

The facts we have just considered make it apparent that the dispersal mechanisms are in large measure responsible for the high frequency of the rosebay willowherb and the common occurrence of the groundsel. The dust-like spores of the mosses, ferns and fungi, which are commonly encountered on the bombed areas where conditions are favourable to their growth, are almost equally well dispersed, and if any further tribute to the action of upward currents were needed it is furnished by the occurrence of many of the commoner species of these bombed areas on old buildings at considerable heights above the ground.

Actually the order of arrival of the various kinds of plants, though to some extent determined by the nature of the soil and the changes which it undergoes with the passage of time, is in no small degree a measure of the relative efficiency of their means of dispersal.

Dispersal, both throughout the country in general and on the bombed sites in particular, is found to be a dual process—a short-distance dispersal which is more or less continuous in space, and a long-distance dispersal which is strikingly discontinuous and, being dependent upon the coincidence of favourable circumstances, somewhat erratic in its incidence.

Discontinuity, which has always been regarded by biologists as a sign of antiquity, is thus seen to be also an attribute of youth. Where the efficiency of dispersal is low, contiguity of occupation will preponderate, but where favourable environmental conditions are infrequent and dispersal efficient, discontinuity may tend to persist.

FUNCTION AND FUTURE OF UNIVERSITIES

MORE than one organization is discussing the post-war development of university education. A committee of the British Association on post-war university education has been at work on this problem for more than a year and has already published an interim report (*NATURE*, 150, 716; 1942), and the Association of University Teachers is also discussing a draft report of a committee which has been considering the future developments of university education. It was a happy inspiration, therefore, which caused the Association of Professors and Lecturers of Allied Countries in Great Britain to arrange for a conference at which they could discuss with their British colleagues both the fundamental question of "The Function of a University in a Modern Community" and the equally vital problem of "Methods of Practical Co-operation between Allied Universities in the Future". The conference was held on April 10, by kind permission, in the rooms of the Royal Institution.

Prof. A. L. Goodhart (United States), who presided at the conference, in his opening remarks dwelt on the fact that a reconstruction of the world after the War, if we are to have a permanent peace, must have an intellectual and a moral basis. The purpose of a university is the establishment of truth, but it is not enough to establish truth 'in an ivory tower'. Universities have an active and not a passive part to play in the modern community. We must also realize that education must not stop with youth; it is a life-long function which can never end. Here again

the universities can play a leading part by taking charge of adult education, which means the education of the community.

Sir Richard Livingstone expressed the opinion that the modern university has not shown any direct influence on the spiritual and moral life of the world; no influence comparable to that of the University of Paris in the thirteenth and fourteenth centuries, of the English universities in preparing the English Reformation, or of Fichte and others in the early nineteenth century. They have not helped the democracies to create any countervailing philosophy to the teaching of Nazism. They have given the world the guidance it needed in science, economics and sociology, but not in the knowledge of good and evil. Hence they have failed to help civilization where it most needs help. They send into life men who are good political technicians but poor statesmen. The universities should demand of all their students that, in addition to their main subjects of study, they should attend courses in three subjects which are a part of the indispensable equipment of educated men—the influence of science on civilization, religion and philosophy, and so learn something of the fundamental problems of life.

This important aspect of university teaching, so essential for the understanding and future maintenance of peace, was dwelt upon by several subsequent speakers. The evils of the absence of instruction in the fundamental problems of life were stressed by the Minister of Education for Poland, Prof. St. Kot. Magnificent education and technical proficiency obtained without acquiring a knowledge of religion and philosophy are liable to be devoted to the service of evil causes. It is the youth of the universities that fill the ranks of the fanatics—marching, beating up their opponents and terrorizing democratic elements.

The Yugoslav Minister of Education, M. Trifunovitch, in considering the functions of a university, indicated that it may vary somewhat according to the community. In a large and rich country, it might be possible to train considerable numbers of scientific workers, but in a young peasant State like Yugoslavia, it is a luxury and threatens to produce an intellectual and unemployed proletariat. The universities should train the young men, the living force of their nation, to collaborate so effectively that the vitality of the nation might be steadily raised and its material and spiritual progress ensured. The preparation of graduates for certain branches of the Civil Service is one of the functions of the Yugoslav universities, but he emphasized the point that the university diploma itself should not open automatically the royal road to certain higher ranks of the Service; the latter should depend on the subsequent acquisition of practical knowledge and experience.

That the universities, apart from the specialized training they give in the sciences and the arts, should also provide the education for the learned professions is a generally accepted thesis. This should include the training of teachers, of whom, however, only about 20 per cent are directly trained by the universities in England and Wales. If provision should have to be made at the universities for all teachers in training, some 30,000 additional students would seek to enter the universities. Mr. P. R. Morris, director of education for Kent, told the conference that "the attitude of the universities towards this great problem will, in no small measure, determine the influence of the universities on the community at large and also their relationship to the educational system". The

universities, he said, must inspire the social ideal of the community. To do so they must themselves be part of the very texture of society and not institutions isolated from society as a whole. Their interest in social problems must be disinterested but not detached.

