

In 1926 the Severn Barrage Committee of the Department of Civil Research decided to carry out investigations on a working model of the Severn Estuary, with the view of determining the probable effect on the physical and hydrodynamical features of the estuary, of the introduction of a barrage for generating tidal power at the English Stones, between Beachley and Avonmouth. This model was constructed and operated in Prof. Gibson's laboratory.

PROF. GIBSON dealt with the problems involved in the construction and operation of such models, and with a comparison of the results obtained from the Severn model with those observed in the estuary. The successful use of a model depends largely on its being of a suitable scale, and on the possibility of being able to reproduce with reasonable accuracy the physical conditions tending to produce movement of the bed materials. This is more easily accomplished in an estuary having well-defined physical characteristics, with a large tidal range in which the action of the ebb and flood currents are all important. In such a case experience shows that the behaviour of the model reproduces closely that of the estuary. In other types of estuary having comparatively small tidal ranges, and especially if very exposed to gales, the results are mainly likely to be of value in so far as they enable the effect of any training works on the set and velocity of the currents and on the tidal range and period to be determined.

Close of Excavations at Ur

WITHIN a few days of the publication by the British Museum of the volume reporting on the excavation of the Royal Tombs at Ur, Dr. C. Leonard Woolley in the *Times* of April 13 announces the close of the brief season's work, and with it the end of the joint expedition of the British Museum and the Museum of the University of Pennsylvania to Mesopotamia. For twelve years this expedition has been engaged in an excavation which has produced results comparable in their far-reaching effect on archaeological studies with the epoch-making discoveries of Sir Arthur Evans in Crete. The results reported by Dr. Woolley in what all will regret to know is his final dispatch in the long series he has contributed to the *Times* since 1922, form a fitting and impressive climax to what has preceded. The main objective of the season was the discovery of a cemetery of the early Jemdet Nasr period, for which the search, in default of guiding indications, was in the nature of an act of faith. It was abundantly justified by the discovery, after prolonged and strenuous digging, of a stratum of 10 ft. containing burials, in the upper levels of which the characteristically flexed human skeletons were surrounded by large numbers of stone jars in a variety of forms and material. One grave alone contained thirty-three vases. In the upper range the stone vase had entirely ousted that of clay. As Dr. Woolley remarks, it "was a luxury that had become a commonplace". As Ur stands in a stoneless land and the material had to be brought from either the north of Meso-

potamia or from the area of the Persian Gulf, it would be difficult to find a more impressive testimony than this closing discovery to the early accession of Ur to wealth and importance, of which Dr. Woolley's excavations have afforded cumulative evidence year by year.

SINCE the trial excavations made by Dr. R. Campbell-Thompson at the end of the War for the purpose of a report to the British Museum, and the more or less tentative expedition of the late Dr. H. R. Hall to Ur and Al 'Ubaid before Dr. Woolley began systematic excavations in 1922, the archaeology of the Middle East has advanced far and fast. Stimulated by Dr. Woolley's results, expeditions have worked at Kish, Nineveh, Arpachiyah, Tell Asmar and elsewhere, each site helping in the work of amplifying and elucidating material which in the long run, it is not unfair to say, gains its full significance by reference to the evidence from Ur and the outline of early Mesopotamian history which that site has afforded. It will be some time, perhaps years, before the place of Ur in archaeological studies will have attained its final adjustment. Possibly from this point of view it may be no bad thing that further discovery here has ceased for the time being, affording an opportunity for comparison and reflection. Results must be weighed and pondered; they must be brought into closer relation with what has been done on the fringes of this great archaeological province. It may then appear that by no means the least important outcome of the broader view now taken of the archaeological field, of which Ur has been made the centre, has been its bearing on the discovery of the prehistoric civilisation of the Indus Valley. This discovery would never, in almost any circumstances, have been passed over as unimportant, but the systematic examination of the site and its interpretation would have been far different, and certainly less fruitful, had it been made before, instead of after, the early excavations at Ur. Archaeologists, indeed, owe a deep debt of gratitude to those who have taken part in the work of the expedition, with Dr. Woolley at their head, and to the institutions by which the joint expedition has been supported.

Jubilee of the Society for the Study of Inebriety

THE fiftieth anniversary of the foundation of the Society for the Study of Inebriety and Drug Addiction, and the centenary of the birth of its founder, Dr. Norman Kerr, who died in 1899, were celebrated on April 10 by a luncheon held at the Langham Hotel, at which the Minister of Health, Lord D'Abernon, the Bishop of Norwich, Sir Thomas Barlow, the presidents of the Royal College of Surgeons and of the Royal Society of Medicine, and Sir Josiah Stamp were the principal guests. The luncheon was followed by a commemoration address delivered by the president, Sir Humphry Rolleston, who gave a sketch of the life of the founder and the activities of the Society. Norman Kerr, who was the author of numerous works on various aspects of the alcohol problem, regarded inebriety as a disease

essentially allied to insanity and insisted that it should be treated medically and not as if it were a crime. It was mainly due to him that the Habitual Drunkards Act of 1888 and the Inebriates Act of 1898 were amended. During the fifty years of its existence, the subjects discussed by the Society have included the influence of heredity on alcoholism, alcoholism and child welfare, alcoholism and venereal disease, the use of alcohol in medicine, drug addiction as an international problem, ether-drinking and the cigarette habit. The Society, which consists of medical members and lay associates, aims at a scientific study of alcoholism and drug addiction, and has not a policy of total abstinence.

