

School Geography.¹

AMONG the valuable reports presented by committees of the British Association at the recent meeting at Liverpool was one on the teaching of geography. The committee included representatives of the two Sections of Geography and Educational Science, and was appointed to formulate suggestions for a syllabus for the teaching of geography both to matriculation standard and in advanced courses, to report upon the present position of the geographical training of teachers and to make recommendations thereon, and to report upon the practical working of Regulations issued by the Board of Education affecting the position of geography in training colleges and secondary schools.

That such a task was pressing, all who have the interests of secondary education at heart will readily admit, and it was well that such an independent body as a committee of the British Association should have undertaken it, for the report shows that the matter demanded urgent consideration and considered judgment. The committee consulted with heads of schools, teachers of geography, examination boards, and universities, and the report is full of suggestions expressed with marked clarity and cogency.

There can be no doubt that a reconstruction of the method and content of geography teaching along the lines of this report is a matter of urgency. The world of to-day is fundamentally different from the world of twenty years ago—or indeed of ten years ago. Life is much more complicated: not only is man more dependent for his social well-being on the activities of a vastly wider world, but his immediate social environment is a complex that requires for its comprehension a degree of reasoning power and scientific knowledge that the school curriculum of a few decades back failed to give. The study of classical literature may give one a deep insight into the life and thought of intellectual giants of the past, but the most pressing need of modern education is a curriculum that will bring before the pupil vividly, and in logical order, the controlling factors that are shaping and giving colour to the social world in which he has to live, and enable him to understand his environment, adjust himself to it, and adjust it to himself. "Geography as ordinarily understood," says the Report, "deals with the world of to-day: it occupies a special position in the study of human conditions at present obtaining in the various parts of the earth and the tendency of the changes taking place therein." Geography, therefore, must take a prominent position in any modern scheme of humane studies. Huxley spoke and wrote strenuously for a curriculum more fitted to help a citizen through the increasingly complicated life that he had to lead (it was the age of scientific discoveries), and his arguments hold with increased force to-day.

One charge that has been laid at the door of modern education is that the teaching of science, history, etc., is formal rather than human, that the courses maintain steady paths parallel to each other without converging at any point. What is wanted is a "core" subject which draws on the others for its facts, co-ordinates them, and thus, by correlation, gives each a fuller and richer meaning. This report shows how geography can be made to function as this core subject. Mackinder and Herbertson at

Oxford, Lyde and Chisholm in London, demonstrated this new conception of geography twenty years ago, and the rapid strides made in recent years in the methods of geography teaching in secondary schools are due to the efforts of the young teachers whom they primarily inspired.

At the present time geography takes a place in the school curriculum on a level with history, and below that of classics, French, mathematics, and science. That more sympathy with the subject is not forthcoming is due, first, to the lack of trained geography teachers, whose enthusiasm and knowledge would compel greater recognition, and, secondly, to the fact that the inspectors of the Board of Education, being mainly interested in other subjects, have hitherto attached small importance to it.

For the lack of trained geography teachers one has to blame the Board of Education and the universities jointly. If the former had recognised the importance of the subject earlier and pressed for skilled geography teachers, it is reasonable to assume that the Universities would have established honours schools in geography, as they did, in like circumstances, in science and history; conversely, if the universities had taken the lead, the Board of Education would have been forced to give greater recognition to the subject, just as it has recently been induced to institute a geography group in advanced courses for secondary schools, through pressure from the council of the British Association.

That the geography group will justify its inclusion in the advanced course there can be no doubt, and when one considers the comparative merits of other subjects as a training for life and citizenship one wonders why its inclusion has been so long delayed. At the moment, however, the total lack of geographical scholarships at the universities is a factor that will operate very strongly against a pupil's choice of geography in the advanced course. A boy destined for a professional career to whom the other subject groups are perhaps more useful as a preliminary training for his university course, will naturally make his selection from them, the quantity of scholarships being a strong determining factor. The British Association might usefully direct its attention to this aspect of the problem.

On the other hand, the geography group presents attractions that should more than counterbalance this drawback. To begin with, parents whose boys are destined for city careers—clerical, secretarial, or commercial—have hitherto failed to see, and very naturally, how a two-years post-matriculation course in one of the existing subject-groups can help their sons in a degree at all commensurate with the expenditure of time and money involved. Added to that, many firms prefer to engage youths at the earlier age, and parents with sons of eighteen years have a difficulty in placing them. There is, however, a growing demand for young men who can produce evidence of specialised training for business life—a training, by the way, which so far only private institutions have endeavoured to provide, albeit fairly adequately and remuneratively. In the syllabuses for these examinations—Institute of Secretaries, etc.—geography occupies an important position, and it is also an important subject-group in the course for the B.Com. and B.Sc. (Econ.) degrees which represent the hall-mark, as it were, of vocational training for business life. For these examinations, the geography group is clearly the most useful, and cannot fail to prove attractive.