Prof. J. A. Veraart (Netherlands) gave a very suggestive account of the necessary "Social Reconstruction within the Universities". He considers that during the nineteenth century an individualistic mood took possession both of the lecturers and the students, and that it is necessary after the War that they should foster the feeling that teachers and taught belong to one close community. An important part of the time of the professors should be reserved to enable them to take part in scientific and social gatherings of students. As much personal contact as possible should be made between staff and students, who should feel themselves in the midst of a community in which there is an interest in all their needs, scientific, social and cultural. That is the best means of securing the cultural development of the students, which is furthered more by personal contact than by formal instruction.

On the question of "Co-operation between Allied Universities in the Future", which was dealt with in the afternoon sitting of the conference, there was practical unanimity between both British and foreign representatives as to the need for such co-operation. Various suggestions were put forward as to how this could best be done.

Mr. Kenneth Lindsay, M.P., considers that intellectual co-operation of the savants, spasmodic conferences of specialists and the exchange of professors and students, although good in themselves, only touch the fringe of the problem. Previous attempts at its solution failed, not for want of good intentions but by a lack of a common purpose and adequate machinery. He advocated the creation of an international organization comparable with the International Labour Office of the League of Nations. It could for the moment be preceded by a United Nations Office of Education in London during the War, while there are among us so many distinguished Allied professors and lecturers. They had been responsible for organizing the conference and it should not come to an end without arranging for the continuance of some more permanent form of intellectual co-operation.

The International Education Office which Mr. Lindsay envisaged should examine the main principles of existing systems of education and draw up a model Education Charter as a supplement to the Atlantic Charter. He is also of the opinion that there is a strong case for establishing centres for international study of education and for cultural exchange. In this field he welcomed the work of the British Council. Much could be learned from the notable experiment of the School of International Studies held in Geneva between 1924 and 1939.

Prof. S. Glaser pointed out that Dr. Julian Huxley, in an article recently published in the *New Statesman and Nation*, had suggested the creation of such an international organization, a sort of International Education Office, the task of which would be the consideration and realization of a world education programme. Prof. Glaser thinks that the Association of University Professors could render useful service in creating an International University Institute, which might deal with comparative education and could collect and distribute information

concerning the universities of different countries, their regulations, their entrance conditions, fees, degrees, living conditions, etc. It might deal with exchanges of teachers and students, recognition of degrees, and lastly with the organization of international university conferences such as have been already initiated by the Association of University Professors in Great Britain.

Prof. Kot, the Minister of Education for Poland, was equally emphatic that the universities of all Europe should join together in an international association, which would define its own tasks and think out methods of fulfilling them. For after the military victory, there would still remain the enemy that had been reared in the minds of the younger generation in the lands of dictatorship. In the re-education which would have to take place, the universities will have to play a leading part, and they should not hesitate to undertake once more the task of general formulation of a world outlook, involving the transformation of minds and character. It will be necessary to rediscover a common tongue and to inculcate common conceptions into the nations, which in this respect have been severed from one another for many centuries.

It might, of course, be questioned whether universities which are State institutions could work harmoniously with universities which, like those of Britain, are independent of the Government even when they receive subsidies from the latter. British universities have been very careful to safeguard their independence, whereas State universities seem more likely to be absorbed into political strife or authoritarian dominance. Prof. Paul Vaucher, however, in an excellent account of the development of French universities since the days of Napoleon, showed how, in spite of being State institutions, they maintained their spiritual and intellectual independence, and that if they can maintain their academic freedom and liberty of mind, they are perhaps better able to play the part and fulfil the duties assigned to universities in modern communities. The two main objectives of the universities are considered by Prof. Vaucher to be: the training of students in acquiring general knowledge and possibly wisdom, and the promotion of the progress of science by independent research.

Prof. E. J. Bigwood, who was so active in Belgium in connexion with the Hoover Relief Committee after the War of 1914-18, indicated that at that time there was a strong feeling that closer personal relations should be encouraged between Belgian intellectuals and their foreign colleagues. When after the War very large funds of the Hoover Relief Committee became available, two important permanent foundations were created and put at the disposal of all Belgian institutions of higher education: the "Fondation Universitaire" in Brussels, and the Belgian American Educational Foundation in New York. More than six post-graduate fellowships were awarded to young Belgians to spend a year in American universities, sometimes renewed for a second year. At the same time, a limited number of similar awards were made to American students to study in Belgium. In addition, there were certain private foundations which sent Belgian students to Paris and to other foreign universities. The effect of the visits of such students was considered in Belgium as of the highest importance for promoting good international feeling, and should be arranged between the universities of other countries.