

obituary

The recent premature and unexpected death of **James Olds** deprives physiological psychology of one of its most distinguished workers and the neurosciences of a man whose experimental work cannot be ignored in any serious behavioural theory. His major discovery provoked controversy from the time of its first report and although he made substantial contributions himself, many related issues are unresolved at the time of his death.

In 1953 Olds and P. M. Milner, working in D. O. Hebb's laboratory at McGill reported that rats with electrodes in lateral hypothalamic and septal sites would press a lever to deliver trains of stimuli to their own brains. Electrical self-stimulation revealed the existence of powerful central reward mechanisms and immediately raised difficulties for theories in which behaviour is initiated only to mitigate the aversive consequences of internal disequilibrium. The phenomenon had not been predicted by theories current at the time (but the aversive effects of brain stimulation had been looked for and found the previous year by Delgado, Roberts and Miller) and although he had considered the existence of central reward processes, Olds was working on the 'arousing' effects of electrical stimulation when he made his discovery. Noting a tendency for one rat to return to a point where he had previously been stimulated, Olds and Milner were quick

to exploit this phenomenon with an operant conditioning apparatus. Many researchers must previously have seen sniffing and approach behaviours following stimulation through implanted electrodes. The originality of the discovery lay in seeing the possible significance of this behaviour and examining it in a Skinner box.

In succeeding years Olds made major contributions to understanding self-stimulation behaviour. With Travis and Schwing, and later with M. E. Olds, he prepared what are still the most extensive maps of approach and avoidance areas in the rat brain. With Travis, Yuwiler and others he initiated investigations of the possible neurochemical basis of the phenomenon. His suggestion in 1960 that the major tranquillizers act specifically on the mechanisms of approach behaviour has recently attracted new interest in the light of the action of these drugs on dopaminergic mechanisms. Increasingly Olds became interested in single cell recordings as a method of investigation, but he never felt that these had given the answer he really wanted, the anatomical identity of the reward mechanism itself.

Olds' writings on self-stimulation included many provocative theories. He took an intense interest in new ideas and findings which might be relevant to the problem, and in recent years had been preoccupied with the possible role of monoamine neurones in reinforce-

ment. To the end of his life he remained at the centre of controversies concerning the functional significance of this behaviour and its neuroanatomical basis, and in retrospect it was perhaps fortunate that so much work in this field was gathered together at the Beerse conference in 1975 (*Brain Stimulation Reward*, edited by A. Wauquier and E. T. Rolls, Elsevier). James Olds must have impressed many of those present as the man best able to draw together the various strands of evidence in a coherent synthesis. Particular interest attaches therefore not only to his contributions to this symposium but also to the as yet unpublished monograph on Drives and Reinforcements completed a year before his death.

Olds modestly maintained that if he had not discovered electrical self-stimulation it would soon have been uncovered by someone else. This may be doubted, but even if true, few workers could have contributed his enthusiasm and imagination to developing a whole new field of psychophysiological work. He was a man who was willing to consider unusual concepts and paradoxical ideas but pursued them with great clarity. Everyone in the field will feel the loss of his critical intelligence and many will also acknowledge a debt of gratitude for his personal encouragement of their own efforts.

T. J. Crow

announcements

Appointments

Dr H. S. Bedson to the Chair of Medical Virology at the University of Birmingham.

Dr Leo A. Kaprio has been reappointed as Regional Director for Europe of the WHO.

Mr E. S. Booth, chairman of the Yorkshire Electricity Board, as the next President of the IEE.

Professor A. Lazenby, at present Vice-Chancellor of the University of New England, NSW, as the next Director of the Grassland Institute.

Professor D. R. Stranks, of the University of Melbourne, as Vice-Chancellor of the University of Adelaide.

Professor E. W. J. Mitchell, Head of the Department of Physics, as Deputy Vice Chancellor of the University of Reading.

Dr Derek Ogston, Reader in Medicine as Regius Professor of Physiology at the University of Aberdeen.

Dr Roger Grice, of Cambridge University, as Professor of Physical Chemistry at Manchester University.

Professor John Fraser Scott, of the University of Sussex, has been appointed Vice-Chancellor of La Trobe University, Melbourne.

Awards

The Faraday Division of the Chemical Society has awarded the 1976 Marlowe

Medal to **Dr James J. Burton** of the Exxon Research and Engineering Company for his theoretical work on microclusters.

The Finsen awards for 1976 have been made to **S. B. Hendricks** (Control of plant development by light), **H. F. Blum** (Skin and Cancer Hospital, Philadelphia, USA) (Photodynamic action and carcinogenesis by UV light), and **D. Shugar** (University of Warsaw, Poland) (Photochemistry and the structure of nucleic acids and proteins).

The SRC has awarded Senior Fellowships to **Dr A. Boksenberg**, of the Department of Physics, University College, London; **Professor A. Car-**

ington of the Department of Chemistry, University of Southampton; **Professor B. C. Clarke** of the Department of Genetics, University of Nottingham; **Dr P. H. Gaskell** of Pilkington Bros Ltd and the University of Cambridge; **Professor C. A. R. Hoare** of Queens University, Belfast; **Professor E. C. Zeeman** of the Department of Mathematics, Warwick University.

Meetings

October 11–15, **Clean Air**, Edinburgh (The Press and Information Officer, National Society for Clean Air, 136 North Street, Brighton BN1 1RG).

November 4–5, **Mutilation of Animals**, London (Symposium Organising Secretary, RSPCA Headquarters, Causeway, Horsham, Sussex RH12 1HG, UK).

November 8–10, **Manufacture of Superconducting Materials**, Port Chester, New York (Conference Coordinator, Technical Divisions and Activities, American Society for Metals, Metals Park, Ohio 44073).

