

not both. Therefore, since continuity was apparent, there could be no discontinuity anywhere, as Leibniz argued. The chemical atomic theory and the kinetic theory of gases of the nineteenth century brought out the aspect of discontinuity for the first time, and recent sub-atomic physics has gone a stage further. At every stage, however, as Prof. Robertson emphasizes, theory really requires both continuity and discontinuity. This was first realized in the case of light, which in some aspects is continuous, and in others discontinuous; and, later, electrons were found to play a similar dual part. Granted that the single electron is discrete, indefinite and indeterminate, it should not be inferred that the continuity, definiteness and strict causality found in the behaviour of large numbers of electrons are not equally genuine aspects of the physical world. Prof. Robertson refers briefly to the way in which the biological theory of evolution requires both a continuous long-term aspect and a discontinuous short-term one; and he ends by asking the question, whether new discoveries in science which look like discontinuities in the historical development of thought are not also in other respects examples of the continuity of thought.

#### Personnel of Museums

DR. ALLAN'S presidential address to the Museums Association on July 5 last is published in the *Museums Journal* (August 1945, pp. 73-80) under the title of "Museums Manpower". Dealing with the qualifications to be looked for in candidates for administrative posts in museums, Dr. Allan emphasizes (1) the educational background (which is usually provided by a university course leading to a degree or diploma); (2) specialized training in the museum; (3) ability for the work entailed; and (4) personality (which is not least in importance). That these attributes are not always recognized as essentials to good curatorship is evidenced by the numbers of small, dismal and neglected museums that are still to be found in various parts of Great Britain, and also by Dr. Allan's subsequent reference to the common contention that few museums can afford to employ holders of degrees or diplomas. In criticizing that attitude, he rightly points out that a local authority or public body which undertakes the provision of a public service (museum or otherwise) also undertakes the responsibility of maintaining it in efficiency. Referring specifically to local museums, he says: "If the local museum is merely a repository of curios, a caretaker is clearly all that is needed. . . . If the museum is to be an educational instrument . . . then it must be equipped and staffed accordingly—and the bill will be correspondingly higher."

Contrasting local museums in Britain with those of pre-war Europe, for example, Dr. Allan says, "much of our museum presentation is ill-founded and amateurish", and again, "a wonderful story available in museum material is all too often badly mis-handled". There are, of course, notable exceptions, and Dr. Allan, recognizing the progress that has been made in several quarters, is not pessimistic as to future developments. Of museum committees Dr. Allan speaks with caution, but he shows clearly that only co-operation and a measure of understanding between those bodies (which he terms 'non-museum expert') and the museum official (the 'museum expert') will make for the fruition of the task common to both, namely, the production of an efficient service. A study of Dr. Allan's address in full should be not

only of value to those already in the profession and those serving on museum committees, but to those, also, who aspire to a museum career.

#### Federation of Documentary Film Units

THE Federation of Documentary Film Units, which was set up in the middle of 1945 as a consultant and information organisation representing eight of the leading independent units making documentary and educational films, is issuing a regular *Bulletin* which will deal in turn with the use of films in health and medicine, industry, education, food and agriculture, architecture and housing. The periodical will attempt to report progress in providing films to meet specific needs in these fields, and will record work being carried out by professional and research institutions in assessing available films and will outline films made or in production. The first to be issued, dated January 1946, attempts to give some of the background information, outlining the system of sponsorship under which the making of documentary films has been carried out from the start. The Federation is organised to survey the requirements of potential sponsors, to advise on subjects, indicate production facilities and costs, and channels of distribution available. Inquiries relating to the making and showing of all types of factual films will be welcomed and should be addressed to the Organising Secretary, 18 Soho Square, London, W.1.

#### Survey of India

THE Civil Activities Report for the War Period, 1939 to March 31, 1945, of Survey of India, now published by order of the Surveyor-General, is in two parts. The first, dealing with activities up to March 31, 1944, indicates that the re-survey of India scheduled for completion in twenty-five years and 25 per cent incomplete in 1939, has been in abeyance since 1940-41, when 2,400 square miles were surveyed as against 8,500 in 1939-40 and 20,000 in 1938-39. Geodetic and other scientific survey activities were mainly shelved, except those such as tidal operations and certain computations which had a direct bearing on the war effort or were essential to the welfare of the country. Scientific work was also suspended early in the War, except such as was required for war purposes, but on the outbreak of war with Japan the War Survey Research Institute was created, which has carried out valuable work for the Armed Forces, much of which will be useful in reconstruction and development after the War. Big strides have been made in the design of instruments and the application of methods expediting and cheapening precision survey technique.

Further reference is made in the second part of the report, covering the year April 1, 1944, to March 31, 1945, to the improvement of air survey methods to meet requirements with the minimum use of skilled personnel, and some of the methods used for the air photo mosaic and for the large-scale mapping of dam sites for engineering plans are described by Lieut.-Colonel D. R. Crane in an appended note. The War Survey Research Institute, during this period, in addition to providing tidal data at many ports, carried out much research on the improvement of base measurement apparatus so as to take advantage of the much improved precision of modern angle-measuring instruments and new technique. It is also proposed to lay out over India a highly accurate framework, the All India Development Survey Frame-