Britain: New Emphasis on Industrial Research

London. Economic payoff being perhaps the most potent criterion in research planning here nowadays, the Science Research Council (SRC)—roughly the equivalent of the U.S. National Science Foundation—has just announced a reorganization designed to put more of its support into research and training related to industrial needs.

The SRC, with a current budget of approximately $100 million a year, is a mainstay of basic research, both in universities and in government-owned laboratories. But its mandate extends to applied research, too, and though it has always put a significant proportion of its tightly stretched resources into that area, concern over the country's economic performance has created strong pressures for the scientific community to become more involved in problems of immediate economic and social value. As a result, the SRC has progressively tended toward greater emphasis on the less pure side of research. And, as more sophisticated analyses of Britain's use of trained manpower have emerged, the SRC has been tailoring its granting policies with the aim of encouraging more scientific talent to enter industrial research and schoolteaching; by all accounts, there is beginning to be a desperate shortage of qualified science and mathematics teachers.

Engineering Gets New Emphasis

The latest step that the SRC has taken in this direction involves the dissolution of one of its three topmost advisory bodies, the University Science and Technology Board, and reconstitution of that body into two separate boards, one for science and the other for engineering. The effect of this change, SRC chairman Brian Flowers told a press conference, is that "engineering is now on equal terms with science in the Science Research Council." It may be, however, that, just as no one in the past would have acknowledged that engineering was not on equal terms, it perhaps may be slated now to be more equal than others. Thus, SRC officials say that the present division of expenditure between science and engineering is roughly about even. But both Flowers and the SRC's annual report clearly indicate that henceforth high priority will be given to activities that can be expected to promote industrial productivity. And, since budgetary growth is expected to be relatively slight in coming years, it is difficult to see how the SRC expects to boost engineering and not do so at the expense of its support for science. Thus, Flowers said, "We hope to make more than a modest contribution to the solution of the nation's industrial problems." And the annual report states that it is SRC's intention to continue to provide postgraduate training for about 16 percent of those graduating but with increased "priority given to advanced courses and to research training directly related to industrial needs." And, after noting that it has invited universities to seek support for developing programs "for a career in science-based industry in production, design, sales, or management," it goes on to state: "The Council is convinced that its support of postgraduate education can be used to encourage suitable broad training for those areas of the economy where scientists, engineers, and technologists are most needed, and by a judicious control of awards the SRC can encourage a net flow towards these areas."

In one form or another the report repeatedly states the position that high-quality research will be supported regardless of relevance or location. And it stresses that more science per unit of expenditure can be obtained through combined use of costly facilities and greater selectivity in making research awards. But, as SRC officials acknowledge, engineering will receive preferential treatment when it comes to growth rates over the next few years. The decision is not likely to sit well with the scientific community, which, though relatively well treated in terms of the resources it has been receiving from government, still does not feel particularly well treated in terms of all the things it would like to do and have.

Utilitarianism in Science Policy

The fact is, however, that science policy-making in Western Europe has entered a utilitarian period that leaves little room for those who would argue in behalf of science for the sake of science. The reason, quite simply, is that the major industrial nations, with the exception of Italy, which is in too much turmoil to cope with the problem, are eager to emulate the American pattern of close ties between research and industry. And, after years of diagnosing and agonizing over the "technological gap" and related ailments, various steps are being taken on a national and international basis to promote by deliberate design the same easy relationships that exist among American science, education, and industry. Thus, as noted earlier in these pages (*Science*, 26 September), one of the first actions taken by the new French government was to amalgamate the Ministry of Science and the Ministry of Industry into a new Ministry for Industrial and Scientific Development, with a mandate to produce more industrial payoff from the relatively great expenditures the French have been putting into research. In West Germany, where the industrial boom and scientific renaissance have obscured a rather low level of activity in applied research, the Ministry of Science last year began a program aimed at stimulating research in some of the more neglected areas, including electronics, materials sciences, and oceanography. At the international level, the Common Market countries hold endless meetings on all the good things they might someday do together technologically but, throughout, the emphasis is on utilitarian projects. And the trend is so strong that not even the banner of "prestige" carries very much power. As Anthony Wedgwood Benn, Britain's Minister of Technology, observes in a guest editorial in this month's *Science Journal*, "We have come to the end of those days when any project, sufficiently big and spectacular, could almost automatically expect to win approval and the funds it needed. . . . The era of technomania is passing."—D. S. GREENBERG