

# New Look for Israel

A RADICAL reorganization of the machinery for supporting research and development in Israel has been proposed by a government committee set up in 1966 and which reported to the Prime Minister earlier this year. Among other things, the committee suggests that there should be a central body with power to suggest the forward strategy for scientific research and to help the government to coordinate the claims of different agencies on the science budget. The proposed Research and Development Authority would take over the functions of the National Council for Research and Development which is now part of the Prime Minister's office in Tel Aviv. The committee also proposes that a good deal of the public interest in research and development should be channelled through existing ministries and that there should be set up three research agencies responsible for agricultural, environmental and industrial research respectively. The committee's work was indeed restricted to the natural sciences and engineering, medicine and the social sciences. The report, available from the National Council of Research and Development in Jerusalem and Tel Aviv, skates around the perennial problem in Israel of whether the long-term national interest is best served by fundamental or applied research.

Apart from its possible influence on the development of science policy in Israel, the report does provide an up to date survey of the distribution of effort in research and development. In 1966-67, expenditure on research and development worked out at £125 million (\$1=£3). In the past few years, the rate of spending has increased quite rapidly by an average of 15 per cent compound. Given the rapid increase of the Israeli population, the per capita rate of increase seems to have been 6.8 per cent per year at current prices. The report points out that the total research and development cost has been a slowly growing proportion of the GNP and amounted to 1.10 per cent in 1966.

Israel differs from many other countries by the way in which a large part of the research carried out is financed by grants from abroad. In 1966-67, roughly one third of the total cost was met in this way, chiefly in the form of grants to the Weizmann Institute and elsewhere. The government provided 48 per cent of the total cost of research and development, roughly half of it (£31 million) in universities and similar institutions and all but a small part of the rest in government laboratories of various kinds. Universities provided £12 million out of their own resources, while the spending by industry on research and development was surprisingly small—£10.4 or 8.4 per cent of all expenditure on research and development. The report points to the dominating role of universities in the pattern of research and development. Altogether, the universities were responsible for 63 per cent of expenditure in 1966-67—a higher proportion than is likely to be found in any other country with a substantial and growing programme of scientific research. The contribution of government funds to the total lies, however, well within the range found elsewhere—in 1963 government contribution ranged from 27 per cent in Japan to nearly 64 per cent in the United States and France.

The committee has a cheerful tale to tell about the

growth of trained manpower. The number of people employed on research in the natural sciences and technology increased from less than 2,000 in 1962 to 2,800 in 1966, with the universities and related institutions employing 60 per cent of the total. The rate of expenditure in government establishments seems, however, to be increasing more rapidly than in the economy as a whole—the total expenditure by government research institutions increased from £13 million in 1962 to £32 million in 1966-67.

The thread running through the committee's argument is that the dominant role of government finance among internal sources of support for research and development should be reflected in a stronger central machine for formulating research policy. The committee has been particularly concerned with the research institutes under the aegis of the National Council for Research and Development, itself an outgrowth of the Scientific Council set up at the foundation of Israel. The council manages a variety of institutes ranging from the Fibres and Forest Products Institute to the Negev Research Institute. Units like the National Physical Laboratory are managed directly by the council, but others have links with outside bodies, universities and hospitals. Some of the institutes, the Negev Research Institute, for example, claim credit for having stimulated the growth of universities. The committee is alarmed at the extent to which the success of many institutes is limited by the willingness of those for whom advice would be of value to listen to what the institutes have to say. It also complains at the way in which government procedure delays the process of agreeing on the research programme and at the way in which matters of status and promotion have hampered the effective employment of the country's scientific staff.

The proposal for the Research and Development Authority springs from this analysis. The authority would consist of seven people, four of them independent of the government but chosen by the Prime Minister. The chairman would be one of the independent members and not an official. The day to day work of the authority would be carried out by a full-time staff with a director also appointed by the Prime Minister. The notion is that the authority should have power and funds to stimulate research in those fields that are not directly the responsibility of government ministers.

In the ministries, the committee would like to see the appointment of chief scientists to provide advice and full-time staffs to help in formulating forward programmes. Under the proposed scheme, the management of the public research institutes would be transferred to the three research administrations which would thus exist independently of particular ministries and be enabled to act as independent critics of ministerial policy. This has the novelty that it decreases the influence of ministries on research programmes. On policy for research in universities and similar institutions, however, the committee has comparatively little to suggest. It wants to see closer links between the universities and government laboratories, but the universities are so well able to look after themselves that the committee prefers to leave well alone.