

sign of its willingness to take risks or as a reluctance to match its patent portfolio to its financial resources.

Most of the inventions communicated to NRDC which later result in commercial success come from government research establishments, universities and industry. In the year up to March 1980, 1,786 inventions were communicated to NRDC, 68 patents were assigned to it, 56 licence agreements were completed and 157 development projects were set up. For those working outside industry, the corporation offers to patent ideas, put up funds for further development to the point of commercial exploitation and then licence the inventions with industry.

NRDC's aims seem laudable enough, but academics in particular feel that the practice does not match the theory. Those who have been able to approach industry directly with their inventions often report greater success, largely because they are able to negotiate relatively informal deals which do away with the legal wrangling often associated with NRDC negotiations. Universities have also become increasingly aware of their science and technology departments as potential revenue earners.

For industry, however, NRDC's services may seem more attractive and it was at industry that last week's conference was primarily aimed. If academics criticize NRDC for not driving hard enough to exploit ideas, the NRDC may equally accuse academics of lacking motivation. Appealing to industry itself to come forward with its own inventions might be more productive. **Judy Redfearn**

British technology

New direction

The Centre for Technical Change, the technological think-tank set up in Britain last summer, has brought off a considerable coup by the appointment of Sir Bruce Williams (aged 62), Vice-Chancellor of the University of Sydney, as its first director. The appointment, announced last week, will take effect full-time when Sir Bruce bows out of his post at Sydney at the end of June, two months early.

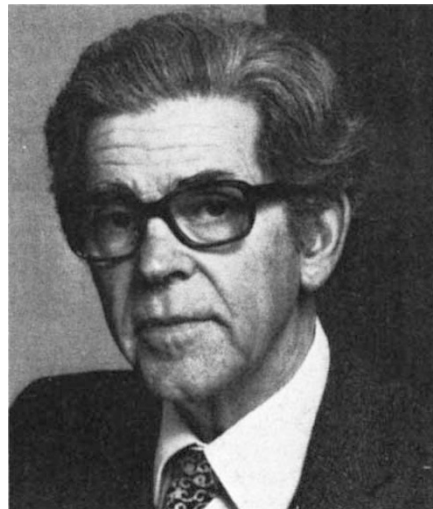
The centre was set up with a grant of £1.5 million from the Leverhulme Trust and with the promise of further substantial funds (up to a total of £2.25 million over five years) from the Science and Social Science Research Councils. Its origins lie in the conviction of its sponsors that pure reason may help to explain the poor industrial performance of the United Kingdom in recent decades, especially in the exploitation of technical innovation.

One of the ironies of Sir Bruce Williams's appointment is that it is almost exactly 25 years since the appearance of a report on the same set of problems produced under the title *Science and Industry* by Williams and Dr (now also Sir) Charles Carter, recently retired Vice-

Chancellor of the University of Lancaster and now director of research at the Policy Studies Institute, London. That document raised the question of why Britain, one of the principal spenders on research and development, should apparently derive so little benefit as a consequence.

Detailed planning of the centre's work is still incomplete. It has however been decided that the centre should be based in London, not (as some had hoped) in a university town.

It was also announced last week that the deputy director of the centre will be Dr A.J. Kennedy, research director of Delta Metal Company Limited. Dr Kennedy, who is 59,



Williams — back to a sinking ship?

has a background in academic life (Cranfield) and in industrial research. The centre is managed by a council whose chairman is Lord (formerly Sir Michael) Swann, now Provost of Oriel College, Oxford. Its future is for the time being assured only for five years, but it is hoped that it will be able to recruit extra funds during that period and also to persuade its sponsors that it deserves a longer life.

Latin America

Freedom lost

Washington

As one of a set of new initiatives designed to help persecuted scientists in Latin America, officials of the American Association for the Advancement of Science (AAAS) intend to monitor loans provided by international development banks to research and training institutions in the subcontinent.

This action is a response to evidence presented to a workshop held during AAAS's annual meeting in Toronto last week that several loans may have been granted to Latin American institutions to compensate for the loss of scientists who have fled abroad.

There was particular concern over two loans — \$66 million lent to Argentina in 1979 by the Inter-American Development Bank (part of the World Bank) to train

scientific and technological research workers at nine regional institutes, and a \$32.5 million loan last autumn to the University of Uruguay.

According to participants at the meeting, one of the purposes of the Uruguayan loan is to employ foreign faculty and consultants on a temporary basis. These workers would help to rebuild science programmes, particularly in agricultural research, that had disintegrated following the recent wave of political repression, when many university teachers had been imprisoned or had left.

The workshop recommended that scientific organizations should encourage international lending institutions to consider human rights when granting loans to educational and scientific institutions. They stressed the need to establish beyond doubt that scientific and academic freedom would be preserved.

The workshop's recommendations were made in the light of evidence that the repression of scientists in particular — and educationists in general — is becoming a chronic problem in many Latin American countries.

Several participants admitted that the situation in some of the countries had improved slightly in the past few years. There are fewer reports of repression from Brazil and Chile than in the early 1970s, and even in Argentina — Buenos Aires physicist Dr José Westerkamp said things were no worse than in the past.

But Dr Westerkamp added that there was still widespread fear that the repression might come back again. And AAAS's Committee on Scientific Freedom and Responsibility, which sponsored last week's workshop, has turned its attention to countries such as El Salvador and Guatemala, citing evidence of "generalized violence" against university and other teachers.

The evidence presented of a general decline of academic and scientific freedom in Latin American countries, including the dismissal of many scientists from teaching and research posts, was sufficient to persuade the AAAS Council, meeting last week to call for "the exploration of new initiatives to protect scientists".

One of these initiatives is likely to be the setting up of a Latin America Regional Centre for Human Rights — possibly in Venezuela — to monitor the state of scientific and academic freedom in the subcontinent, since several participants stressed the need to involve indigenous scientific societies.

Meanwhile AAAS officials said that the association hoped to invite officials from the Inter-American Development Bank to a meeting of its scientific freedom committee, and pointed to the success of international conservation groups in slowing down one loan because of its potential environmental consequences as evidence that bank officials seemed willing to discuss such issues. **David Dickson**