OLD WORLD

BRITISH ASSOCIATION

Cross Roads Again

from our Special Correspondent

Swansea, September 8

THE 135th annual meeting of the British Association, now finished, has been more than usually a demonstration of how much the association has to offer and a source of anxiety that it might not be able to continue. The scientific programme has been imaginative if unspectacular. The association has also gone a long way to meet the criticism that it has done too little in the past to provide a forum for the discussion of important public issues in the management and exploitation of science. But a cloud, now very much bigger than a man's hand, continually hangs over the association's future. It remains to be seen whether the decisions taken this week will provide an administrative framework in which the association will be able to survive.

Letter from Rothschild

SIR,—In your leading article on August 20 you referred to "inexcusable delays" on the part of the Government in reaching important decisions. You cited the study of certain aspects of Government research and development.

The Central Policy Review Staff was asked by the Government at the end of March to report on this subject by October. Given the complexity of the issues involved, to which your article testifies, six months is surely not too long for a study of the organization and management required for the annual expenditure of £650 million of public funds. This study has obviously entailed "the ample discussion with interested parties" which you imply the Government has been neglecting.

You also argue that in the management of the Government's policy on research and development, "the machinery that exists is a hindrance, not a help". It is precisely this question of the machinery which the CPRS has been studying.

Yours faithfully,

LORD ROTHSCHILD

11 Herschel Road,
Cambridge

It is good to know that the Rothschild inquiry is well on with its work, but must everything wait until its report has been digested? And will the Dainton report on the Research Councils be published?

EDITOR.

The mood of the annual meeting, a cautious blend of enthusiasm and scepticism, was in part determined by the opening address of the president, Sir Alec Cairncross, who argued that economic history contains very little evidence to suggest that "the process of innovation owed much directly, even if it owed a great deal indirectly, to advances in scientific knowledge". The result, he said, is that those "who put their faith in science as a means of our economic salvation exaggerate the part played by the body of formulated knowledge in the generation of technological change". He went on to say that it is consumer demand—the interests of governments as well as of individuals—and not advances in scientific knowledge that "gives innovation its motive-force", and that in the moulding of innovation by consumer demand, what matters most is the way in which industrial management exploits the potentiality of techniques.

The moral which Sir Alec Cairncross drew from this analysis is that there is no correlation between expenditure on research and development and the rate of economic growth. The suspicion that there must be has, in Britain, moulded government policy towards innovation in such a way that "the problem was misconceived, the strategy mistaken, the tactics unsatisfactory...". For the British and for other governments, the social climate is also an important determinant of the pace of innovation. Britain has been unlucky in this respect. But for all governments, according to Sir Alec, innovation "comes far more from below than above". Governments may be able to cajole but they cannot direct.

Sir Alec's declaration has drawn a number of opponents in the past week. At a public discussion on Monday evening, Sir Brian Flowers, the chairman of the Science Research Council, said that he could have written a similar address to the Royal Institute of Economics, replacing the word "science" by "economics". Sir Alec himself is anxious to insist on the distinction between science and technology, so that in that sense his argument is not relevant to all the things that British governments have done in the past few years to foster innovation in industry.

One of the ingredients missing from Sir Alec's address was a sense of what might happen or should happen in the planning of government policy. From a quite different point of view Sir Brian Flowers spelled out on Monday some of the steps which in his view must be taken to foster the development of science within the European Community, with luck enlarged by the accession of Britain and the other applicants. (The full text of this address will appear in *Nature* in the near future.) On the creation of common institutions

he asked that innovators should insist "the science must be good science" and the purpose of the institution must be clear. But the initiative for creating a new organization must come from scientists and there must be good reasons for thinking that international collaboration is essential. With these conditions satisfied, Sir Brian considers that there are great benefits to be won in the development of the European economy, especially if ways can be found of encouraging the nations of Europe to "give up the idea of alternative and purely national ventures".

Elsewhere, various sections of the association have sought to lay down the law on what should be done to brighten or to make more liberal the education of science graduates at British universities—these days, it seems, the advocates of liberal courses are the only ones who dare to speak in public. Several of the meetings in the past week have been designed to draw attention to social problems inherent in scientific developments of all kinds, and there has been a particularly successful discussion, led by Professor R. R. Porter, of the social problems occasioned by medical research. The same question was argued over at a discussion to which members of the general public were invited—an innovation for the British Association.

Controversy about the place of science in the modern world has sprung up at several sessions, sometimes by accident and sometimes by design. Nobody is in a position to count heads and thus identify the winner. On balance, however, this year's meeting has been distinguished by much more open discussion of the social antecedents of science, which is why the statement issued by the British Society for Social Responsibility in Science that "a few tame symposia on environmental things, a few public lectures on the ethical problem of this or that are not a real response to this crisis" has fallen a little flat.

This "crisis" is whether the British Association will somehow manage to survive. The association seems to have gained very little from the year long study by the Committee of Review (see *Nature*, 231, 412; 1971). The financial position is now even more desperate.

RADIO TELESCOPES

Jodrell Bank in Wales

by our Astronomy Correspondent

THE Science Research Council has earmarked £250,000 for a detailed design study of the telescope which the Nuffield Radio Astronomy Laboratory at Jodrell Bank, and in particular the laboratory's director, Sir Bernard Lovell, have looked forward to building for years. But it is clear that Sir Bernard's original aspirations have had to be toned down some-