

# Britain Centralizes Science Policy-Making

*A new machinery for establishing priorities and pinpointing commercially promising areas of research is being put in place with substantial input from the private sector*

**B** LONDON Prime Minister Margaret Thatcher, fresh from her third successive general election victory in June, has carried out a sweeping reform of the top levels of British science policy-making. She has placed herself in charge of a new apparatus, operating largely on the advice of research managers and chief executives from the private sector, which has been designed to give firm central guidance over all forms of government support for science, ranging from the most fundamental to the most applied.

The central element in the new system is an Advisory Committee on Science and Technology (ACOST), headed by the chairman of Rolls Royce PLC, Sir Francis Tombs. It will report to the Prime Minister through the Cabinet Office.

The new committee will take over the responsibilities of the previous Advisory Committee on Applied Research and Development, but it will cover a broader territory. Three of the topics expected to be examined at its first meeting later this month, for example, will include whether Britain should pull out of the European Laboratory for Particle Physics (CERN), whether it should increase its subscription to the European Space Agency, and whether substantial support for nuclear research remains justified in the light of the government's plans to privatize Britain's publicly owned utility, the Central Electricity Generating Board.

ACOST will work closely with another of Thatcher's innovations, a new Centre for the Exploitation of Science and Technology. Something of a cross between the U.S. Office of Technology Assessment and the "industry-academic clubs" that exist in many large German towns, the center is intended to provide industry, government, and the academic community with advice on the most commercially promising areas of science. It will be financed primarily by subscriptions from private corporations, although some additional finance will be provided by three government departments.

The reorganization of Britain's science policy machinery has been carried out partly

in response to a highly critical report published last year by a committee of the House of Lords. This claimed that the United Kingdom's science effort suffered not only from underfunding but also from a lack of direction and thus a fragmentation of effort.

In its reply to these criticisms, published in a white paper in July, the government described several steps that it had decided to take to remedy this situation. While rejecting the House of Lords proposal that a Minister of Science with cabinet rank should be appointed, the government said that sci-



**Margaret Thatcher:** Britain's new science policy czar.

ence and technology priorities would in future receive "collective Ministerial consideration, under the Prime Minister's leadership," and added that both ACOST and the new center will provide advice on how research spending should be directed toward areas of high national priority.

"I think that the scientific community can take comfort from the fact that, for the first time, an overall view of research is going to be taken, and clear priorities are going to be suggested," Tombs said in an interview with

*Science* last week.

The main link with the scientific community will be achieved through the Advisory Board for the Research Councils, which will be represented on ACOST. In a report published simultaneously with the government's white paper, the board expressed its own concern at "a lack of purposeful direction, nationally, in the redeployment of university research effort, both between and within institutions." One of its chief recommendations was the creation of a number of interdisciplinary, university-based research centers, each of which would focus on an area of "strategic" science—that is, science considered important for the future health of the economy.

In line with this recommendation, the Science and Engineering Research Council (SERC) announced in August a list of seven areas, ranging from molecular engineering through lasers to high-temperature ceramic superconductors, in which it is inviting bids from selected universities to establish such research centers. According to SERC chairman Bill Mitchell, the growing cost of equipment in all such fields means that "there will inevitably be a wider spread of individuals and groups interested in a particular field than there will be universities which can be adequately equipped."

The Centre for the Exploitation of Science and Technology will attempt to pinpoint other areas ripe for a highly selective approach to medium-term research funding—as well as ways in which companies could profitably use the results of research in these areas. Sixteen of Britain's largest companies, including ICI, British Aerospace, and Rolls Royce have already signed up with \$100,000 annual subscriptions.

"In the past, Britain has lacked a hard-nosed professional view of what advances in science and technology really mean, and the approach has been very fragmented," says Sir Robin Nicholson, a former chief scientist in the Cabinet Office who is now research director of the glassmaking company Pilkington's and heads the committee responsible for setting up the center and recruiting its staff.

"Take gene splicing, for example. If the center had been in existence 10 years ago, then I am sure that there would have been a quicker reaction to the early scientific results and an earlier assessment of the potential technological exploitation by industry. We did set up a committee to do this, but it tended to be after the event."

There has not been unanimous enthusiasm for the government's new approach from the scientific community. The decision by SERC, for example, to offer to set up a university research center for high-tempera-

ture superconductors and make an immediate promise of more than \$3 million for its first year of operation, has been criticized on the grounds that major new initiatives requiring specialist teams cannot be created overnight.

There has also been criticism of the fact that the industrial representatives on the new advisory boards came primarily from large, well-established companies. There is concern that the point of view of smaller, but perhaps more innovative, companies will not be heard.

Finally, there is little evidence either that the government is likely to relax its current stringency on increasing research funds—even in strategic areas such as information technology—or that the private sector, despite government exhortations, is stepping in enthusiastically to fill the gap.