On turning to the Report itself one has to admit that

¹ Geography Teaching. Report of Committee (Prof. T. P. Nunn, Chairman; Mr. W. H. Barker, Secretary; Prof. H. J. Fleure, Mr. C. J. R. Howarth, Sir H. J. Mackinder, Prof. J. L. Myres, and Prof. J. F. Unstead, from Section E; Mr. G. H. J. Adlam, Mr. D. Berridge, Mr. C. E. Browne, Sir Richard Gregory, Mr. E. Sharwood Smith, Mr. E. R. Thomas, and Miss P. Wright, from Section L) (British Association, Burlington House, London, W.1.) Price 1s.; ros. per doz.; 4s. per 100.

any attempt to summarise it must meet with failure: every aspect of the subject is dealt with in all its bearings, and there is scarcely a redundant word. The chapter on the aim and function of geography is particularly illuminating. Stress is laid on the fact that school geography must be the geography of geographers: not the mere learning of geographical data and results, but a training in the geographer's characteristic methods and principles of interpretation, and an assimilation of his characteristic point of view. This, we consider, is a most important statement, and postulates a trained geographer for the success of any geographical scheme.

Proceeding, the Report deals with the stages of school life, and outlines the principles which should guide in the formation of a syllabus of geographical instruction in secondary schools: a detailed syllabus for each year is appended. Stress is laid on the necessity of proceeding psychologically with young children and of adopting a logical order only as riper years are gradually reached. An outline scheme for each stage, including the advanced course, is given, and apart from its merits as a scheme it possesses special value for the teacher because the underlying aim of each step is made abundantly clear. Great importance is attached throughout to the value of direct observational work and to the construction and interpretation of maps and charts. "One important value of geography in education is the opportunity it gives to express thought in diagram and sketch no less than in words." This sentence should be constantly in the mind of every geography teacher. A highly controversial dictum is that formal lessons in physical geography should not precede the advanced course: incidental teaching of most subjects is apt

to be disjointed and incoherent, and the experience of many examiners at matriculation proves that geography is no exception to the rule.

The suggestions for a scheme of study in the advanced courses are excellent. Emphasis is laid on the economic conditions of the modern world, and it is suggested that a small area be selected for comprehensive analysis and synthesis. Correlation of the subsidiary subjects is of course taken for granted.

The chapter on the relation of geography to science and history cannot fail to impress upon the most uninformed reader what a tremendous range of knowledge, not only of topographical facts, but of such allied subjects as physics, geology, botany, biology, history, and economics, is demanded of the geography teacher called upon to carry out such a modern geography course. It is pointed out that it is not his duty to teach these subjects; nevertheless, to correlate them he must know them. The Report proceeds to summarise the facilities offered at the universities for the training of geography teachers. Practically all the universities have established honours schools of geography—mostly in the Faculty of Arts—and there is general agreement that the subject of study should include geology, history, and political economy at least to intermediate standard. The number of trained geographers leaving the universities is steadily increasing, and "the result," to quote the Report, "undoubtedly will be not only a more thorough and scientific study of the subject, but a general increase of accurate knowledge of the Empire and the rest of the world, which will affect the everyday life of the community through its economic and political relationships with other countries."

J. MARTIN.

Transport and its Indebtedness to Science.

IN the Engineering Section of the British Association at Liverpool, one whole morning was devoted to the subject of transport, the other sessions being occupied by papers—many of great interest—on very diverse branches of engineering. The president of the Section, Sir Henry Fowler, was chief mechanical engineer of the Midland Railway, and he took as the subject of his address "Transport and its Indebtedness to Science," extracts from which were published in *NATURE* of September 29, p. 474. He was followed by Mr. A. E. Berriman, the chief engineer of the Daimler Co.; Col. O'Brien, the electrical engineer of the L.M.S. Railway; Major-General Sir Sefton Brancker, of the Air Force; and Mr. A. T. Wall, of Messrs. Wall, Maas and Co., naval architects, of Liverpool.

Each speaker dealt with the branch of the subject with which he was specially identified. As the president pointed out, there is probably no city in the world more dependent on transport than Liverpool, and no city which has done such pioneer service in its development. Whether one considers canals, steam railways, electric railways, or motor traffic, one finds that Liverpool was in the forefront of development, and it was a happy thought of the president, a non-academic engineer, engaged in practice, to take as his thesis that progress in all means of transport has been based upon scientific investigation, to predict that this will be even more marked in the future, to insist on the interdependence of science and engineering, and the necessity for the terms scientific and practical being synonymous. In concluding his address Sir Henry said that "one would like to feel that the meetings of the British Association were more generally used as the occasion on which the scientist and the engineer would meet in larger numbers."

Mr. Berriman gave a very valuable review of the position of road transport. He was somewhat scathing in his criticism of the railway companies' lack of faith in the railway principle, as shown by their proposal to operate their own road vehicles for through traffic. He maintained that, since the tractive effort on rails is only 5 lb. per ton against 60 lb. per ton on average roads, it is technically a sheer waste of energy to transport by road between distant points that are rail-connected. Mr. Berriman also dealt with the question of traffic regulation, and maintained that the warning signs on roads have been put up on a wrong principle and are consequently largely disregarded; in his view, every crossing should have a primary and a secondary stream of traffic, the former having priority and not being expected to slow down; drivers on the secondary roads would be warned to go dead slow on approaching a crossing.

Col. O'Brien's paper, as was to be expected, dealt largely with the question of electrification, which is really an economic one; there are no engineering difficulties. "A very slight lowering of rates of interest and in the price of the material required for such electrification is likely to produce a very considerable development in future." "There is no doubt that the electrification of any main line containing gradients of 1 in 300 or greater and averaging over 2 trains per hour in either direction would at least involve no loss of any kind to the company, while the indirect advantage to both the railway company and the electrical industry of the country would be very large."

Sir Sefton Brancker's breezy optimism with regard to aerial transport caused some amusement. He was fortunate in delivering his paper before the news came