

Mr. Dennis Chapman made a strong plea for the expansion of social research. The position of the social sciences, he said, had been transformed by the publication of the Clapham Report. There were two main fields of activity. First, there was the field of fundamental research. Here, he thought, the position was lamentably backward. Brilliant generalizations of two or three decades ago by Patrick Geddes, the Webbs, Graham Wallas and others had lain dormant for want of initiative to follow up with research. Over a wide potential range of social problems research was, at present, non-existent. No inquiries were being undertaken on such subjects as human relations in industry and politics, the family, the church and other institutions or on the social process of education. No studies were being made of the social psychology of morale, civil and industrial, or into the medical and nursing services of Britain. No one had yet attempted to study the curious distribution of civic vitality in different cities. The methods employed to-day in social research needed revitalizing. They had not advanced since the days of Charles Booth and Beatrice Webb. Many of the techniques were thirty or forty years old and needed bringing up to date. In the United States the methods of social measurement had made far more rapid progress.

In the applied field, the position was much the same. Little research was being pursued. Yet every administrative action was a social experiment and threw up problems for investigation. Social processes were constantly changing and creating experimental situations. It was untrue to assert that there were no experiments in the social field. On the contrary, social scientists were overwhelmed by the multiplicity of experiments taking place around them.

The situation as regards the status and salaries of social scientists left much to be desired. In the universities, status was good but the salary of the few engaged in the 'sweated trade' of social research was appreciably below that of a teacher with similar qualifications in the same subject. In Government Departments, on the other hand, there was no settled status for social scientists. Many were regarded as administrators or as statisticians; scope for publishing results of official research was also severely restricted. It would be disastrous, he thought, if all financial support for social research went to the universities. Almost every important advance in social research, so he declared, had taken place outside the universities. There was a strong case for setting up a Social Science Research Council.

During the ensuing discussion, a number of important points came to light. In Government Departments, it was said, personnel work failed to be accorded adequate recognition. It was a neglected service to be run by officers of the clerical grade without appropriate training. Another speaker challenged Prof. Zuckerman's assumption that scientific method influenced administrative decisions in sufficient measure; a great deal more 'pre-decision' analysis was needed. In this connexion, he mentioned that the Social Sciences Committee had set up a special group to study the requirements of a scientific public administration.

A third speaker reminded the meeting that it was not the function of the Association to carry out research for which full-time investigators properly financed were required. But the Association could survey a field so as to indicate the kind of research and scientific organisation that were needed. What

the Association had attempted to do for fuel and power could be done for the field of social inquiry. The main weakness at the moment was a deficiency in fundamental knowledge of social phenomena. He did not regard as adequate the suggestion in the Clapham Report that provision for social research in the universities should be determined by a sub-committee of the University Grants' Committee. Opportunities should be left open for the talented individual with an inquiring mind. Universities, Government departments and other institutions should not monopolize research. Anyone who had ideas for research and could convince a small authoritative body of their value should be given sufficient financial aid to carry out the necessary inquiries. If such steps were taken the large number of workers with experience in operational or social research would have an opportunity of proving their worth. This speaker also directed attention to the need for studying the effects of advances in the social and economic research upon the development of technique in the physical sciences. We were well aware of the impact of science on society. What was now needed was a consciousness of the reciprocal influence.

Several speakers criticized the tacit assumption of the Clapham Report that all social research was expensive. It was often implied, it was said, that most social inquiries involved questionnaires on a large and costly scale. The need for 'penetration' studies of the individual, of the kind made in social anthropology, tended to be overlooked. Measurement was not a *sine qua non* of social research. There was a complete absence to-day of really fundamental social research, with the possible exception of industrial psychology.

Before the meeting drew to its close, a national sectional committee of the Association of Scientific Workers was set up with the terms of reference as described above, and the members duly elected.

JOHN COHEN

BRITISH CONTRIBUTION TO RADIOLOCATION

EARLY in March 1946, the Institution of Electrical Engineers held a Radiolocation Conference at which were presented a large number of lectures and papers by various members and other individuals who had contributed to the development and application of radiolocation during the war years. The Convention was formally opened at an ordinary meeting of the Institution by the Minister of Supply, Mr. John Wilmot, and was followed by a lecture on "The Evolution of Radiolocation" by Sir Robert Watson-Watt. In the course of this lecture it was explained that the object of the Convention was to describe and discuss British activities in this subject, which began in February 1935 and were at first conducted independently of any similar work elsewhere. Following the co-operation established between Great Britain and the United States in the autumn of 1940, later developments were conducted on the basis of a United Nations' system for which the name 'radar' was adopted in 1943, this term being then in current use in the United States.

