

this connexion a group of papers relating to information, organisation, and statistics in commerce and industry, discussed at the recent conference in Cambridge of the Association of Special Libraries and Information Bureaux, is of direct interest.

The first paper in the group, dealing with rationalisation in industry, was communicated by Major L. Urwick, honorary secretary of the Management Research Groups. The basic idea of the rationalisation movement is 'control' in the sense of "the detailed analysis and measured presentation of the facts in each and every set of circumstances—and the planning and organisation of future common action in the light of those facts." The movement is, in reality, an endeavour to develop the scientific habit of thought within industry and commerce. It insists that the phenomena influencing the course of business have each their cause, that the causes are capable of investigation and definition in the light of modern knowledge, and that the facts so gathered can advantageously be applied to the effective solution of fresh problems. Such an outlook must, as Major Urwick points out, be rationally applied to a manufacturing concern as a whole. It is useless, for example, to attempt to improve output by motion study among the operatives until the management, organisation, and planning of the concern as a whole have been put upon a sound basis; in the smaller industries, labour is often more conscious of inefficiencies than is management. The objective should be a well-planned structure, strong, efficient, and co-ordinated in all its activities, and ever alert for improvement.

In Great Britain the movement has recently found an outlet in the formation of the Management Research Groups. Co-operation is essential to the success of the movement, which calls for the free exchange of experience and facts bearing upon every aspect of industry. Each of the groups is a small band of representatives of manufacturing concerns in different industries. No two competing firms are represented in the same group, a compromise which meets the still existent feeling in favour of secrecy in industry. The firms in any group can investigate and discuss the best practice in each individual concern without fear of giving advantage to a trade rival. Major Urwick's survey of the need and scope for rationalisation in industry was of such great interest that it was to be regretted that time did not permit him to give a more detailed account of the progress of the Management Research Groups with which he is associated.

In the course of his paper, Major Urwick directed attention to the need for more and better co-ordinated statistics; in a later paper, Mr. A. E. Overton, of the Board of Trade, described the trade information and statistics in Great Britain as compared with those in other countries. Many manufacturers and traders are probably not fully aware of the sources of statistical information that are available, and to these Mr. Overton's paper will be of value; reference is made to the time-lag in the issue of the statistical information from the various sources and the degree of classification adopted. Statistics of external trade and of internal production are of course of prime necessity in business forecasting, a subject discussed in the paper by Mr. W. Wallace. This paper outlines and illustrates the conclusions of the Harvard Committee on Economic Research; incidentally, it gives due weight to the limitations of business forecasting in its present pioneer stage. The paper by Mr. S. J. Nightingale and Miss A. L. Bennie dealing with statistical analyses in the engineering industry gives illustrative examples of the analysis of the available information in the formation of a sales policy. A further example of the use of statistics in an industry was given by Mr. F. W. Tattersall, who discussed the relation of cotton statistics to marketing and market estimation, and the group of related papers was completed by Mr. F. Hall's account of the more general aspects of the trade survey.

At first sight the interest of such papers for a conference of the Association of Special Libraries and Information Bureaux is not obvious. The collation of sources of information, which is the chief function of the Association, should, however, render the latter almost essential to the rationalisation movement. The Directory of Sources of Specialised Information which the Association is shortly to publish will be of the greatest assistance to those who have to collect and collate the facts that industry needs. As an organisation for ascertaining and indicating where information is to be found, the Association should play a not insignificant part in the movement.

The movement deserves at least the benevolent interest of the scientific worker. It awakens in industry the scientific habit of thought; it encourages the wider dissemination of knowledge, including scientific fact; it fosters an increasing interest in, and appreciation of, science; if successful, it cannot fail to stimulate the utilisation of scientific research in industry.

Obituary

DR. D. G. HOSKIN, C.M.G.

BY the unexpected death of Dr. David George Hoskin on Nov. 6, geography and archaeology lost one of their most distinguished representatives in Great Britain, and the University of Oxford one who combined in an unusual way the qualities of a student and a man of action and affairs. Born on May 23, 1862, at Barton-on-Humber, he was admitted commoner of Winchester

in 1876, and elected to a classical demyship at Magdalen College, Oxford, in 1881, where he was placed in the first class in Honour Moderations and Literæ Humaniores, appointed to a classical lectureship, and then in 1886 elected to a fellowship. Both at school and at college he distinguished himself as a runner, and made himself felt in the social life of the place, presiding over the Junior Common Room, acting with the O.U. Dramatic Society, and

editing the *Oxford Magazine*. Of these early days he has left his own frank account in one of his most characteristic books, "Accidents of an Antiquary's Life."

