

French research

Salomon speaks out (unpublished)

FRENCH technocratic centralism may have worked brilliantly for Ariane, nuclear power and high-speed trains, but it is not working, and will never work, for biotechnology, electronics and other consumer-oriented technologies. So argues Jean-Jacques Salomon, the only professor of science and technology policy in France, in a blistering — and unpublished — report now circulating at the Organisation for Economic Cooperation and Development (OECD), where Salomon was head of science for more than a decade.

Salomon's almost unrelieved criticism of French technology policy was commissioned 18 months ago by the prime minister, Laurent Fabius, in his then role of industry and research minister. Salomon submitted it to Fabius's successor, Hubert Curien, in July, but has heard nothing since. He is said to be furious that his passionate 160-page report may now simply gather dust.

The contents seem likely to guarantee that fate. For example, the report describes the creation of a grand ministry of research and technology by Jean-Pierre Chevènement as little more than "bureaucratic inflation". Scientists, writes Salomon, had much more influence over French policy in the pre-Chevènement days of the former and far smaller administration, the Délégation Générale de la Recherche Scientifique et Technique (DGRST).

The administrative consequences of Chevènement's expansion was a ministry split into several competing factions, says Salomon. This administration made only internal evaluations of its work, and rarely consulted its scientific advisers. Some advisory committees never met, according to the report, allowing bureaucrats to define programmes that were ends in themselves, not the means to innovation in the French economy.

In Salomon's report there are no scared cows, not even research spending. Basic research in France has enjoyed a 51 per cent budget rise since 1981 (without allowing for inflation), and applied programmes have seen a near doubling of spending. But according to Salomon, this attachment to a large increase in research and development spending as a fraction of gross national product has been "fetishism". (The ratio was 1.8 per cent in 1980, and 2.2 per cent now so a real increase has been achieved; the latest target is 3 per cent.) But, according to Salomon, the connection between research spending and economic growth is very loose: many other factors can matter more.

What the government should have been doing, according to the report, is actually to change the things that matter. But the author despairs whether in France anything can change. There have been 40 "re-

forms" of the French education system since 1945, Salomon counts, but none of them has finally changed anything. On the one hand, a true mass technical education remains out of reach despite frequent pious promises (of which the latest is Chevènement's, as education minister); and on the other, the top *grandes écoles*, the "engineering" schools that produce the elite of the French administration, in practice yield up graduates who "know nothing", neither science nor literature.

Also, Salomon suggests France must abandon its attachment to "great technological programmes" of state. These can only work when the state is, or controls, the purchaser; and can only fail when the purchaser is a multifarious public and the technologies various and rapidly changing (such as microelectronics). Here, the centralized French bureaucracy not only fails to be sensitive to the market but could not respond fast enough even if it were. The government should emphasize indirect action, where it has power and can change the climate, says Salomon.

• It is "indispensable" that there should be an independent, non-managerial, advisory unit to assess science and tech-

nology policy and ministerial action be established "as close as possible to the prime minister".

• The relevant ministries, with their competing and fragmented departments, should be streamlined, better directed to the marketplace.

• The "customer-contractor" principle, under which government departments should behave as customers for applied research by contract from research institutions, should be strictly applied to all big technology programmes.

• An external and public evaluation of the big technology programmes should be made "routine practice", as has become the case for the universities.

• The big programmes should take a lesser and lesser share of the cake, turning money towards "more supple and diversified" projects.

• Research and development aid to big industry must be analysed to determine if this is mere lame-duck support. Some 100 out of 1,500 French companies doing research receive 90 per cent of the government budget for industrial research and development, according to Salomon. There is danger of money going only to the strongest lobby, and more support is needed for innovative small companies.

• It is necessary to "rethink the French education system".

Robert Walgate

Cancer research

Ludwig branch lab to close

THE Ludwig Institute for Cancer Research is to close its London branch laboratories by the end of 1987. The unit, in collaboration with the Royal Marsden Hospital and the Institute of Cancer Research, is one of the major laboratories in the United Kingdom concerned with breast cancer. The Ludwig Institute has plans to open three more branches in London in the next two years and is negotiating with St Mary's Hospital, the Courtauld Institute and the Cardiothoracic Institute for sites. The staff at the present London laboratories in Sutton do not know whether they will be offered jobs at the new branches or even whether the organization intends to continue with breast cancer research. The reasons for the closure are obscure — clearly, lack of money cannot be one of them.

The Ludwig Institutes were set up in 1974 by Daniel Ludwig, one of the richest men in the world. There are at present nine branches, in the United Kingdom (2), Australia (2), Brazil, Belgium, Canada and Switzerland (2), and the organization plans to expand the number to 14. None of the branches are autonomous, but are administered by the Institute in Zurich. The present London laboratory was the first Ludwig branch to be established; its first director was Professor Munro Neville. Last year, Neville left to become a research administrator at the

organization's Zurich headquarters.

Staff at Sutton say that the post of director was not advertised after Neville left. The unit was without a director until the closure was announced, when Dr Tony Vickers, an ex-administrator from the British Medical Research Council, was appointed to oversee the rundown. Staff say that at the time of Neville's departure, the Ludwig executive assured them that the unit's future was not in doubt; eleven months later they received notice of closure. Although the technical staff have long-term contracts and are likely to be transferred, the scientific staff do not. And there is no indication that any of the new units will research breast cancer.

Scientific decisions by the Ludwig Institute are taken with the advice of a board of scientists from the United States and the United Kingdom. In the case of Sutton, staff are unconvinced that the normal procedure was followed and suspect that the decision was made at an executive level in Zurich. An explanation for the decision was promised for the staff by the end of November, but failed to materialize. Neville, speaking from Zurich this week, says that he "chose to leave" Sutton and that he knows nothing about the reasons for the decision to close it. And nobody else at the Zurich headquarters was prepared to explain the reasons for Sutton's demise.

Maxine Clarke