

the Establishment as from March 1. Dr. Marshall will assist the director of the Establishment, Dr. R. Spence, in the overall planning and management of the Establishment. Dr. Marshall is thirty-four years old. He was born in Cardiff, and took a B.Sc. in mathematical physics at the University of Birmingham in 1952 and a Ph.D. in 1954. He joined the Atomic Energy Research Establishment at Harwell in 1954, and spent the period 1957-59 in the United States at Berkeley and Harvard carrying out fundamental physical research. He then returned to Harwell, where he was promoted rapidly, becoming, in 1960, head of the Theoretical Physics Division. In 1964 he was made a member of the Research Group Management Board, a Fellow of the Institute of Physics, a member of the Council of the Institute of Physics and the Physical Society, Maxwell Medallist, and Kelvin lecturer of the British Association for the Advancement of Science.

#### Inorganic Chemistry in the University of Southampton: Prof. I. R. Beattie

DR. I. R. BEATTIE, at present senior research officer in inorganic chemistry at the University of Oxford, has been appointed to the new chair of inorganic chemistry at the University of Southampton. Dr. Beattie was a student at University College, Nottingham, and, after a period of 5 years in industry, was appointed an assistant at the University of Aberdeen. He joined the staff of the Department of Chemistry at the University of Sheffield in 1953 and moved to King's College, London, 2 years later. In 1962 he was promoted to the post of reader in inorganic chemistry. He left King's College in 1964 to join Prof. J. S. Anderson at the Inorganic Chemistry Laboratory at Oxford. He is a Fellow of Oriol College. Dr. Beattie's earlier research interests centred around diffusion mechanisms in alumino-silicates and the chemistry of dinitrogen trioxide. His more recent work concerns applications of vibrational spectroscopy to the stereochemistry of inorganic compounds. Dr. Beattie will take up his duties in the University of Southampton in October.

#### Experimental Pathology at the Walter and Eliza Hall Institute, Melbourne : Dr. J. F. A. P. Miller

DR. J. F. A. P. MILLER, reader in experimental pathology at the Institute of Cancer Research, has been invited to be the head of the Experimental Pathology Department at the Walter and Eliza Hall Institute, Melbourne. Dr. Miller graduated at the University of Sydney in 1955 and was awarded the Gaggin research fellowship in 1958 to carry out cancer research for two years at the Chester Beatty Research Institute, London, where he was appointed to the staff in 1960. He obtained his Ph.D. and D.Sc. degrees from the University of London in 1960 and 1965 respectively. In 1963 he was awarded an Eleanor Roosevelt fellowship and spent a year at various research centres in the United States. Dr. Miller has carried out investigations into the importance of the various factors involved in murine leukaemogenesis. These led him to the discovery of the special role of the thymus in immunological function. He found that removal of the thymus at birth leaves the animal with deficient immunological competence and that this organ continues to function during adult life. His experiments provided evidence indicating that a humoral factor, elaborated by the thymus, might also be involved in the establishment of immunological responsiveness. These observations led to the intensive research on the basic mechanism of the immune response which is being conducted all over the scientific world. The Walter and Eliza Hall Institute specialized in this field under its former director, Sir Macfarlane Burnet, and Dr. Miller is joining its staff in April because the new director, Prof. G. Nossal, is expanding its research facilities (see also *Nature*, 208, 729; 1965).

#### United Kingdom Patent Law

IN reply to a question in the House of Commons on February 17, the Minister of State, Board of Trade, Mr. G. Darling, said that the President of the Board of Trade had decided not to publish with the report of the Patents Liaison Group on the effects of the 1963 Strasburg Convention on United Kingdom Patent Law (see *Nature*, 209, 765; 1966) the memorandum in which three members of the Group set out their reasons for refusing to sign the report. He considered that the memorandum dealt with matters outside the scope of the original request to the Group and that, in the main, it was concerned with proposals for future action by the Government. The President thought it more appropriate to consider the memorandum together with other comments in the report, but he had arranged for the memorandum to be published in the *Board of Trade Journal* for February 25. At the same time, comments on it which the chairman of the Group made at the time of its submission would be published.

