

British science is far from affluent, and it, too, is confronted by a government that is increasingly unhappy with the seeming paradox of considerable scientific skill and poor industrial productivity. As Anthony Wedgwood Benn, Britain's Minister of Technology and Power, recently remarked in an interview, "We're a country full of Nobel prize winners, but we constantly have to borrow money to pay our bills." But, though operated on what many British scientists consider to be short rations, research in Britain is blessed by one feature that is painfully absent in the United States—namely, financial predictability. The University Grants Committee, the government's principal agency for channeling general funds to the universities, lays out its spending plans 5 years in advance. And the various research councils plan their spending at least 3 years in advance. Thus, the director of one of Britain's major biomedical research centers, commenting on the budgetary cliff-hangers that the U.S. National Institutes of Health goes through annually, observed that he could well do with more money but at least had the certainty of knowing what government funds would be available to him in 1971. Nevertheless, there is probably more research and development currently going on in California and Massachusetts than in all of the United Kingdom. And, as is the case with most Europeans who are familiar with the conduct of research in the United States, British scientists express puzzlement and amusement at the cries of anguish now coming from their American colleagues. In their view, most European scientists would be quite pleased to ascend to what Americans consider to be a level of austerity, both in salary and in working conditions. As for the complaint that jobs are lacking for a substantial number of newly graduated American scientists, many Europeans, coming as they do through an educational system that takes in a relatively small proportion of the university-age population, tend to feel that U.S. enrollments exceed the supply of potential scientific talent.

It can be properly argued that, though Germany, France, and Britain are the most populous and powerful countries in Europe, none comes near the United States in population or productivity per capita, and that therefore individual national comparisons are not relevant. But what of the much-talked-of multinational efforts that are boosted as a means for Europe to combine

resources and compete in scale with the United States? With high-energy physics the principal exception, the situation in this regard could easily produce weeping among proponents of "big science," for the fact is that the forces working together have yet to achieve a decisive margin over those that cause each nation to take a narrow view of its own interests. Thus, the European Launcher Development Organization, the cooperative agency for building large rockets, started out with high hopes but has since come to near extinction on the probably quite sensible grounds that even a vast investment will leave Europe far behind the United States. Its sister agency, the European Space Research Organization (ESRO), is considered competent and productive for the development and operation of space research satellites, but France recently announced that, for economy reasons, it plans a substantial reduction in its support of ESRO. Even in high-energy physics, the story is one of the cooperative spirit just surviving, rather than vigorously triumphing. Europe's model for big scientific cooperation is the European Organization for Nuclear Research (CERN), whose 28-Gev laboratory near Geneva is universally admired as an outstanding example of international harmony in a costly and complex field. For several years, CERN has been planning the construction of a 300-Gev accelerator, arguing that without the proposed machine, high-energy physics will decline and eventually disappear in Europe. In turn, the argument goes, this would have a variety of stultifying effects that would touch off a new brain drain, with detrimental consequences for European science, education, and industry. (In view of the situation in the United States, it would be interesting to know the drainees' destination.) Eighteen months ago, the prospects for the new accelerator were seriously shaken when Britain announced that, for financial reasons, it would not take part in the project. The plans were redrawn to compensate for the absence of Britain's support, and CERN officials then cheerfully predicted that the project would soon proceed. For a year nothing happened. Then gloom descended upon CERN following reports that France might follow Britain's example and pull out of the project as part of its effort to cut down spending and put greater emphasis on applied research. Such a move would have laid the 300-Gev to

NEWS IN BRIEF

● **BAN ON GERM WARFARE:** As *Science* went to press, President Nixon renounced any resort to chemical or germ warfare and promised to destroy U.S. stockpiles of such weapons. Tear gas and riot control agents are apparently not included. Nixon asked the Senate to ratify the 1925 Geneva protocol prohibiting the first use in war of "asphyxiating, poisonous or other gases and of bacteriological methods of warfare." He said future government research in this area will be limited to defensive measures.

● **DDT RESTRICTION:** A government announcement of impending pesticide restrictions (*Science*, 21 Nov.) has been followed up by a partial ban on DDT. Secretary of Agriculture Clifford Hardin has ordered cancellation within 30 days of all DDT uses for shade tree pests, pests in water areas, house and garden pests, and tobacco pests. About 14 million pounds, or 35 percent of the total DDT used in this country, is manufactured for these purposes. Hardin also announced his intent to cancel all other uses of DDT by 31 December 1970, and requested industry to comment within 90 days. Exceptions would be made where DDT is needed for prevention or control of human disease and essential uses for which no alternative is available. Beginning March 1970, Hardin said, action on other persistent pesticides will be taken. The Interior Department will review water quality criteria and hazards to wildlife relative to pesticides; and Health, Education, and Welfare will review established tolerance levels of specific pesticides in food and drinking water.

● **CYCLAMATE BAN EASED:** The ban on cyclamates has been eased with the announced intention of helping diabetics and weight-watchers. Secretary Robert H. Finch of Health, Education, and Welfare approved the use of the sugar substitute for foods, but foods must be labeled to show the cyclamate content in an average serving. The new order also allows the use of cyclamates as concentrates in tablet or liquid form. All beverages containing cyclamates will still be banned after 1 January, however. Finch modified his 18 October order after hearing recommendations of a medical advisory group, who told him that the product was needed by diabetics and weight-watchers.