The science ministry's authority is confined to civil science but not exclusively to basic research. The ministry oversees programs which in Britain, for example, would come under the Department of Education and Science and the Ministry of Technology.

The science ministry budget for 1968, accepted by the cabinet last autumn, called for basic expenditures of $482.5 million, a 20.3-percent increase over last year's budget. Total federal funds for R&D would increase from $800 million to $925 million. The 5-year financial plan adopted in July 1967 provides for an average annual growth rate of about 16 percent, more than twice the rate of growth of total public expenditure.

Past surveys have shown Germany lagging behind its European peers in proportion of national income being spent on science and education, and the Germans have been eager to catch up. The proportion of gross national product spent on R&D rose from 1.6 percent to 1.8 percent between 1964 and 1966 and will reach 2.4 percent by 1970 if the trend continues. This would then rival the British effort, which has been consistently the highest in Europe but is not rising at a rapid rate.

The most substantial increases in the German civil science budget for the current year are in the so-called *schwerpunkt* (priority) programs—nuclear energy, data processing, marine research, and space. Research in the life sciences has priority status but has so far received modest federal support.

Oceanographic research up to now has been the responsibility of the Länder. This year the federal government will provide $1.25 million, and the amount is scheduled to increase to $6.5 million by 1971. Total funds for nuclear research and technology will rise from $140 million in 1967 to $166 million in 1968. Space research will go from $68.75 million to $81.25 million.

These sums are hardly staggering when compared with U.S. and in some cases British or French efforts, but it should be remembered that Länder expenditures on science are not included.

If German science remains spotty because of the turmoil of the past, nevertheless the Germans, in many ways, have made the best of things. In the postwar growth areas of nuclear energy, high-energy physics, and space research, Germany has to some extent overcome the disadvantages of a late start by wholehearted participation in such European organizations as Euratom, the European Center for Nuclear Research, the European Space Research Organization, and the European Launcher Development Organization. In science Germany has been a "good European" to an extent that has sometimes complicated its close relations with France.

As part of the effort to catch up, it is now German policy to build up centers of excellence at selected points in the scientific spectrum, particularly where an economic payoff is hoped for. If such a policy is to succeed, it is necessary to back the right horses, and some political as well as scientific risks have to be taken.

Science minister Gerhard Stoltenberg has made himself a reputation as an administrator who is prepared to take such risks. Stoltenberg earned his doctoral degree in history at Kiel. A former manager in the Krupp empire, he is a North German Protestant who has done well in the predominantly Catholic Christian Democratic party. As a science minister he has shown the same sort of talent for mastering his subject and flair for dramatizing the importance of his ministry that Minister of Technology Anthony Wedgwood Benn has shown in Britain. Stoltenberg also seems to have been a "strong" minister, having, for example, reportedly blocked efforts to have Luftwaffe research made an item in the science ministry budget.

In championing the cause of science and technology Stoltenberg frequently raises the question of national prestige. At a time when Germany has been on probation for two decades and reunification appears not to be a burning political issue, Germans do seem to be seeking a new national identity. In view of the nation's 19th-century eminence in science and technology it is not unreasonable to suggest, as Stoltenberg often does, that the role Germany will play in the world will depend to some extent on her again being a leader in science and technology.

Within the last year the appearance of a Second Report by the German Government on Research (*Bundesbericht Forschung II*), a review and prospectus dealing with federal-government activities and aims in science, and a Middle Term Financial Plan, a forecast of federal science expenditures for the years 1967 to 1971, have given a clear view of expansionary science planning.

There are, however, some obstacles to German self-realization in science. The shortfall in tax revenues this year could result in paring of the science budget. Policy making on a national basis is inhibited by custom and complicated by law, and, as a matter of fact, the constitutional court will probably soon decide whether present trends toward regularizing national science policy making are to continue. Also not to be ignored is the possibility that German science could again be affected by overriding political and social forces. The key problem of university reform has now become so entangled in the burgeoning student revolt in Germany that it is likely to become a national political issue with unpredictable consequences.—JOHN WALSH

APPOINTMENTS

C. Blitzer

P. C. Ritterbush

Charles Blitzer, Office of Education and Training, Smithsonian Institution, to assistant secretary for history and art at the Smithsonian; and **Philip C. Ritterbush**, special assistant to the secretary of the Smithsonian, to director of the Office of Academic Programs at the Smithsonian. . . . **William B. Weil**, A. I. duPont professor for handicapped children, University of Florida, to chairman of the newly established department of human development, Michigan State University. . . . **J. C. R. Licklider**, director for behavioral sciences and information processing research, Advanced Research Projects Agency, DOD, to professor of electrical engineering, M.I.T. . . . **Mendel Herzberg**, professor of bacteriology, University of Florida, Gainesville, to professor of microbiology, University of Hawaii, Honolulu. . . . **Donald C. Klein**, director of the Human Relations Center, and coordinator of graduate training in community psychology, Boston University, to program director in the Center for Community Affairs, NTL Institute for Applied Behavioral Science (formerly National Training Laboratories), associated with the National Education Association, Washington, D.C.