#### British Teachers Overseas

IN moving approval of the Commonwealth Teachers (Extension of Financial Authority) Order, 1965, in the House of Commons on February 9, the Parliamentary Secretary to the Ministry of Overseas Development, Mr. A. E. Oram, said that the purpose of the Order was to increase to £11 million the limit of £6 million for expenditure on Commonwealth Educational Co-operation imposed by the Commonwealth Teachers Act, 1960. This would cover expected expenditure in the financial years 1965-66 and 1966-67 and it was the Government's intention to introduce legislation to amend the Act so as to obviate the need for further Orders in Council. The main reason for the rise in expenditure from £5 million in the five-year period 1960-65 to £6 million in the subsequent two years was the increased volume and level of current activity. The Order was generally welcomed in the House, and in replying to the debate Mr. Oram said that the original thirty posts under the Aid for Commonwealth English scheme had been filled and the first six of a new contingent of thirty teachers were at present being trained. Half the additional 100 bursaries under the Commonwealth Teacher Training Bursary Scheme had been taken up in the present academic year and it was hoped that the remaining places would be filled by October 1966. In the first 2 years, 150 places had been taken up at Makerere College under the 'study and serve' scheme, but the pace would have to be stepped up if the 1,000 places were to be filled in the next few years. The present level of capital expenditure was about £3 million. Mr. Oram agreed that a close watch should be kept on costs. The grant to the Centre for Educational Television Overseas would be £40,000 in the next 2 years and might be increased thereafter. Last year, 1,000 teachers came forward to do a period of service overseas, and while there might still be difficulties about superannuation, more and more local education authorities were operating the code of secondment. The Ministry was supporting, in conjunction with the University of Ibadan, an experimental study of the effectiveness of the Initial Teaching Alphabet in teaching English as a second language. Mr. Oram agreed about the importance of the development of agriculture, and said that the need for education in agriculture in developing countries was fully recognized.

#### Wool Research

IN moving the approval by the House of Lords on February 21 of the Wool Textile Industry (Scientific Research Levy) (Amendment No. 2) Order, 1966, the Parliamentary Secretary to the Board of Trade, Lord Rhodes, said that the purpose of the Order was to increase the total current annual yield of the two levies (on the

suppliers and the processors of wool) from £369,000 to about £500,000. This was to be done by increasing the rates of charge and adjusting the incidence of the rates so as to reduce the proportion from the supply and consumption of wool and increase that from processing. For scientific research the amended rates should produce about £286,000 in 1966-67. The bulk of the proceeds of the levy are allocated to research schemes carried out by the Wool Industries Research Association, constituting the major part of the income of the Association, which also receives a current grant of about £82,500 from the Ministry of Technology. It was Government policy to ensure that industry bore an increasing percentage of the cost of research. In reply to a question from Lord Drumalbyn on this last point, Lord Rhodes said that from the start the Government contribution through the Department of Scientific and Industrial Research had been on a pound-for-pound basis, but for some time the industry had been taking a large share of the cost. He could not say whether it was intended to maintain the grant from the Ministry of Technology at its present level.

### American Museum of Natural History

THE ninety-sixth annual report of the American Museum of Natural History, covering the year July 1964 to June 1965, mentions that the Hall of the Eskimo has been arranged to show Eskimo life as it was at the beginning of the twentieth century (Pp. 109. New York: The American Museum of Natural History, 1965). The Hall of Early Mammals tells the story of the beginning of the Age of Mammals. Plans are in hand for a new Hall of Geology and for the establishment of the Louis Calder Natural Science Laboratory, where children between the ages of eight and sixteen can conduct their own research and experiments in the natural sciences. New scientific knowledge and modern techniques of presentation have also been used in the Hall of Primates. The magazine, *Nature and Science*, has become firmly established in schools throughout the United States and now has a circulation of a quarter of a million.