It was, indeed, a group of accidents that determined Hogarth's career. The Craven Travelling Fellowship, of which he was the first holder in 1886, was itself an experiment in classical endowment, though the benefaction was an old one. The new Lincoln and Merton professorship in classical archaeology and art was inaugurated in 1885 by Dr. (now Sir) W. M. Ramsay, who had begun in 1880 those journeys which revolutionised our knowledge of ancient Asia Minor. Hogarth had already been attracted by the historical and geographical achievements of Alexander the Great, and was collecting materials for his "Philip and Alexander," though this was not published until 1897. He seized the opportunity of apprenticeship to field work with Ramsay; and so began a partnership in research, all the more fruitful because the qualities of the two men supplemented each other. As one of the first students at the newly founded British School of Archaeology at Athens, he took a leading part in excavating the famous Temple of the Paphian goddess in Cyprus. First fruits of this adventure and of an extensive tour in unfrequented parts of the island were published in 1890 under the title of "Devia Cypria." In Cyprus, then, and Asia Minor, he began that intimate acquaintance with the peoples and problems of the Near East which led him afterwards to Deir-el-Bahari, Naukratis, and Carchemish, to North Arabia, and the 'Arab Bureau' in Cairo.

To combine these vacation pursuits with the routine of a college dean and vice-president was not easy. "Philip and Alexander" had to await the convenience of Turks and undergraduates; but with wise economy of resources Magdalen created a research fellowship, and made Hogarth master of his time and movements, with an Oxford home in which to store and work up his materials. Fortunate again in his opportunities, he was Director of the British School at Athens, and in charge of excavation on the prehistoric site at Phylakopi in Melos, during the years when Crete fell free of Turkish rule and excavation became possible there; and in the early years of Sir Arthur Evans's great enterprise at Cnossus, Hogarth was engaged in opening tombs hard by, and in exploring the important and difficult 'Cave of Zeus' on Mt. Dicta, and the remote but significant site at Zakro, looking out over the ancient sea route to Egypt. Emergency work at Naukratis, rendered necessary by the extension of irrigated land in the Delta, took him in 1899 and 1903 to Egypt, where he had already excavated at Deir-el-Bahari in 1894, at Alexandria in 1895, and in the Fayum in 1896. Then came the British Museum's excavation of the Temple of Artemis at Ephesus in 1904-5, with unforeseen difficulties from flood and fever, and no less unforeseen results in the splendid foundation-deposit of early goldwork and ivories, throwing quite new light on early Ionian art and culture. These were published in a stately memoir in 1908,

and interpreted in larger historical perspective in "Ionia and the East" in 1909. After another season in Egypt, at Assiut, came another chance to break fresh ground, at Carchemish on the Euphrates, again for the British Museum, with assistants of his own training, T. E. Lawrence and C. L. Woolley, both destined to notable achievements later.

Meanwhile a fresh line of work opened in 1909, when Sir Arthur Evans resigned the keepership of the Ashmolean Museum, which he had re-created as a centre of prehistoric and oriental studies. Hogarth was the obvious man to succeed him, and the peculiar combination of facilities for home study and field work which the keepership offers, happily provided for him the post which he held until his untimely death. He retained his Magdalen fellowship, and took an ever-increasing part in University affairs, on the Hebdomadal Council, the Clarendon Press, and (later) the Statutory Commission; and it was at one time hoped that he might represent the University in Parliament.

Across these many activities, and still more across his archaeological work, broke the Great War. Hogarth had intimate knowledge of Turkish and Arab ways, and was able to render most valuable services in organising and directing that 'Arab Bureau' in Cairo which prepared the way for attacking the Ottoman Empire at its weakest point, through that 'Revolt in the Desert,' in which T. E. Lawrence was his own discovery. At the Peace Conference he represented Great Britain in the Middle East Commission, and maintained the keenest personal interest in the new regime and its problems. For these public services he was honoured with the C.M.G., and Egyptian and Arab decorations. His wide and detailed knowledge of Arabia and the neighbouring lands was recognised already by the award of the Founder's Medal of the Royal Geographical Society, and assured his election as president of that Society in 1925.

With these numerous calls upon his time and great abilities, Hogarth's output of scientific work was less abundant and consecutive than those who best knew his fine scholarship, wide learning, and literary facility, had reason to expect. Not that he neglected the prompt and detailed publication of his numerous pieces of field work and excavation—though this was not the side of the business that best pleased him. But, naturally laconic, and clear-headed, he wrote concisely, and without parade of information, beyond what was essential to his point. He had, moreover, a journalistic—or was it rather Herodotean—appreciation of episodes and situations, vividly revealing "all the kingdoms of the world in a moment of time," and some of his best remembered writing deals with incidents of this kind. But for a man of these wide interests "the world is so full of a number of things," that a lifetime passes all too soon, in 'Forschungen' and 'Prolegomena,' not to mention the "History of the Air Force," which he inherited from his friend Sir Walter Raleigh, and a projected life of 'Arabian' Doughty, another of his heroes. "Alexander" seemed always to have to wait.

