

International data flow

Liberals and regulators meet

THE rapid growth in the flow of computer data across international borders was the subject of a meeting of 250 representatives of business corporations and governments from member countries of the Organization for Economic Cooperation and Development (OECD) in London last month.

Transborder Data Flow (TBDF), as it is known, is likely to account for 120 million transactions in 1987, a number comparable with the number of international telephone conversations. Although there is widespread agreement on the need for legislative harmony between countries, the subject has not often been considered at an international forum.

OECD resolutions are not enforceable in law, but do place moral obligations on member governments. No such resolution on TBDF is immediately in prospect, however: last week's symposium was merely to decide an agenda for future discussion.

The focus of attention since OECD's last symposium on the subject seems to have shifted away from privacy protection (where OECD guidelines are held to have been influential in shaping national legislation) to concern over the economic implications of TBDF. International agreement is desirable to eliminate not only technical obstacles but also protectionist tendencies.

Brazil and Canada, for example, have both recently introduced measures to restrict TBDF. The Government of Canada acted to prevent an international bank from transmitting data on accounts to other countries for processing each day, and Brazil prevented an international corporation with a local operation from hooking up to an overseas database.

Mr W. H. Montgomery of the Canadian Department of Communications made his government's case thus: "We would not wish to see data-related activities in the private sector — including planning, financial control, systems design and computer programming — fall to a level in Canada that is low in comparison with our trading partners".

The case for fewer restrictions was made chiefly by Ambassador D. Lady Dougan from the US State Department, who said that the United States "will always insist that the burden of proof is on those who claim that restriction is necessary". According to Ambassador Dougan, "protection of cultural integrity" is an insufficient justification for information control, because it is too often a guise for economic protectionism or censorship of the press. But Mr Y. Utsumi, of the Japanese Ministry of Posts and Telecommunications, warned that the principle of free information flow should not be used to protect the national interests of specific countries.

There is, it seems, no need to encourage companies to make use of the best available technology in the international sphere. But there is as yet no international agreement on how privacy legislation should treat legal entities such as companies. One suggestion made forcefully last week by the Hon. Justice Kirby of the Australian Law Reform Commission was that an OECD committee should be established to tackle legal questions.

There are formidable problems to be faced where criminal acts span several coun-

Big science

Small not always beautiful

THE question whether Britain can afford "big science" was aired but not settled at a public meeting in London last week organized by the Association of British Science Writers. There was general agreement that more money was required for science as a whole, but participants in the debate were otherwise chiefly seen to be protecting the interests that they represented.

Professor Ken Pounds of the University of Leicester, chairman of the Astronomy Space and Radio Board of the Science and Engineering Research Council (SERC), stressed that in his fields the United Kingdom is at the bottom of the international spending league (0.02 per cent of gross national product, 1 per cent of total UK research and development). With 1,200 people engaged in astronomy and space research in the United Kingdom, the *per capita* spending is £25,000. Yet, he pointed out, such research delivers value for money; although it contributes only 13 per cent of the European Space Agency's budget, the United Kingdom wins 28 per cent of the European Space Agency's support for basic science.

More generally, according to Pounds, geophysics research has been valuable in the understanding of terrestrial climate and resources and astronomy in its capacity to excite and even inspire members of the general public with new concepts such as black holes and gravitational lenses.

According to Professor Derek Colley of the University of Birmingham, chairman of SERC's nuclear physics board, the proportion of SERC's budget spent on the subscription to CERN, the European Organization for Nuclear Research, (£26.5 million in 1982) has decreased since 1979, while answers to questions such as "What is mass?" may have an important impact on society.

The case for "small" science was put last week by Dr Colin Humphries, a metallurgist from Oxford, who produced a vivid comparison of spending in the United States and the United Kingdom on materials

tries with different legal systems, says Kirby. One recent example concerns a US database, made public under the US Freedom of Information Act, that was interrogated from Norway, where the information obtained was a state secret. Such problems deserve the highest priority, according to Kirby. Existing international copyright agreements are, he says, entirely inadequate to deal with the possibilities that new technology is offering, and there is no consensus on the liabilities of communications operators. The need for agreement on these matters is more urgent now that the means for making international mischief are now to be found in many private citizens' homes. **Tim Beardsley**

science. The US National Science Foundation, the Department of Energy and the Department of Defense between them spend the equivalent of about £216 million a year on basic materials science, while the United Kingdom spends about £6 million — a 9:1 ratio per head of population. Moreover, as a proportion of SERC expenditure, materials science research has decreased over the past few years. Dr Humphries argued that, while "truth and knowledge" are truly valuable products of "big science", "little science" produces jobs and wealth as well.

This point was also stressed by Professor Mike Hart of King's College, London. While acknowledging the value of big science, he said that small science needs to be done now if "UK Ltd" is to benefit. Would it matter if big science experiments were delayed by a hundred years, he asked? He suggested that the United Kingdom might opt out of experimental particle physics but remain involved on the theoretical side — a notion dismissed as parasitic and impractical by other participants. He made the general point that the science budget, contrary to what the government claims, had not been maintained in the recent past. Part of the problem, he said, is the "sophistication factor" which has significantly increased the costs of measurement devices so that, for example, the installation of the most advanced electron microscope now represents a national undertaking. Even small science, it seems, is big.

In these circumstances, it is not surprising that the participants took refuge in the argument that the total science budget needs to be increased.

Sir David Phillips, chairman of the Advisory Board for the Research Councils, said that the government's response would be scepticism that, within a budget of £500 million from the research councils and a similar amount from the University Grants Committee, a satisfactory balance could not be achieved. **Philip Campbell**