

Debate without Raised Voices

HOWEVER unsatisfactory may be the outcome of the discussion of the future of British science policy provoked by the publication of the government's green paper containing the Rothschild and Dainton reports (see *Nature*, 234, 169; 1971) there is very little doubt that the occasion will provide yet another demonstration of the gentility of British public life. So far, the people most affected have been muttering to themselves and to their friends about the iniquities of one or other (and sometimes both) of the two documents, but there has been no sign so far of the kind of intellectual debate which the issue deserves. Christmas, perhaps, may be a diversion, although there is every reason to hope that the scientific community will not put turkey and plum pudding before its more lasting interests. It is also to be hoped that when eventually people start responding to the government's plea that interested parties should have their say, they will do so in language free from the ritual cant with which the subject is usually blessed. Last week, Dr G. J. Leigh began a statement on the subject with the words "The Rothschild report and recommendations present a threat to the well-being of British science which must be resisted". And the annual meeting of the Medical Research Society on December 10 adopted a formal resolution that "this society disagrees entirely with the principles stated in the report by Lord Rothschild . . .".

The weakness in these formal statements of opposition to the Rothschild doctrine that research policy should be determined by the demands made by customers (government departments) on research councils and their establishments is that they imply that the conduct of scientific research is an autonomous process in which the balance of effort is not determined by the wish somehow to obtain practical benefits. In practice, however, the research councils most directly threatened by the Rothschild proposal—the Natural Environment Research Council, the Agricultural Research Council and the Medical Research Council—have all relied in recent years on the argument that their activities are of practical value. Moreover, nobody will dispute that immense benefits have been won from much of the work that has been carried out under the umbrella of the research councils—the strains of wheat which the Agricultural Research Council have developed have been, for example, a great practical and economic benefit. In other words, although there may be some who object as the Medical Research Society apparently does to the principle of the Rothschild report, most students of the question will agree that the overriding issue is not whether customers of one kind or another should make demands on the research councils but that of know-

ing how best these demands might be made. On this point, Dainton and Rothschild share common ground, for the Dainton report says that in the years ahead, "research councils will have to become increasingly well informed about national needs and objectives so that they may try to deploy scarce resources in the most appropriate directions and be seen to be doing so". In other words, the Dainton view is that the research councils should comprise enough skill and understanding of practical problems for them to be able to make coherent demands on laboratory scientists. What this implies is that the two reports differ only in the arrangements which they suggest for expressing the interests of the ultimate beneficiaries, the British taxpayers, in language that can be used to define a programme of research.

What kinds of questions should be asked of the research councils? Implicit in Sir Frederick Dainton's definition of strategic research, that kind of scientific activity considered likely to lead to beneficial results which is nevertheless unpredictable in character, is that there are limits inherent in the character of the scientific process to the precision with which goals can be defined in advance. So far as the Dainton report is concerned, it would be entirely proper for government money to be spent under the banner of strategic research on a comprehensive investigation of the physiology of domestic farm animals because of the near-certainty that in the decades ahead, a better understanding of animal physiology will be of great practical importance in agriculture.

As things have turned out, this is precisely the point of view which Lord Rothschild rejects. To him, such an investigation is far too unspecific. To him, the questions to ask are questions such as "Is it feasible to think of developing Christmas turkeys weighing substantially more than those at present on the market and, if so, what kind of a research programme would be necessary and how much would it cost?" This is exactly like the question whether it is feasible to think of developing a supersonic aircraft and, if so, what kind of a research programme would be needed and how much would it be likely to cost? The real issue between Rothschild and Dainton is not whether questions like these are valuable questions—and some, of course, say that they are indecent—but how extensive is the field of enquiry in which they can be useful guides to the development of research policy. This, as it happens, is an empirical question, not an issue of principle. Those who pretend otherwise are turning the debate on research policy (such as it is) into the intellectual equivalent of a mediaeval joust, with Rothschild and Dainton as tin-clad champions.