

from time to time let their pent-up sense of mischief get the better of them. In other fields, and in the award of the literature prize in particular, they are prone to let rather temporal considerations get the upper hand. An award to a distinguished writer seems the more delicious (from Stockholm) if the result should be problems with an exit visa from, say, the Soviet Union. There could be just an element of that tail-twisting in this year's prize (shared with Sanger and Gilbert) to Dr Paul Berg of Stanford University, who is, of course, a molecular biologist of the highest standing and the first to join two pieces of DNA together synthetically and also a distinguished teacher. But Dr Berg has also been, perhaps unwillingly, one of the advocates of the regulation of genetic manipulation. Nobody will begrudge Dr Berg his prize, and nobody in his senses will deny that the progress of science is effected not merely by startling discoveries but also by the genial influence of men and women who help to ensure that a new subject is widely known, properly understood and regarded with

enthusiasm. This, for what it is worth, was the late J. Robert Oppenheimer's influence in physics in the 1930s, but he died without a Nobel Prize. Nobel's will may be intact, but have the rules been subtly changed?

That such questions are asked of the Nobel Foundation is a measure of its success. For better or worse, the Nobel Prize has come to stay. The need now is to make sure that it creates more pleasure than grumbling disappointment. Broadening the terms of reference of the will would help. A more explicit statement of the reasons for making an award, and a more explicit recognition by the Nobel committees of the teamwork involved in novel discoveries, would often help to disembarrass those who are awarded prizes and who are frequently heard to say "It's not for me but for my lab". Indeed, there is even a case for thinking that the Nobel Foundation might itself give expression to that sentiment by making the award, as at present, to the distinguished scientist but sending the cheque to his institution.

## Making British science policy by stealth

The present British government, noted for (and proud of) its empiricism, appears to have taken an axe (or at least a chopper) to the foundations of British science policy in the past decade without much caring what the consequences will be. Since 1971, the word Rothschild has been (among other things) the code word for a doctrine — that, in the planning of applied research, decisions about what to do and how to spend can sensibly be made only by the ultimate user of the results of the research. But who is the potential user of the results of publicly financed research? Constitutionally, Rothschild recognized, the strict answer must be the taxpayer. In theory, however, taxpayers' interests are represented by government departments. So what more natural than that government departments should be required to work out, between themselves and the Treasury, what proportion of their resources should be spent on research and then to arrange that the work should be undertaken by the contractor offering the best terms? This was the argument accepted by Mr Edward Heath's government in 1971. Different fractions of the budgets of the Agricultural and Medical Research Councils and the Natural Environment Research Council were transferred to the appropriate sponsoring ministries. (The budgets of the Science Research Council and of the Social Science Research Council were, for a supposedly provisional period, left untouched.)

Now (see opposite page) the system is beginning to break down. The Department of Health and the Medical Research Council appear to have decided that Rothschild's omelette had better be unscrambled. The attractions to both parties are clear enough. The department will rid itself of some tedious administration (and may in due course get rid of even more). The council will grow modestly in size (which is probably not an important consideration) and, more to the point, will know more accurately where it stands financially from year to year. Undoubtedly a great many things would, under the proposed transfer of funds, be carried out more efficiently than in the past. It is, for example, anomalous that the Department of Health should have commissioned the study of the side-effects of the use of pertussis vaccine directly from a group of academic physicians, while the council has on its staff or on its books a galaxy of distinguished epidemiologists better able to plan a study of the kind required than almost anybody else. Plainly, part of the weakness of the Rothschild doctrine has been that in some fields of enquiry there is not merely just one customer but just one contractor as well.

For the council, there is only one serious drawback in the proposed arrangements. If the department is planning to hand over at least half the money it now spends on applied medical research, it is only right that the council should accept the responsibility for deciding how these should best be spent. In other words, the council will have to work out for itself some way of identifying the needs of the department and ultimately of the National Health Service. For what it is worth, one of the council's

weaknesses in the heyday of its growth in the 1950s and 1960s was its stolid disinclination to take responsibility for such problems. Now, plainly, its inclinations have changed. It is to be hoped that it will succeed. Certainly a failure to do so will mean further upheaval. On balance, however, there is every reason to hope that the council will be able to rise to the occasion and be the better for having part of its interest in the long-term development of applied research however untidy it may be.

The drawbacks, such as they are, will be found principally at the Department of Health but also in the principles on which public policy on research now rests. Evidently — this is the experience of the past decade — the Department of Health has been at a loss to know how to function efficiently as a customer for research. To use the Rothschild imagery, the department has had money to spend but has not known clearly what it wanted to spend it on. At this stage, it is probably too late to know whether the department has deliberately (or even unconsciously) dragged its feet in setting up the "strong" chief scientist's department that was an essential ingredient of the Rothschild prescription. It is, however, a curious turn-up for the book that the council should now be thinking of taking on responsibility for operational research in health care, apparently because the department does not keenly sense the operational need of the health services. Rothschild would say that that is precisely what is wrong. The trouble with the traditional departments is that they consider research to be a kind of commodity, like string or sealing-wax, that can be bought in from time to time as the fancy strikes the administrators and as the funds allow. Part of Rothschild's point was that government departments should be forced to take a more constructive interest in the potential of research. That battle is on the way to being lost.

The consequences of this new development for the British government's wider conduct of research are harder to foresee. No doubt the administration will be saying that the special arrangement for medical research does not mean that the Rothschild principle has been breached, but the members of the other research councils will be less than human if they do not now sense a quickening of ambition, a tendency towards what the Soviets call revisionism. The Minister of Health, when he comes to describe the new deal in the House of Commons, should therefore be asked to explain why medical research is such a special case. That may be more difficult than he thinks. For although agricultural research appears to have fitted well into the Rothschild framework, it has for some time been clear that the application of the principle to the affairs of the Department of Industry is far from satisfactory. The "requirements boards" intended to simulate customers for research are not a great success. The lack of an obvious contractor has been a serious drawback. Sadly, the time may be approaching for yet another inquiry into the management of research in Britain.