November 17–18, **Agricultural Yield and Efficiency**, London (The Executive Secretary, The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG, UK).

December 1–2, **Food Additives in the Balance**, Harrogate (Dr D. Howling, c/o Technical Division, CPC (United Kingdom) Ltd, Trafford Park Road, Trafford Park, Manchester M17 1PA, UK).

January 5–7, **Solid State Physics**, Manchester (Deadline for contributions: November 1) (Professor H. E. Hall, Department of Physics, University of Manchester, Manchester M13 9PL, UK).

January 18–19, **Optical Production Technology**, London (Mrs R. G. Keiller, SIRA Institute Ltd, South Hill, Chislehurst, Kent BR7 5EH, UK).

January 25, **Energy Transfer Mechanisms, Dosimetry, Dose-Response Relationships**, London (Professor J. H. Martin, Department of Medical Biophysics, Blackness Laboratory, University of Dundee, Dundee, UK).

February 16–18, **4th International Congress on Mutations: Biology and Society**, Paris (Congrès Service, 1, rue Jules Lefèbvre, F 75009, Paris, France).

March 17–18, **Perinatal Care**, New York (Dr Raymond L. Vande Wiele, Co-chairman of Symposium on Future Directions in Perinatal Care, College

Person to Person

Nominations for the 4th Royal Society Esso Award for the Conservation of Energy should be sent to the Executive Secretary, The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG by February 7, 1977. The award consists of a gold medal and a prize of £1,000. It is for outstanding contributions which in the opinion of the Council of the Royal Society will lead to more efficient conversion or use of energy.

Dr R. P. Sheldon, University of Bradford, is preparing a report on the research which is going on in polymers/plastics in medicine (including surgery, dentistry, etc.) in the UK. Anyone who is working in this area is asked to contact Dr Sheldon giving brief details.

Applications are invited for Johananoff Fellowships (worth \$15,000), to spend a year at the Mario Negri Institute in Milan doing cancer chemotherapy and/or immunology, cardiovascular pharmacology, neuropsychopharmacology or drug metabolism. Candidates should be non-Italian scientists of established reputation. Apply to The Johananoff Fellowship Committee, Istituto di Recherche Farmacologiche Mario Negri, Via Eritrea 62, 20157 Milan by January 31.

There will be no charge for this service. Send items (not more than 60 words) to Martin Goldman at the London office. The section will include exchanges of accommodation, personal announcements and scientific queries. We reserve the right to decline material submitted. No commercial transactions.

of Physicians and Surgeons of Columbia University, Department of Obstetrics and Gynecology, 630 West 168th St, New York, N.Y. 10032).

March 29–31, **Neuromuscular Disorders**, Bath (Dr G. G. Lune, Department of Biochemistry, University of Bath, Bath BA2 7AY, UK).

April 17–30, **Chemically Induced Magnetic Polarisation**, Sogesta, Urbino, Italy (Professor L. T. Muus, Chemistry Institute, 140 Langelandsgade, DK-8000 Aarhus C, Denmark).

April 23–28, **Annual Meeting of the American Ceramic Society**, Chicago (Deadline for abstracts: November 20) Dr D. N. Winslow, School of Civil Engineering, Purdue University, West Lafayette, Indiana 47907).

April 25–29, **11th International Sym-**

posium on the Remote Sensing of the Environment, Ann Arbor, Michigan (Dr Jerald J. Cook, Environmental Research Institute of Michigan, PO Box 618, Ann Arbor, Michigan 48107).

May 1–7, **Stereochemistry**, Burgensstock, Switzerland (Professor P. Pino, Laboratorium für Technische Chemie, ETH, Universitätsstr. 16, CH-8092, Zurich, Switzerland).

May 23–27, **Safety at Sea**, London (The Conference Secretary, WEMT 1977, 10 Upper Belgrave Street, London SW1X 8BQ, UK).

August 29–September 1, **Drugs Affecting Lipid Metabolism**, Philadelphia (Deadline for abstracts: April 15) (Dr William L. Holmes, Scientific Secretary, Symposium on Drugs Affecting Lipid Metabolism, Lankenau Hospital, Philadelphia, Pennsylvania 19151).

August 30–September 2, **Biological Activity and Chemical Structure**, Noordwijkerhout, the Netherlands (Secretariat Department, c/o Merck Sharpe and Dohme B.V., Waarderweg 39, PO Box 581, Haarlem, the Netherlands).

August 31–September 2, **Astronomy and Astrophysics**, Christchurch, New Zealand (Astrophysics Conference Secretary, Department of Physics, University of Canterbury, Private Bag, Christchurch, New Zealand).

September 4–9, **13th International Symposium on Free Radicals**, Lyndhurst, Hampshire, UK (Professor A. Carrington, Chemistry Department, The University, Southampton SO9 5NH, UK).

September 11–16, **Pathology**, London (Professor A. Munro Neville, VIth European Congress of Pathology, Institute of Cancer Research, Fulham Road, London SW3 6JB, UK).

September 12–14, **Electron Microscopy and Analysis**, Glasgow (The Meetings Officer, Institute of Physics, 47 Belgrave Square, London SW1X 8QX, UK).

September 27–29, **Power Semiconductors and their Applications**, London (Deadline for abstracts: November 1) (Press Officer, IEE, Savoy Place, London WC2R 0BL, UK).

October 24–26, 1977, **Erosion: Prevention and Useful Applications**, Vail, Colorado (Deadline for abstracts: March 30) (Dr William F. Adler, Effects Technology, Inc., 5383 Hollister Avenue, Santa Barbara, California 93111).