The opening meeting referred to above was followed by twelve special meetings of the Radio Section of the Institution devoted to lectures and

papers on special portions of the technical field of development and their applications. The wide range of subjects dealt with is indicated by the titles adopted for these meetings: "Aerials and Wave Guides"; "Propagation"; "Cathode Ray Tubes"; "Precision Radar"; "Valves"; "Radio Measurements and Test Gear"; "Shipborne Radar"; "Transmitters and Receivers"; "Circuit Techniques for Radiolocation"; "Radar Navigation" (two meetings); and "Naval Gunnery Radar". At most of these meetings one or two papers were first read, giving a general survey of the portion of the field under discussion; and these were followed by a series of brief lectures by experts on particular sections of the subject. Three of the meetings were each devoted to a formal lecture on a phase of the subject to which special attention had been given by the Army, Navy and Air Force respectively. The authors of all these contributions, the total number of which exceeds 160, included members of the staffs of various Government establishments, industrial organisations and universities, who had co-operated in the very large amount of research and development work undertaken during the war years.

The *Proceedings* of this Radiolocation Convention are now being published as nine special numbers of Part 3 of the *Journal of the Institution of Electrical Engineers*, of which the first two, Vol. 93, Part 3 A, Nos. 1 and 2, have recently been issued. The first number comprises a basic record of all the meetings described above, the survey papers and some of the lectures being published in full; while abstracts of the remaining lectures and of the supporting papers, the full texts of most of which will appear in later numbers, are also given, together with some sectional bibliographies of other supporting papers to be published later. This publication thus forms a most useful work of reference to the whole literature so far available describing the British contribution to the technical development of radar or radiolocation.

The second number (Vol. 93, Part 3 A, No. 2) of this special issue of the *Journal* contains the full text of the six papers read at the session on "Naval Gunnery Radar", of the four papers read at the session on "Radar Navigation", and of two papers dealing with certain aspects of the technique of "Precision Radar". This publication will be found of great use to those responsible for detailed research and technical development in these subjects, of which radar as an aid to both aerial and marine navigation is already well advanced in its civil applications.

FORTHCOMING EVENTS

Monday, February 3

ROYAL SOCIETY OF ARTS (at John Adam Street, Adelphi, London, W.C.2), at 5 p.m.—Dr. A. Dickson Wright: "The Possibilities of Recent Discoveries in Medical Diagnosis and Treatment" (Cantor Lectures, 2).

SOCIETY OF ENGINEERS (at the Geological Society, Burlington House, Piccadilly, London, W.1), at 5 p.m.—Inaugural Meeting for 1947. Mr. Victor S. Wigmore: Presidential Address; Mr. A. E. Turner will present the Premiums awarded in 1946.

MANCHESTER LITERARY AND PHILOSOPHICAL SOCIETY (in the Reynolds Hall, College of Technology, Manchester), at 5.30 p.m.—Mr. Norman Pye: "Hyperbolic Navigational Charts".

SOCIETY OF CHEMICAL INDUSTRY, FOOD GROUP (joint meeting with the LONDON SECTION, at the Chemical Society, Burlington House, Piccadilly, London, W.1), at 6.30 p.m.—Dr. E. Griffiths and Mr. F. R. Jones: "Refrigeration—Development and Application".

Tuesday, February 4

INSTITUTION OF CHEMICAL ENGINEERS (joint meeting with the ROAD AND BUILDING MATERIALS GROUP OF THE SOCIETY OF CHEMICAL INDUSTRY, at the Institution of Structural Engineers, 11 Upper Belgrave Street, London, S.W.1)—Conference on "Particle Size Analysis". At 10 a.m.—"Methods of Measurement"; at 2 p.m.—"Industrial Applications".

Wednesday, February 5

ROYAL SOCIETY OF MEDICINE, HISTORICAL SECTION (at 1 Wimpole Street, London, W.1), at 2.30 p.m.—Dr. W. R. Bett: "On Style in Medical Literature—Traditions, Circumstances, Diversions and Lethargies".

INSTITUTION OF ELECTRICAL ENGINEERS, RADIO SECTION (at Savoy Place, Victoria Embankment, London, W.C.2), at 5.30 p.m.—Mr. C. Domb and Dr. M. H. L. Pryce: "The Calculation of Field Strengths over a Spherical Earth".

SOCIETY OF PUBLIC ANALYSTS AND OTHER ANALYTICAL CHEMISTS (at the Chemical Society, Burlington House, Piccadilly, London, W.1), at 6 p.m.—Scientific Papers.

