

ferences in so-called bioavailability among brands which are supposedly chemically equivalent. And it suggests that such differences have resulted in therapeutic failures or inadvertent poisonings when patients have been given doses containing too little or too much of the prescribed drug.

The importance of the OTA's findings is that they have a direct bearing on proposed new policies governing payment for drugs by the federal government. On December 19 last year, the Secretary of Health, Education and Welfare, Caspar Weinberger, sent a shiver of apprehension through the pharmaceutical industry by announcing that the federal government would limit the price paid for drugs under the state-run Medicaid and Medicare programmes to "the lowest cost at which the drug is generally available". About \$1,300 million is paid each year for prescription drugs under those programmes, and Weinberger estimated that the new policy would save between 5 and 8% of the costs.

But last week the Pharmaceutical Manufacturers' Association (PMA), the trade association which represents nearly all the big United States drug makers, claimed that the OTA report "completely undercuts the ill-advised proposal" for drug purchasing, because it challenges the basic principle that chemically equivalent drugs are interchangeable.

Berliner pointed out last week, however, that for most drug products biological equivalence is not critical because there is a wide margin of safety between the dose needed for therapeutic effects and the toxic dose. He reckoned that only "about 10 to 15%" of the drugs on the market may pose a problem because of therapeutic differences between brands.

## Science studies in Amsterdam

by a Correspondent

At a time when the values of scientific activity are increasingly being questioned, so social studies of science are being included as optional or compulsory courses in universities round the world. British experience in this field—particularly that at the Universities of Edinburgh, Manchester and Sussex—has achieved considerable note during the past few years. So therefore it comes as no great surprise, even in these times of fluctuating interest in European collaboration, that the programme of teaching and research in science studies at Edinburgh will be the model for an unusual new unit at the Free University in Amsterdam. Moreover, British and Dutch collabo-

## Confiscated manuscripts

by Vera Rich

THE scheduled date of the Moscow "seminar that never was" has passed, and the would-be organisers and participants have been, at least temporarily, released from custody—yet the history of this valiant venture in academic freedom seems far from complete. As might be expected, the attention of the authorities is still focused on Professor Aleksandr Voronel, whose Moscow apartment was to have been the venue of the seminar. On Friday July 19, 1974, his apartment was subjected to an 8-hour search by the

police who confiscated some 2,000 papers, mostly scientific manuscripts, including those submitted by intending participants in the international seminar. On the same day, the fourteen-year-old son of Dr Benor Gurfel, another of the seminar sponsors, was stopped in the street on his way to deliver certain manuscripts to Professor Voronel. These were also confiscated.

Professor Voronel and his wife are under constant and obvious surveillance, and are at present staying away from the apartment. This confiscation of manuscripts is seen by informed observers as an ominous sign—the intensive campaigns against major dissidents such as Solzhenitsyn began in precisely this way.

ration is further strengthened by the appointment from August of a British historian of science and former palaeontologist, Dr Martin J. S. Rudwick, from the Department of History and Philosophy of Science, Cambridge, as the unit's first director and also as the first professor of History and Social Studies of Science in the Netherlands.

The Free University has long had a liberal attitude to the education of its science students. A course in general philosophy has been compulsory since the university's foundation in 1880 and history of science was added to the curriculum of all students in the late 1940s on the appointment of the noted historian of science, Dr R. Hooykaas, as professor. When Professor Hooykaas retired—about the time of the student unrest in the Netherlands at the end of the 1960s—it was decided that it would be expedient to widen still further the scope of the curriculum by introducing courses in science and society. For the past two years staff from the History and Social Studies of Science Division at the Science Policy Research Unit, convened by Dr R. M. MacLeod, have helped Dr E. Boeker, Professor of Physics in the Natural Sciences Laboratory, to prepare the ground for the new unit which will be the cornerstone of the Centrum Algemene Vorming (Centre for General Education) in the Faculty of Mathematics and Natural Sciences.

All first and second year students in the five departments of the faculty must now attend 52 lectures a year on philosophy, and the history of 'science and society'. Since 1972/73, teaching has been divided between the staff of the science and philosophy departments and visiting scientists from industry as well as guest lecturers from Sussex. The Sussex staff have also assisted with the seminars for the science and society 'minor' option

which graduate students can take during their fourth and fifth years.

When Dr Rudwick assumes his appointment in August, the unit will then start acting as general coordinator of all the courses in general studies, including those at present taught by the different departments—the so called encyclopaedia. The first PhD student in science studies at the Free University (a physicist who is currently taking the MSc course at Sussex) will register next year and it is hoped that in time the unit will be able to carry out a regular programme of research. Dr Rudwick's present interest is the social and conceptual history of science; to complement this, it is expected that staff who specialise in the sociology of contemporary science will eventually join him in the Centrum.

Although science studies and science policy units are found in other universities on the continent—for example, at Heidelberg and Lund—they are usually separate from the central core of the science faculty. At the other five universities in the Netherlands, some science and society courses are available, but these are not as widely based as that offered at the Free University in Amsterdam. Chemistry students seem to be the most privileged in this respect; at the State University of Groningen, for example, the chemistry department offers a major in 'free chemistry' with courses in chemistry, physics, economics and sociology. There has been some success in introducing discussions on ethical problems into biology courses, but in physics and mathematics departments there has been more resistance, though in the department of physics at the Technical University, Eindhoven, students can do a minor in physics and society.