

geography and only one with a purely physical problem. This is a reversal of the proportions which held good in most geographical work even a few years ago; and it marks the extent to which geographers are now attempting to investigate their central problem of the relations of man to his environment and his modifications of the natural environment. Dr. Bryan gave a vivid account of the cultural landscape of rural central Illinois as it is to-day, after more than half a century's work by a population of skilled agriculturists, under favourable physical, political, and economic conditions, has made that area the heart of the Corn Belt. Here the first settlers, coming from the wooded regions of Western Europe or the Eastern States, chose the forested bottom lands as the most fertile and left the treeless prairie untouched; though their choice was also influenced by the fact that they were dependent on the rivers for bulk transport in the pre-railway period. But the soils of the open prairies, fertilised by the humus accumulated from the annual sod of many centuries and retaining their fertility better than the soils of steeper slopes and wetter bottoms, where also tree growth gave a less quantity of humus, are better than any of the other soils except annually renewed river alluvium; and so the prairies are now the richer farmland. The corn belt is by no means a one-crop area, like so much of the cotton belt and some newer parts of the wheat region to the north-west. The corn (maize) is usually grown for two years of a four-year rotation on the best soils and one year in three on other soils. The specialisation of farms in the use of the corn for sale as grain, or for feeding dairy or beef cattle, or swine, is determined mainly by the relative transport facilities for the more or less rapid disposal of their produce by rail to the cities.

A contrast to this account of a modern adjustment to a particular type of environment was furnished by Dr. Cornish's study of the borders of German speech. The author's thesis was that these borders were, for the most part, fixed at the time when Christianity was adopted by, or imposed on, the several peoples concerned; that the Church estimated carefully, and usually accurately, the territorial limits of the languages in use by its converts, and adapted its organisation of bishoprics and archiepiscopal provinces to those limits; and further, that through this organisation the Church did much to stabilise the boundaries which it had adopted and the languages which it recognised and helped to develop. Thus, on the whole, the boundaries established from the fifth century (in the west) to the thirteenth century (in the north-east) remain to-day. The thesis was illustrated by detailed studies of the linguistic borders in Belgium, Alsace-Lorraine, Switzerland, Tirol, Carinthia, Bohemia, Poland, and Slesvig.

The third paper, by Prof. C. B. Fawcett, was an examination of a particular problem of the distribution of population. The differences of classification in various censuses make it impossible to obtain close and trustworthy comparisons of the proportions of urban and rural populations in many countries. According to such census returns, the urban population ranges from 10 per cent of the total in India to 79 per cent in England, and from 3 per cent in Assam to more than 90 per cent in the southern states of New England. Such numerical comparisons are only possible for part of the last century and for the more advanced countries. The maximum numbers of the urban population are fixed by the surplus food produced by the rural population, in any self-contained region and in the world as a whole, and the possibility of transporting that food to the towns. As a result of the improvement of the tools and technique of agriculture,

and of transport, during the last two centuries the urban population is now more than half of the total in most of the lands of western civilisation. These improvements act in two ways, first by reducing the number of workers required to cultivate a given quantity of any crop, and second by enabling almost all the industries other than agriculture to be concentrated in the towns. A study of the numbers of the agricultural workers and the proportions of home-grown foods in Great Britain led to the estimate that under the conditions of this country the rural population, not including therein urban workers resident in rural districts, should number at least 25 per cent of the whole population to make the country self-supporting in regard to its principal foodstuffs.

Prof. Sölch's lecture was accompanied by a number of magnificent photographs of Alpine scenery illustrating the existence of several comparatively plane, though much dissected, surfaces, which he termed 'flats,' at various altitudes in the Alps. He compared these with similar land forms in the British highlands, and appealed for comparative studies and co-operation in the task of investigating the ages of these 'flats' and their relations to different stages in the uplift of the Alps and to glacial and interglacial periods.

These papers will probably be published in full in early numbers of *Geography*, the magazine of the Geographical Association, which is to be issued as a quarterly from now on.

University and Educational Intelligence.

APPLICATIONS are invited by the committee of the Royal Society and the University of Sheffield appointed to administer the Sorby Research Fund, for the Sorby research fellowship, value £500 per annum and tenable for five years. Particulars may be obtained from the Assistant Secretary of the Royal Society, Burlington House, London, W.1.

In the recent Report of the National Fuel and Power Committee it was stated that the most economic use of fuels is largely dependent on a highly trained personnel. With this in mind, the Governors of the Sir John Cass Technical Institute, Aldgate, E.C.3, are extending their existing courses in fuel technology by an advanced and post-graduate course on "Coal Carbonisation," and the inaugural lecture will be delivered by Dr. F. S. Sinnatt, of the Fuel Research Board, on Jan. 28 at 7 P.M. Admission to this lecture is free.

NEGRO universities and colleges in the United States of America have six times as many students as they had ten years ago. This very striking growth is one of the developments brought to light by a comprehensive survey of 79 institutions for the higher education of negroes recently completed by the United States Bureau of Education. It means that the negro universities and colleges have been growing three times as fast as the others. Their aggregate annual income increased in the same period nearly fourfold. Even now, however, their students constitute only one-sixtieth of the total number of university and college students in the United States, and their incomes amount to only one-fiftieth of the aggregate incomes of all such institutions. Although there has been a correspondingly rapid increase in the number of negroes entering the professions for which preparation can be had only in institutions for higher education, the number of negro doctors, dentists, architects, engineers, etc., is still wholly insufficient to provide all the professional service required by the negro population.