Society of Dyers and Colourists

ARRANGEMENTS for the jubilee celebrations of the Society of Dyers and Colourists, to be held at Bradford at Whitsuntide, are in active progress. Inaugurated at a meeting in Bradford on May 14, 1884, the Society is the oldest of its kind in Great Britain. Special interest in the celebrations will be attached to the issue early next month of a jubilee number of the Society's *Journal*, containing original articles by eminent authorities on the processes of dyeing and their development in the course of the past fifty years. In these, invention, scientific research and records of practical applications will receive full attention. It may be recalled here that the Society allots the Perkin Gold Medal at intervals, for conspicuous service to the tinctorial industries. By means of its award the synthesis of indigo, the discovery of viscose, of primuline, and of alizarine blue have been severally recognised.

Geistige Arbeit

THE object of a new periodical of this title which appears twice monthly (25 pfennigs per copy) is to give brief reviews of the progress and tendencies of modern scientific research. The subjects considered cover a wide field, including anthropology, political economy, agriculture, sociology and all the pure and applied sciences. There are articles on peasants and nomads, problems of German sociology, new concepts of natural science, methods of counting for statistical purposes, Paracelsus (a sketch), and many others. The contributors are chosen from the ranks of those who have done original work in their respective fields. In the article by Möglich dealing with the foundations of present-day physics, we find due acknowledgment paid to the epoch-making ideas of Planck and Heisenberg, but there are important omissions which detract from the value of the account. In highly compressed articles of this type, it is of primary importance that the authors should have not only a deep insight into their subjects but also a proper sense of values, if the services of a discriminating censor are not to be invoked. Goethe has said: "Die Vernunft ist auf das Werdende, der Verstand auf das Gewordene angewiesen". This remark applies particularly aptly to the present journal, which bears the sub-title "Zentralblatt für die gelehrte Welt". The article on Theophrastus Bombastus

von Hohenheim, commonly called Paracelsus, is of interest as his name has recently come into prominence again as one of the first great experimenters in medical science—one hears of a Paracelsus Renaissance in Germany—in spite of a certain notoriety as a vagabond miracle-worker which he probably only partly deserved. His ideas, if not actual results obtained, undoubtedly exerted a considerable influence on later workers. The journal is published by Walter de Gruyter and Co., Berlin W.10, Genthinerstr. 38.

Philosophy of Science

THE welcome co-operation between science and philosophy, which has become a distinctive feature of our time, is further illustrated by the appearance of a new quarterly, *Philosophy of Science*, which is published by the Philosophy of Science Association in the United States (Baltimore: Williams and Wilkins Co.; London: Baillière, Tindall and Cox. 6s. 9d.). This interesting publication sets itself the useful task of giving an organised expression to the growing interest among philosophers and scientific workers in classifying, and perhaps unifying, the programmes, methods and results of the disciplines of philosophy and of science. With this object in view, the editor, Prof. W. M. Malisoff, proposes as a research programme, the analysis of meaning, symbolism, definition, axioms and postulates, the study of the nature and formulation of theoretical principles, and questions of method and of the structure and hierarchy of the sciences. The first issue of the new journal contains a remarkable series of papers; among the contributors are Prof. J. B. S. Haldane on "Quantum Mechanics as a Basis for Philosophy", D. J. Struik on "The Foundations of the Theory of Probabilities", Rudolf Carnap on "The Character of Philosophic Problems". The excellent presentation of the journal and the eminence of its contributors give an added value to its object and method which, no doubt, will appeal equally to scientific workers and to philosophers.

Research in the Solomon Islands

A REPORT on the work of the Templeton-Crocker Expedition to the Solomon Islands, 1933, has recently been sent to NATURE by the Director of the Bernice P. Bishop Museum, Honolulu. The expedition left San Francisco on March 2, 1933, in Mr. Templeton-Crocker's auxiliary schooner *Vaca* and returned on September 15 after conducting a preliminary ethnographical and medical survey of a number of islands in the Solomon group. The principal objective was the Rennell and Bellona islands, but before arriving there the expedition collected data bearing on tuberculosis and tropical diseases, as well as ethnographical material, at Sikiana, Tulalagi, Guadalcanar and Malaita. Advantage was taken of conditions on Rennell and Bellona, where bird and insect life are undisturbed and the inhabitants virtually unaffected by European contacts, to make extensive collections of birds, plants and insects and to record particulars relating to native life and customs, which appear to