ADMISSIONS TO UNIVERSITIES

IN the third annual report, for 1964-65, of the Universities Central Council on Admissions, its chairman, Dr. G. Templeman, reports a year of solid and encouraging progress*. The ten colleges of advanced technology entered the scheme in September 1964, while final preparations were made for the entry of the universities of Oxford and Cambridge into full membership in September 1965.

The medical and dental schools of the University of London have agreed to enter the scheme from September 1966, and from that date all university institutions in England and Wales will be full members of the Council. The technical difficulties of managing the multitudinous dealings between candidates and universities have been surmounted quickly and accurately, and the handling of these large numbers of decisions by universities and replies from candidates is now done by computer.

Beginning with the present report, the information at the disposal of the Council is being published in two parts. The main report, to be issued as soon as possible after the end of the period covered, contains essential information about applications and admissions, analysed in reasonable detail, as well as the customary survey of the operations of the Council, details of the participating institutions and of membership of the Council and the annual accounts. Supplementary tables, including analyses of the performances in the General Certificate of Education of those admitted in the year under review, will be published later and separately, probably in the early summer.

In May 1965 the universities hoped to admit a total of 49,000 candidates in October 1965, and in fact 45,500 were admitted. Except in science, where 430 fewer candidates were admitted than expected, the numbers of candidates actually admitted in October differed only marginally from the May estimate.

In the autumn of 1964 the Council for the first time received applications from all overseas students. The experience during the past winter suggests that the concern for the difficulties of overseas candidates in understanding the full United Kingdom procedure which had led the Executive originally to recommend separate procedure for handling their applications was unnecessary. After September, the separate overseas scheme will be abolished.

* The Universities Central Council on Admissions. Third Report, 1964-5. Pp. 19. (London: The Universities Central Council of Admissions, 1966.) 6s.

In 1965 the number of candidates applying through the Central Council of Admissions increased by 37.2 per cent to 80,033, including applicants from colleges of advanced technology and all overseas applicants. The year 1964-65 was the first of full computer operation, and progress made in passing information to candidates was swift; more than 97 per cent of the candidates knew by September 10 how they stood with respect to their original applications. Every possible effort was made by the clearing panels to find alternative courses for candidates for whom it was certain that places would not be available in the subject of their choice. Some hundreds of candidates who had applied to read medicine but clearly had no chance of a place in a medical school had their applications considered for pure science or for a medical science. Transfers from pure science to technology were, however, successful in only a few cases because the unsuccessful candidates for science usually lacked the necessary qualifications in mathematics and physics to be acceptable for entry in technology. Of the 80,033 candidates, 8.7 per cent were from overseas, of whom 15 per cent were women, compared with 30 per cent of home candidates. According to their first preference, about 25 per cent of all candidates intended to read social, administrative and business studies, 25 per cent of all candidates opted for art subjects; about 20 per cent of the total chose pure science, and a further 15 per cent engineering, technology, and applied science.

Men candidates applied for pure science and technology in similar proportions, 22.1 and 21.8, respectively, but for women the corresponding proportions were 17.8 and 0.8 per cent, respectively. Of the 16,061 candidates considered by the Clearing Panels because they were not accepted by any university originally named by them, 9,051 did not possess the qualifications stimulated by universities for acceptance, and of the remainder 3,276, including 936 women, were offered a place at a university.

The universities of Great Britain received 480,342 applications for entry in October 1965, and if the colleges of advanced technology are omitted, this represents an increase of about 40 per cent overall between 1964 and 1965. Total admissions to universities in Great Britain in 1965-66 were 49,510, of whom 13,515 were admitted to pure science courses and 8,760 to technology courses.

THE PAST IN THE PRESENT

IN recent years considerable effort has been made by archaeologists and those anthropologists interested in material culture to trace and study groups of people who have maintained a hunting-gathering economy and to whom the use of metals is unknown. These groups may be said to represent a major source of information to the archaeologist about the methods of survival probably practised in Pleistocene and early post-Pleistocene times. Few prehistorians to-day would claim that these modern primitives represent to any appreciable degree the modes of existence in prehistoric times, when climate and environment may have been different from that of to-day. Nevertheless, the results of recent investigations on groups of people still practising a formally Stone Age existence have yielded valuable evidence, not so much on the social and political organization of the people, but on their hunting and gathering exploits, and on their techniques of production of stone, wood and bone tools.

Such studies have occasionally resulted in specific interpretations of the functions of certain prehistoric tools on the basis of exact analogues with modern material, fortified of course by examination of traces of wear and utilization on both sets of tools.

A recent expedition to the northern Kaokoveld of South West Africa by the State Museum, Windhoek, has opened up a new field in these studies, and in a particularly valuable region*. It is well known that several groups of indigenous peoples in southern Africa were still formally in the Stone Age at the time of the arrival of the first Europeans; the recorded history of some of these groups is mainly concerned with their extermination by the whites, and there is a lamentable lack of information about the details of their basic hunter-gatherer existence.

* *Cimbebasia* No. 13: Preliminary report of two stone-working OvaTjimba groups in the Northern Kaokoveld of South West Africa. By H. R. MacCalman and B. J. Grobelaar. Pp. 39 (16 plates). (Windhoek, South West Africa: Staatsmuseum, Postbus 1203.)