Tombs, however, remains confident that the new machinery will provide a much-needed process for selecting priorities, including (at the apparent insistence of officials from the Treasury) responsibility for providing advice on which sectors of science should be abandoned. The United Kingdom, he says, should decide what its scientists do best and concentrate funds on those areas. He mentions ground-based astronomy as one field in which it may no longer be appropriate for Britain to be active in every domain. Meanwhile, high-energy physicists are waiting with interest to see where ACOST comes out on the future of Britain's contribution to CERN. ■

DAVID DICKSON

## News Moves

### Going:

After 14 years with Research News, **Gina Kolata** has moved to the science section of the *New York Times*. Research News also loses **Arthur L. Robinson**, another veteran of 14 years, who joins the staff of the Center for X-Ray Optics at the Lawrence Berkeley Laboratory, Berkeley, California.

### Coming:

**Leslie Roberts** has joined Research News from the National Academy of Sciences' *Issues in Science and Technology*, of which she was editor. **William Booth**, formerly a free-lance writer for the *Texas Monthly*, and a Vannevar Bush Fellow at the Massachusetts Institute of Technology during 1986–1987, has joined News and Comment.

## Briefing:

### Europe Agrees to EUREKA Projects

Madrid

Research ministers from 19 European countries last week approved the inclusion of 58 new high-technology projects, with a total value of more than \$800 million, in the EUREKA initiative. This is a scheme launched 2 years ago at the prompting of French President François Mitterrand designed to link Europe's industrial and academic scientists and engineers in the development of market-oriented technologies.

The projects approved at a meeting here range from a relatively small research effort being launched by scientists in Britain and Denmark into the production of fruit flavors from plant tissue cultures, to a major 5-year, \$60-million project involving the joint development by teams in Italy, Germany, the United Kingdom, and France of the high-speed optical transmission of telecommunications signals. Each project is funded from private and public sources.

The new projects bring the total to 165, with a value of \$5.8 billion, the total approved since EUREKA was launched in 1985 in what many saw as a direct response to the U.S. Strategic Defense Initiative (SDI). European politicians argue that EUREKA is needed to counterbalance civilian spin-offs from SDI for U.S. companies.

A preliminary analysis by the EUREKA secretariat of projects launched so far reveals that the most popular fields for collaboration are in information technology (25% of the projects), robotics and manufacturing (17.6%), and biotechnology (13%). Other important fields include new materials (12%), environmental protection (8.3%), and telecommunications (7.4%).

One of the conclusions of the ministers at the Madrid meeting was that a special effort should be made within the EUREKA initiative to encourage greater university-industry cooperation on future projects. ■ D.D.

### Four Researchers Honored with Laskers

The 1987 Lasker Awards have been won by a Danish psychiatrist who pioneered drug therapy for mental illness and by three molecular geneticists who helped to solve one of the major mysteries of immunology—namely, how the immune system provides the essentially unlimited number of different antibody molecules needed to recognize all the foreign molecules an individ-

ual might encounter in a lifetime.

Mogens Schou of the Aarhus University Psychiatric Institute in Risskov, Denmark, won for his work showing that lithium can control the sharp mood swings of manic-depressive illness.

Back in the 1950s when Schou originally proposed lithium as a treatment for manic-depressive illness, the suggestion was greeted with more than a little skepticism. The idea that mental illnesses could have a biochemical basis and therefore be susceptible to drug therapy was then considered radical. Now, of course, it is widely accepted.

Susumu Tonegawa of the Massachusetts Institute of Technology, Philip Leder of Harvard Medical School, and Leroy Hood of the California Institute of Technology won a Lasker for their contributions to solving the mystery of antibody diversity. Simply put, the problem concerned how the genome could encode such a large number of antibodies and still have room for genes for any other proteins. "If I were to choose one preeminent immunology problem over the past three decades, it would be the question of antibody diversity," says Thomas Waldmann of the National Cancer Institute and a member of the Lasker Awards jury.

Tonegawa, Leder, and Hood found that a great deal, although not all, of antibody diversity is produced by combining separate segments of DNA to form the antibody genes. The Lasker Awards are well known as preludes to the Nobel Prize. Forty-four of the 120 scientists who have won Laskers during the past 42 years have also made the trip to Stockholm. ■ J.L.M.

### Fraud Reimbursement

The University of Pittsburgh has returned \$163,000 to the National Institute of Mental Health following the fraud investigation involving psychologist Stephen Breuning. A panel investigating Breuning concluded in May that he had engaged in "serious scientific misconduct." Most of the money was expended as part of a grant Breuning obtained from the NIMH while at Pittsburgh; about \$51,000 was for research Breuning was supposed to be doing under a grant obtained by Robert Sprague of the University of Illinois.

The Justice Department is currently gathering information on the case with an eye to possible criminal prosecution for violation of the False Claims Act, which prohibits the submission of false information to the government for the purpose of obtaining money. Violation carries a penalty of \$10,000, a jail term of up to 10 years, or both. ■ C.H.