What will be remembered, however, besides

Hogarth's brilliant summaries of geographical and historical knowledge, "The Nearer East," "The Penetration of Arabia," "The Ancient East," and "The Balkans," is his monumental catalogue of the "Hittite Seals" of the Ashmolean Museum (1922), and the numerous short articles which announced, interpreted, and thereby in a very real sense guided the progress of discovery in the difficult history and ethnography of Asia Minor and North Syria. Though he never brought his materials together into a general survey—for which, indeed, the time is scarcely yet come—this group of problems was

that to which his mind seemed most spontaneously to recur; to which he gave all time spared from the more urgent 'accidents' which beset a 'wandering scholar'; on which his judgment was most in demand among colleagues who had not his distractions and occasions. Had he entered the army (as at one time he desired), Hogarth might have been a great commander, for he could handle men, and his decisions were those of a 'cavalry-mind.' In his actual career he was a superb scout, with a general's outlook over the prospects and trend of exploration. J. L. M.

News and Views.

THE appearance of Prof. C. T. R. Wilson's name in the list of Nobel prize winners for 1927 will be received with acclamation by physicists throughout the world. The poised perfection of his experimental work and the subtle ingenuity of his methods have long been the admiration and the despair of workers in the same or in cognate fields. Prof. Wilson is, perhaps, best known for his experiments on the tracks of ionising particles in gases, work which has occupied him, at intervals, from the time when he joined the first group of research students under Sir J. J. Thomson, some thirty years ago. His discovery that gaseous ions would serve as nuclei for the deposition of water drops was the basis of the first methods of measuring the charge on an electron. With definite patience and resource, the technique of these early experiments has been gradually perfected, until now it is possible to make visible, and to photograph, the actual tracks of ionising particles, to count their number, and to watch every twist and turn in their paths. The power of rendering visible, at will, the actual paths of particles which, themselves, must remain for ever invisible is a weapon of no small value in investigating the behaviour of these particles, and Prof. Wilson's apparatus is being employed more and more in our great research laboratories, almost always with striking and important success. Prof. Wilson, however, is not known only by his work on 'tracks.' He is one of our foremost experts on atmospheric electricity; and it would be both unfair and ungrateful not to recall in conclusion his 'tilted' electroscopes, a measuring device which made possible much of the early work on ionisation in gases.

PROF. ARTHUR COMPTON, of Chicago, who divides with Prof. Wilson the Nobel prize for physics for 1927, belongs to the younger school of American physicists, and has distinguished himself by the daring originality of his speculations, as well as by the variety and ingenuity of his experiments. Adopting the new 'quantum' theory in its most extreme form, he was able to calculate the change in wave length which should occur when X-rays are scattered, and by very able experimental work to obtain confirmation of his calculations. The technique of these experiments was so difficult that it was some time before the results were confirmed by other workers, and some controversy arose as to the genuineness of the effect. In the

end, however, the Compton effect was finally established, and it stands to-day as the firmest individual piece of evidence in favour of the hypothesis of localised light quanta.

THE recent judgment of the Court of Appeal in *Inland Revenue Commissioners v. Yorkshire Agricultural Society*, before the Master of the Rolls, Lord Justice Atkin, and Lord Justice Lawrence, is significant as indicating the confusion and difficulty prevailing in interpreting what is or what is not a 'charity' within the meaning of the Income Tax Acts. The Commissioners had refused the claim of the Society to exemption, whilst on appeal to the Special Commissioners the claim was allowed. Mr. Justice Rowlatt in the High Court afterwards reversed the decision of the Special Commissioners; and now the Court of Appeal unanimously affirms the Special Commissioners' decision. In giving judgment for the Society the Master of the Rolls referred at length to the objects for which the Society was established, pointing out that it was formed at York in 1837 for the purpose of holding an annual meeting for the exhibition of farming stock and implements, etc., and for the general promotion of agriculture. Prizes were awarded, and the members enjoyed certain privileges and benefits. The privileges and benefits which the members derived did not, in his lordship's opinion, in any way detract from the fact that the purpose of the Society was charitable within the meaning of the Act, any more than the privileges and benefits which subscribers to other charities, such as hospitals, derived, altered the fact that they were charities. He held that this Society, which by its constitution in 1837 and since had continued for the purpose of the general improvement of agriculture and not merely for the special benefit of its members, was in fact a society for the general benefit of the community, and therefore came within the accepted definition of a charity as laid down by Lord Macnaghten (*Income Tax Commissioners v. Pemsel*, 1891). This decision should help to define the position of scientific societies in regard to exemption from income tax; for they should be able to establish, by their constitution and the aims and objects of their work, those elements of permanency and benefit to the community that the Yorkshire Society has claimed and won for agriculture.