

by the council during the year, but 1967 will be remembered by British agriculturalists for the serious foot and mouth outbreak and its aftermath. The ARC and the Animal Virus Research Institute have naturally been among the chief witnesses to the Duke of Northumberland's Committee—the Duke was until May this year chairman of the ARC. The report states briefly that during the outbreak the virus was, for the first time, found locally in milk in farm storage tanks and tankers before the disease had become overt in the local herds.

TOYS

Fun for Fathers

THIS Christmas, children can make fascinating shapes by blowing plastic or build themselves a digital or analogue computer to make their homework fun. More and more sophisticated and realistic toys are being designed, probably half with an eye to fathers, but others, based on ingeniously simple ideas, are possibly more fun for children.

Scientific kits on sale in London range from the computer kits costing about eight pounds to a simple amplifier for picking up car and aeroplane noises. The series of 'Radionic' electronic sets teaches children how to build circuits from the simplest to the most complex using a transparent insulating board on which colour coded components are laid out and connected exactly as in the wiring diagram. With Philips 'Compact Electronic Engineer' kits, thirteen year olds can build burglar alarms, time switches, amplifiers and even medium-wave radios.

War toys are as popular as ever—tanks are more ferocious and "life-like" and voluble soldiers issue commands, but space-age toys are beginning to compete. A balloon controlled by a stream of air blown by a steerable fan makes an ingenious "space-probe" and a two-stage rocket works with water as fuel and an air pump to build up pressure. The battery operated Space Express has cogged wheels and can travel vertically up or upside down on a cogged track. These all cost three or four pounds.

'Scaletrix' sets with electric racing cars running over powered tracks are still very much in vogue and are becoming increasingly complex. Remote control cars can be parked and made to negotiate obstacle courses, and a new and expensive toy is a radio-controlled car for which a radio operator's licence is necessary. A nice idea is the track system—a parallel pair of moving springs—into which any 'Matchbox' toy with a pair of metal pins fixed underneath can be fitted. 'Lego' manufacturers have devised a small unit with a microphone and a motor which can be fitted to any 'Lego' toy so that it stops or starts at a flick of the fingers or a whistle. Reserved for maharajahs' children is a £150 petrol engined model car.

WOLFSON FOUNDATION

Money for Projects

THE Wolfson Foundation announced this week the first recipients of the grants it has set up to support technology at British universities. The foundation is spending £1 million in British universities on projects

which will, in its judgment, "help the modernization of British industry and improve the commercial and economic position of the UK". After the announcement of the awards last year, about 150 applications were received, and they have now been assessed by a panel under the chairmanship of Sir Solly Zuckerman. The panel, distinguished scientists all, was assisted by assessors from industry and commerce. The result is a list of sixteen universities which are to receive the money.

Top of the list, in terms of the grant given, is the Department of Metallurgy at the University of Nottingham, which is to receive just over a quarter of a million pounds to set up an institute for the study of interfacial phenomena. This is to include work on the interfaces between solids, liquids and gases—a wide field, but one in which there are great strides to be made. Other large items include a grant to the Department of Electrical Engineering at Edinburgh University to set up a micro-electronics liaison unit. This department is particularly well known for its work with industry, and the grant is worth £130,700. The Department of Engineering at Cambridge has been given £20,000 to apply modern control theory to models of the national economy (which sounds a tall order), and Imperial College has £65,000 to compile a geochemical atlas of part of the British Isles. Other grants include £132,000 to Surrey University for a centre for research and development in bio-analytical instrumentation and a similar sum to the University of Wales to set up a centre for the technology of soft magnetic materials and their applications.

To judge from the list of grants, the foundation seems to have managed the difficult task of avoiding overlap with the Ministry of Technology without at the same time supporting trivial projects. The universities will be pleased to have the money for projects which might otherwise have been lost, and may feel doubly grateful for money which has the effect of diversifying their sources of finance. It is reassuring for them to know that not all their finance is coming from the same barrel, and perhaps other foundations could be persuaded to follow the Wolfson example.

JOURNALS

Core Journals

MORE support for the contention that most of the published literature which is valuable is to be found in a small number of core journals is provided by a report by two members of the Aslib Research Department (*An Evaluation of British Scientific Journals*, Aslib Occasional Publications, No. 1, 1968; 15s). The authors of the report, John Martyn and Alan Gilchrist, ranked British journals in science and technology using the criterion that citation of a document indicates use of it by the citing author. They found that 165 British journals provide the "core". On the assumption that British scientific journal literature is a representative sample of the world's scientific literature, they conclude that the number of the world's "core" journals lies between 2,300 and 3,200—a definite reduction in the "information explosion".

