on all our resources and effort; and consequently such sciences should receive in full measure the material means they require for their development as sciences of observation and not as arts. This would in turn necessitate a manifold increase in the number of permanent posts in the faculties of social science of British universities, where teaching and research can be combined and where also the material means of research are available, especially statistical laboratories and provision for the training of field workers. As he did in the House of

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Lords debate, Lord Beveridge here also suggested that the building up of the social sciences would make a valuable contribution towards preventing war and other misuses of natural science. He urged frankly that the leaders of natural science should favour the devotion of more money to social science, even if it meant less for natural science, and they should also realize that the social sciences are not the same as the natural sciences.

Sir Richard Livingstone discusses the need for a wider outlook in his contribution in *The Universities' Quarterly*. He recognizes it is necessary to see that both humanists and scientists, while specializing in their own subjects, at the same time receive the wider education which they need as men and citizens. Every educated man should understand the impact of science on civilization, and its place in civilization; but the man of science also needs a wider education than science itself can give. What the world most needs to-day is a clear and worthy view of life. To this end Sir Richard suggests that moral philosophy should be a compulsory subject in universities, together with either logic or the theory of knowledge, and that it should be possible, but not compulsory, for everyone to take religion and the history of science in his or her degree course.

While Sir Richard Livingstone pleads for a return to the Greek attitude to life, Prof. J. D. Bernal, urging the establishment of closer relations between science and the humanities, suggests that we need an integration of the scientific and humanistic points of view, and that we should seek to join these two streams of human culture. He welcomes a plea put forward by Prof. Dobree for a common basis of knowledge, but he believes there would still be the need for faculties of arts and of science, differing in the emphasis given to different parts of the common basis. Prof. Bernal suggests that our presentation of whole subjects such as physics requires simplifying and should be accompanied by more interpenetration and also by active personal collaboration; and he goes so far as to urge that the union of science and the humanities is a condition of survival.

Some of these ideas are to be found also in the fine presidential address "Classics and the Social Revolution of our Time" delivered by Lord Greene, the Master of the Rolls, to the Classical Association last April. Lord Greene urged that one of the principal allies in the defence of humanities is science itself. A race that knows and cares for nothing but science and its practical applications would, if left to itself, become as soulless and mechanical as the formulæ that it invents and the engines that it creates; just as a race that knew and cared for nothing but the humanities would end its life in dreams or in some cloister of the mind. Neither the perfect scientist nor the perfect humanist, he believes, can hope to reach human perfection. Scientific men are conscious of the weakness in the educational system which leads to their growing up ignorant of the humanities, and students of the arts ignorant of science. He therefore thinks that the danger would largely be averted if all education, before specialization claims the pupil, were to include at least the rudiments of training in the

value of honest thought, of a fair but critical mind and of the beauties of literature and art.

This recognition of the cultural values of science, and the attempt to formulate specifically, if tentatively, our ideas as to a general education not merely for scientific workers but also for all other university students, coming from such diverse quarters, are welcome evidence that the problems of university expansion are being faced with vision and imagination as well as realistically. That this is so is shown further by the Lord Chancellor's speech in the House of Lords. Lord Jowett spoke immediately after a well-balanced speech by Lord Lindsay of Birker to which reference was made in *Nature* of June 7, p. 755. Lord Lindsay also referred to the place of the universities in meeting the demand for refresher courses, and to the importance of their extra-mural work and particularly their part in adult education. In this extra-mural work for further education, as well as in their internal aims, the universities will find considerable scope for pressing the study of the humanities, especially in so far as they are, or should be, correlated with the sciences.

ADVENTURES AND DISCOVERIES IN ARMY EDUCATION

Adult Education

The Record of the British Army. By Major T. H. Hawkins and L. J. F. Brimble. Pp. viii+420. (London: Macmillan and Co., Ltd., 1947.) 15s. net.

IN 1940 it might well seem that "education was the first casualty". Yet, as in the First World War, it was already arising with new vitality, phoenix-like, from the consuming flames. The shape of things to come in Mr. Butler's Education Act was beginning to appear. More immediately, the educational resources of the whole of Britain had been mobilized, through the Central Advisory Council for Education in H.M. Forces and its twenty-three regional committees, to provide mental stimulus and sustenance for the men and women who were being transformed into citizen soldiers, sailors and airmen. In the autumn the members of the Army Educational Corps were brought back from the 'other duties' to which they had been posted, and an immense educational enterprise had been launched with the enemy literally knocking at our gates. Amazing in itself, no effort and adventure on this scale would have been possible in peace-time. But how much was actually done, and what are likely to be the enduring fruits of this enormous experiment in further education?

This attractive and impressive book is the first full-scale account and assessment of 'Army education' during the War and the release period. The authors had first-hand knowledge of the scheme in action. They are experienced in research. There is not a dull chapter in what they have written. The story is told with admirable clarity, balance, discrimination, and humour. It is neither arid in detachment nor vitiated by prejudice and partisanship. It is extraordinarily well documented, and it is set in the framework of a wide acquaintance with adult education in civil life. The suggestions concerning the application of what Army education has taught