

French research planning

How will the future come about?

PERHAPS the French Revolution so divided and politicized the nation that every now and again France seems to need to pray together, to demonstrate its solidarity. This is the spirit in which researchers and industrialists met at the National Colloquium on science and technology in 1982, and this was also the spirit in which the same groups met again at the end of last month, at another grand mass — one praying for the future.

The meeting, "Prospective 2005", was jointly sponsored by the Centre National de la Recherche Scientifique (CNRS) and by the Commissariat du Plan (le Plan for short), which together had spent a year on the preparations. In many ways, the meeting marked le Plan's return to the public stage. Founded after the Second World War, le Plan became famous for its planning of France's spectacular economic rebirth during the 1950s. More recently, it has been somewhat moribund, suffering an uneasy relationship with, and neglect by the socialist government until, it seems, le Plan discovered technology.

The main fruit of the discovery so far seems to have been last month's colloquium on technological France twenty years ahead. But, unfortunately for le Plan, the general feeling was that the year of study by expert groups, and the voluminous documents they presented to the colloquium, amounted to a flop.

A report on communications, for example, was described by one communicator as "arid"; no doubt he was as aware as the other participants of the tremendous political debate then (and still) raging outside on the prospect of a fifth (private) French television channel run in collaboration with Italian and British interests and the future use of the first (and French) European direct broadcasting satellite to be launched next October.

The formal documents on the future of medicine similarly failed to take much account of the potential contribution of genetic engineering, but one of the colloquium rapporteurs dismissed — with venom — the notion that microgravity (as in a space station) might be of great importance in materials processing.

The rights and wrongs of these issues are certainly arguable. The future of French television was firmly outside the meeting's terms of reference. Less glamorous techniques than genetic engineering (such as halting smoking) might have more impact on public health in 2005 than any monoclonal magic bullet. But materials processing in space does occupy a large proportion of French research ministry funds devoted to work of this kind. One aggrieved representative of French industry complained at the meeting that the research ministry's funds devoted to space-based and land-based special pro-

grammes in materials science are in the ratio 4:3 (FF80 million against FF60 million). One consequence of this vein of realism, as the French would call it, was the opposite of what might have been expected of the nation that nurtured Jules Verne: the colloquium made the future seem a little dull.

The exception was the dramatic presentation of the future of unemployment in 2005. We are moving away from a civilization of pain and labour (*civilization de la peine*), the colloquium was told, to one of *civilization de la panne* (implying breakdown), a more flexible way of working than at present. The mere labour of the workers would no longer be needed, the colloquium was told; twenty years from

now, there would be 100,000 robots at work in factories, 25 times as many as at present. Before then (ten years from now), there would be an electronic workstation on every office desk. By 2005, retraining would occupy 10 per cent of people's working hours, which would by then be reduced by a quarter. The urgent need, the conference was told, is that institutions and trades unions should worry about the career patterns of the future.

This uplifting theme evoked a sour note. The intended massive increase of education and of retraining is a policy "of the elite for the elite" according to one who should know, the director of an employment office in north Paris with 3,500 unemployed people on its books. He doubted whether ordinary people would be able to cope with what the future, even as described, would expect of them.

Robert Walgate

UK medical research

MRC defends core of excellence

UNDER continuing financial pressure, the UK Medical Research Council (MRC) intends fully to protect the best jewels in its crown, but to throw out those that are substandard. Speaking in London last week, Sir James Gowans, secretary of MRC, said that only then would it be possible for the council to afford much needed equipment for existing units, to start new units and to give proper support to university research.

One unit to be backed up to the hilt is the Laboratory of Molecular Biology at Cambridge. A search committee has been set up to find a director to replace Sydney Brenner, who will be retiring from the post by 1987 and Sir James said that the

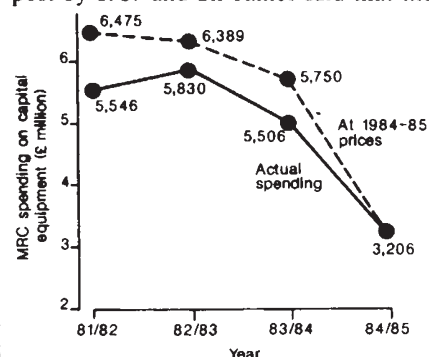
headed by Sir Michael Stoker that is due within the next two weeks.

Although MRC is well off relative to the other British research councils, with a budget that is falling only slightly in real terms, it has such big inescapable costs — mostly permanent scientific staff — that grants to university researchers, spending on capital equipment and the number of research studentships awarded have all fallen markedly in the past two years. For example, capital equipment spending has dropped from £6 million in 1982–83 to £3 million in 1984–85. Of projects worth £4 million rated to be of high priority for which central funds were sought this year, only £2 million could be found, although some more will follow from the extra £2.5 million recently added to the science vote.

Similarly, whereas it was possible in 1982–83 for MRC to support 80 per cent of the alpha-graded grant requests from universities, the figure has now fallen to 55 per cent. Most worrying, says Gowans, is that the total number of applications has fallen from 1,200 to 950 in the same period, suggesting that the scientific community is losing hope.

Unconventional ways of funding have been used for MRC's two current major initiatives. For the Institute of Molecular Medicine in Oxford, both the Wolfson Foundation and the Edward Penley Abraham Research Fund have contributed substantially to capital costs, and the research groups within the institute will be expected to compete for grants rather than be tenured. And the Centre for Collaborative Research, which will occupy a building being vacated by the Imperial Cancer Research Fund next to the National Institute for Medical Research at Mill Hill in London, is expected rapidly to become self-financing as a result of industrial backing.

Peter Newmark



council will have "some flexibility" in the salary that can be offered, although it will not be possible to compete with US universities or industry.

On the other hand, the MRC Pneumonia Unit at Penarth has been closed because the science was not good enough and the Trauma Unit in Manchester is closing because it proved impossible to find a new director of sufficient calibre. Moreover, it is rumoured that two neuroscience units will soon be closed down, while the Clinical Research Centre must be nervous about the report of a committee