### Museum of Applied Arts and Sciences, Sydney

THE annual report of the Museum of Applied Arts and Sciences, Sydney, for 1964 is issued in a striking format with illustrations, and records that the obsolete Ultimo Tramway Depot has been transferred to the Board of Trustees and part of the building arranged as a Transport Museum (Pp. 27. Sydney: Museum of Applied Arts and Sciences, 1965). The Spitz Planetarium has again proved popular and plans are complete for the installation of a larger apparatus. A closed-circuit colour television unit has aroused much public interest. A very important acquisition was a harpsichord made by Jacob Kirekman in London, in 1763, and this will be used, with other instruments, in musical concerts. Another outstanding purchase was a set of fully marked silver Apostle spoons from the early seventeenth century. The Museum has been of service to the community in many directions, and many loans—including a barrel organ and a Japanese stringed instrument, the koto—have been made for specific purposes.

### University Libraries

THE paper by D. W. Bryant of Harvard University Library on "University Libraries and the Future", in the *Library Association Record* for January 1966, underlines recent comments on the insufficient resources available for university libraries in Britain and indicates the importance of the work of the present Committee on Libraries. Harvard University Library, the largest university library in the United States, reached the million mark in 1903 and has now more than 7.25 million volumes; however, thirty-six university libraries in the United States are now larger than Harvard was in 1903. Mr. Bryant explains

clearly but convincingly the reasons why university libraries need so much larger resources and describes the changing demands made on such libraries which have led to them being recognized as major national resources. He also discusses the new techniques in library work and their limitations as well as advantages, pointing out the implications of the increasing interdisciplinary scholarship. He emphasizes above all the critical importance of the quality of library staff, which should be adequate not only in numbers but in range of experience and variety of qualifications. It is to be hoped that if the report of the Committee on Libraries is not inspired by a like vision it will be examined by the University Grants Committee and the Department of Education and Science at least with sufficient imagination and insight to ensure that answers are sought to the vital questions which Mr. Bryant asks.

### Information Processing

*Scientific Information Notes* (7, No. 6; December 1965–January 1966), issued by the National Science Foundation, records the issue by the U.S. Naval Oceanographic Office of a contract to Vitro Laboratories, Silver Spring, Maryland, to determine first the real needs of potential users of oceanographic literature and, secondly, to establish an up-to-date information processing system. The Foundation is also financing a design study for a national medical library and information system and, with the Air Force Office of Scientific Information, has awarded four major grants totalling 189,000 dollars to Lehigh University for continuing research and educational programmes in the scientific information field. Under the title *Haystack: A Mechanized System for Searching Chemical Information*, the National Bureau of Standards has issued as Technical Note No. 57 a report by Ethel C. Marden on a co-operative venture with the U.S. Patent Office describing a system developed to help the Patent Office in searching chemical information.

### Communication

DR. COLIN CHERRY'S three Cantor lectures before the Royal Society of Arts on "World Communication", in November 1965, have now been published in the *Journal of the Royal Society of Arts* (114, 158–205; February 1966). In the first, which discusses the nature of human communication, Dr. Cherry suggests that the present revolution may be regarded as the control of the power developed in the first industrial revolution, defines a society as people in communication and argues that essentially communication means involvement. Although mass communication is very new on a historical scale, it already sometimes serves for social integration and may yet appear as a force for cultural integration. From this point of view Dr. Cherry discusses the means of communication, considering the significance of language and habit and pointing out that conformity here does not mean uniformity. Deliberate, purposeful, reasoned communication is not easy but this is a basic concern of education. In his second lecture, Dr. Cherry discusses what he terms the communication explosion resulting from such developments as the telephone, television and short-wave radio. These technical developments, up to and including the use of satellites and computers, are concisely described. The third lecture discusses the future of world communication, reiterating the emphasis placed at the outset on involvement and emphasizing the sociological prospects as well as the technical possibilities. Dr. Cherry notes how the increasing importance of reliability tends to increase the cost, and throughout he is concerned to stimulate constructive and open-minded thought about potentialities, rather than to express satisfaction with or wonder at past achievements.

### Impact of Science on Society

*Impact of Science on Society* (15, No. 3; 1965) is noteworthy for four articles. In the first, N. M. Sissakian,