The groups recently contacted and studied by the State Museum expedition probably represent the only stone-using indigenous peoples in the whole of southern Africa. Two groups calling themselves OvaTjimba were contacted; the first of these, the Okombambi group, consisted of fourteen individuals who normally lived in the heights of the Baynes Mountains. Details of their appearance, dress and decoration, and habitations were recorded by the expedition, and specific information about the equipment used for hunting and gathering was obtained. Nothing could be ascertained of their religion, and they appeared to have neither art nor music. The second group, called Otjinungua, consisted of only four individuals, but in general terms these seemed to conform to the Okombambi group in physical appearance and in material culture. Both extensively utilize the products of their limited high-altitude environment, using wood, skins,

bone and stone, supplemented in both cases by scavenging in abandoned OvaHimba villages for cloth and iron. The stone-working methods observed consisted of direct percussion and block-on-block; the differences in detail between the two groups may have been due as much to the limited quantity of the evidence as to different traditions.

The authors of this report have also succeeded in establishing the true indigenous nature of these groups, by producing evidence which seems to show that these people do not represent OvaTjimba who have lost their cattle, but must be considered as a group whose economy has never been based on domestication. Further expeditions are planned, and it is to be hoped that this unique opportunity to investigate an isolated group living under conditions which must be relevant to those of prehistoric times will be fully exploited.

JOHN M. COLES

DRIFT REHABILITATED

AFTER many years of suspicion and acrimonious discussion the seal of respectability has firmly been set on the theory of continental drift by the publication of *A Symposium on Continental Drift** as a volume of the *Philosophical Transactions of the Royal Society*. For the first time Continental Drift is discussed with as little reference to Wegener as was formerly accorded to Taylor. It avoids the Scylla of inconclusive discussion of geological and palaeontological data on the Wegener-Du Toit models, and the Charybdis of inadequate mechanism. The first pitfall is avoided by discounting data so obviously insufficiently precise and relying on data from palaeomagnetism to establish a *prima facie* case for drift, and the second by concentrating on the most plausible mechanism so far proposed, mantle convection currents, and assembling the variety of data from modern petrology—petrochemistry, oceanographic geophysics, physics and geochemistry which have a bearing upon it.

The contributions to the Symposium are divided under four heads, each with discussion. These are "Continental Reconstructions", "Horizontal Displacements in the Earth's Crust", "Convection Currents and Continental Drift", and "Physics of Convection Currents in the Earth's Mantle".

The first section, largely introductory, opens with articles by P. M. S. Blackett, T. S. Westoll and S. K. Runcorn, which, if they present little that is new, nevertheless set the stage for the Symposium. This section is completed by Creer's survey of data from the southern hemisphere, much of it his own, and the article by E. Bullard, J. E. Everett and A. G. Smith on the fit of the continents around the Atlantic. In view of Westoll's exposure of the inadequacy of many of the geological data used in earlier discussions and the claim in each of the first three articles that there is good agreement between palaeoclimates and palaeomagnetism, it would perhaps have been of value if the quantitative work on palaeoclimates by Irving or Blackett had been recorded. For, in the fourth article, Creer's discussion of Devonian reconstructions overlooked the siting in polar regions of a North African Devonian fauna similar to one considered in Europe as a warm water fauna on palaeontological grounds and tropical on palaeomagnetic grounds, and results in the austral fauna generally considered as a cold water fauna in South Africa coming to rest in latitude 30°.

The article by Bullard, Everett and Smith removes once and for all from the realms of speculation the fit of the continents bordering the Atlantic. This fit for the

North Atlantic is used by contributors to the third session (J. A. Miller and F. J. Fitch), whose assembly of radiometric and tectonic information would have gladdened the heart of F. B. Taylor. However, the attempt to reassemble the whole Atlantic, as J. L. Worzel points out, runs into difficulties as far as Central America and Mexico are concerned. The geological history of the Atlantic forms part of an article by J. T. Wilson.

The second section, on "Horizontal Displacements in the Earth's Crust", covers recent oceanographic work on transect faults, ridge-rise systems, and rifting. The section title unfortunately precludes a review of the heat flow data. This section is completed by an article on continental transect faulting. Mostly factual, the data are objectively described and tentative interpretation is attempted.

The final section, on "The Physics of Convection Currents in the Earth's Mantle", provides the geologist with present-day views of geophysicists on the state of the mantle, and although G. J. F. MacDonald shows that another interpretation in terms of mantle strength is possible, overwhelmingly, discussion is of convection. The conditions for thermal convection for a mantle of non-Newtonian viscosity are described by E. Orowan, while J. Verhoogen considers the effect of phase change on convection. Convection involving the whole mantle is proposed by Runcorn, and Tozer discusses convection confined to the upper part of the mantle. The former puts forward a general theory to account for "the most puzzling feature of continental drift; that it should have occurred in the last 5 per cent of the Earth's life", for it is hard to see why, if drift has been active during the past 250 m.y., it should not have occurred in earlier times. J. T. Wilson suggests, on the other hand, that "periodic break-up of continents . . . may have happened several times", a view with which the reviewer concurs. The reconstructed North Atlantic as shown by Bullard must have been broken through during much of the Palaeozoic by a geosyncline bordered by shelf seas. The steady sinking and later folding and uplift have to be explained in some way. If Wilson is right, the convection pattern suggested by D. C. Tozer may provide a better explanation than Runcorn's. Questions of this nature will continue to stimulate research and indicate how ideas are moving away from the initial simple pattern to the recognition of a more complex, and as yet uncertain, design.

In stimulating such interest, the Symposium succeeds, and thanks are due to the organizers and editor for the assembly of so much interesting material. If the price, at more than £2 per hundred pages, seems high, was respectability ever cheaply bought?

* *Phil. Trans. Roy. Soc., A*, 258, No. 1088, 1965: Organized for the Royal Society by Prof. P. M. S. Blackett, F.R.S., Sir Edward Bullard, F.R.S., and Prof. S. K. Runcorn, F.R.S. Pp. x+1-323+41-46. (London: The Royal Society, 1965.) 140s.; 21 dollars.