Thursday, February 6

ROYAL SOCIETY OF ARTS (at John Adam Street, Adelphi, London, W.C.2), at 11 a.m.—Conference on "Proposed International Exhibition in 1951".

ROYAL SOCIETY OF ARTS, INDIA AND BURMA SECTION (at John Adam Street, Adelphi, London, W.C.2), at 2.30 p.m.—Sir Herbert Howard: "The Forests and Forest Resources of India".

LINNEAN SOCIETY OF LONDON (joint meeting with the SYSTEMATICS ASSOCIATION, at Burlington House, Piccadilly, London, W.1), at 5 p.m.—Discussion on "The Teaching of Taxonomy" (Speakers: Sir Clive Forster-Cooper, F.R.S., Prof. James Gray, F.R.S., Dr. W. B. Turrill and Prof. A. R. Clapham).

INSTITUTION OF ELECTRICAL ENGINEERS (at Savoy Place, Victoria Embankment, London, W.C.2), at 5.30 p.m.—Mr. J. Hacking and Mr. J. D. Peattie: "The British Grid System in Wartime".

INSTITUTE OF ECONOMIC ENGINEERING, MIDLAND SECTION (at the Chamber of Commerce, Birmingham), at 7 p.m.—Mr. C. D. Pollard: "Time and Motion Study in the Foundry".

CHEMICAL SOCIETY (at Burlington House, Piccadilly, London, W.1), at 7.30 p.m.—Dr. A. E. Alexander: "The Application of Surface Chemistry to Colloidal Problems" (Tilden Lecture).

Friday, February 7

INSTITUTION OF ELECTRICAL ENGINEERS, MEASUREMENTS SECTION (at Savoy Place, Victoria Embankment, London, W.C.2), at 5.30 p.m.—Discussion on "What has the Electrical Instrument Industry to learn from Developments in Continental Practice?" (to be opened by Mr. F. E. J. Ockenden and Mr. G. N. Harding).

INSTITUTION OF MECHANICAL ENGINEERS, APPLIED MECHANICS GROUP (at Storey's Gate, St. James's Park, London, S.W.1), at 5.30 p.m.—Prof. A. Porter: "Basic Principles of Automatic Control Systems".

GEOLOGISTS' ASSOCIATION (at the Geological Society of London, Burlington House, Piccadilly, London, W.1), at 6 p.m.—Dr. J. M. Bruckshaw: "Application of Geophysics to Geological Problems".

CHEMICAL SOCIETY (joint meeting with the LOCAL SECTIONS OF THE ROYAL INSTITUTE OF CHEMISTRY and the SOCIETY OF CHEMICAL INDUSTRY, at University College, Cardiff), at 6.45 p.m.—Prof. W. Wardlaw: "Structural Inorganic Chemistry".

TEXTILE INSTITUTE, DUBLIN BRANCH (at the Mansion House, Dawson Street, Dublin), at 7.30 p.m.—Mr. E. Waters: "Nylon Textiles—their Properties and Processing".

ROYAL INSTITUTION (at 21 Albemarle Street, London, W.1), at 9 p.m.—Prof. James Gray, F.R.S.: "Vitalism, Old and New".

APPOINTMENTS VACANT

APPLICATIONS are invited for the following appointments on or before the dates mentioned:

GAS EXAMINER—The Town Clerk, Municipal Offices, Bromley, Kent, endorsed 'Gas Examiner' (February 7).

FARM MANAGER—The Director, Agricultural Research Council, Field Station, Compton, Berks. (February 10).

HEAD OF THE ESTABLISHMENT, Survey Production Centre, R.E., Hanwell, under the War Office—The Secretary, Civil Service Commission, 6 Burlington Gardens, London, W.1, quoting No. 1777 (February 15).

JUNIOR CHEMIST and a JUNIOR PHYSICIST—The Director, Institute for Industrial Research and Standards, 45 St. Stephen's Green, Dublin (February 15).

ASSISTANT SUPERINTENDENT (Research), Government Livestock Farm, Hissar, in the Punjab Veterinary Service, Class I—The High Commissioner for India, General Department, India House, Aldwych, London, W.C.2, quoting No. 306 (February 15).

GEOLOGIST for the Government of the United Provinces, India—The High Commissioner for India, General Department, India House, Aldwych, London, W.C.2, quoting No. 298 (February 15).

CLINICAL CHEMIST to be responsible for tests and investigations of a chemical nature in the Clinical Pathology Department—The Secretary, University College Hospital Medical School, University Street, London, W.C.1 (February 28).