To find the British "core" journals, they used the resources of the 1965 issue of *Science Citation Index* which contains in the source index a record of every

item—with the exception of announcements, advertisements and news items—published in 1965 in every issue of the 1,147 journal titles covered by the index. Every reference citation is extracted from these items and listed alphabetically by name of cited author to form the citation index. The citation index therefore contains a record of all documents, of all dates and of whatever provenance, cited by the 1965 issues of the journals covered in the source index. For the purposes of this study, a special print-out of data from the index was commissioned. This listed all citations to the journal literature in 1963 and 1964 from the *SCI* source list (26.1 per cent of all the 1965 citations), and it consisted of 560,624 citations to 296,182 unique items. Checking these with a list of 1,842 British journal titles, Martyn and Gilchrist found that 590 British journals (32 per cent) were cited in the index. Altogether there were 68,764 citations in 1965 to a total of 28,949 papers published in 1963 and 1964 in British journals. Of these citations, 14.9 per cent were made to one journal (*Nature*), 90.05 per cent to 111 titles, and 95.02 per cent to 165 titles (9 per cent of the total number of current British journals and 28 per cent of all cited titles).

In addition to ranking British journals according to the number of citations received in 1965, Martyn and Gilchrist list the 165 journals in the order of the ratio between the number of papers cited and the number of papers published in 1964, thus showing how much of the contents of each journal in 1964 was used in 1965. Not surprisingly, review journals and journals with very specialized interests topped this list. Five journals had all their published papers cited—these were the Chemical Society's *Quarterly Review*, *Immunology*, *Advances in Physics*, *Reports on the Progress in Physics*, and *Progress in Materials Science*. *Nature* had 55.1 per cent of its papers quoted in 1965. A further list arranges the same 165 journals in order of the number of citations each cited paper received. *Physics*, *Advances in Physics* and the Chemical Society's *Quarterly Review* were top in this table. Each cited item in *Nature* was cited an average of 2.72 times compared with a ratio of 7.07 for *Physics*.

OBITUARY

Miss June Arlidge

ALL those who are involved with industrial research in Britain will be sad to hear of the death of Miss June Arlidge (43), the secretary of the Committee of Directors of Research Associations. She died on November 20 after a long illness, and her death will be a considerable loss to the CDRA. She was the first permanent secretary of the organization, and was in large measure responsible for the many new initiatives during the five years she was at the CDRA.

June Arlidge came to the CDRA after working for the OECD in Paris (when it was still OECC), for the Federation of British Industry, and for the British Iron and Steel Research Association. As well as setting up the secretariat and organizing publications, she was responsible for coordinating work with the Department of Education and Science and the Ministry of Labour on the industrial training acts. She also contributed to the formation of a working party on building materials which brought together work from

research associations and outside organizations, and which recently produced its first publication, on the testing services available in Britain. At meetings of the British Association she was a familiar figure, and the exhibitions she organized are likely to become a regular feature at BA meetings. More recently, she was working on a major reorganization of the CDRA, which is likely to come to fruition in the next few months. Meanwhile, the difficult task of finding a replacement for her is likely to wait until the new structure of the CDRA is decided, and a specification for the job can be written.

SOCIETIES

Chemists Rehoused

THE Chemical Society has been the chief beneficiary and the British Academy and Society of Antiquaries the lesser beneficiaries of the Royal Society's move from Burlington House to its new marble and formica rooms at Carlton House Terrace. In the Government's shareout of the Royal Society's old rooms at Burlington House, the Chemical Society received, rent free, most of the larger rooms. Between July 1967, when the Royal Society moved out, and August this year, when the Chemical Society moved in, the rooms were adapted and refurbished to meet the needs and tastes of the chemists. The society also has some extra accommodation among the tailors in nearby Savile Row, 9,200 square feet of



The library after conversion.

warehouse space in Letchworth and a share in a lecture theatre which has yet to be built in Savile Row. Thanks to the Government, donations from fellows and the industry and its own funds—which totalled £300,000—the Chemical Society now finds itself with 23,500 square feet in two London premises which includes a library more than four times the previous size. For the first time for many years, the entire library of the society is under the same roof, at Burlington House.

The only thing that has suffered is the interior of Burlington House. The Chemical Society, naturally enough, is delighted with its new home, but not everybody will share its enthusiasm for the conversion wrought on the old library. This lofty mid-Victorian room used to extend through two storeys with a double