

British space agency?

If the British research councils can no longer afford space research, who will pick up the tab?

FOR an eminent astronomer to suggest that Britain should have its own space agency smacks of naivety when sterling is weaker than ever before and when the British research councils are thinking increasingly unthinkably about the harsh decisions that confront them. It may also seem like special pleading on behalf of one section of the community. Budgetary pressures have concentrated the collective mind of the British science community, but divisively. Materials scientists, for example, who rightly complain of insufficient support, wrongly point the finger at "big science". They should know better than to abet the destruction of colleagues in other fields who are just as hard-pressed (see p.91).

A new space agency is not so inopportune a proposal as may first be thought. A panel under the chairmanship of Professor Mark Richmond recently spent several months pondering the costs and the benefits for science, industry and training that accrue from Britain's modest involvement in space (see *Nature* 312, 92; 1984). Its principal recommendations, predictably tame, were that two committees should be set up, one within the Science and Engineering Research Council (SERC) and one at a national level, to coordinate and stimulate potentially interested parties. Another recommendation was that participation in the European Space Agency (ESA) should take priority over other civil space activities. As it happens, the panel was set up by SERC and could not expect directly to influence government ministers. Even so, given the positive achievements and the potential benefits that the panel catalogued, its report was insufficiently robust. Committees such as those proposed are easily ignored. But given money to spend and direct responsibility to a government minister, they have a chance of being audible, visible and effective, which has been shown by the Alvey organization in information technology.

The proposal for a British agency for space is being urged by Professor Martin Rees* and would help do much of what the Richmond panel wanted. At the least, it would exploit the European Space Agency (ESA) for Britain's best national advantage and, at the most, perhaps in a more prosperous future, serve Britain's industrial, research and other communities more directly.

Can such a proposal make sense? In the present financial climate, probably not, but only because the present financial climate itself makes insufficient sense. SERC's dwindling resources cannot support both the core sciences and the increasing demands of lively and intellectually first-rate international collaborations. For what it is worth, the Department of Trade and Industry spent three times as much as SERC in ESA in 1983, primarily on communications satellites and remote sensing. But, by the nature of ESA's constitution, the department was able to do this only because SERC forked out the mandatory science budget required to keep British membership alive. A single channel for British contributions to ESA would avoid this nonsense; obviously Rees considers the risk that science would be swamped by technology to be one worth taking. But what is at stake is only small beer. Britain's total spending on civil activity in space in 1983 was about £80 million, compared with £200 million from West Germany, £300 million from France and £4,500 million from the United States.

What will happen to Rees's proposal is anybody's guess. Probably nothing, at least if past form is any guide. But the British government has to decide something; the question of participation in the US space station programme must be settled at next month's meeting called by ESA in Rome. The government should ask itself two questions. Does Britain have a technological future? And will space at some time be an important arena for civilian activity? If the answer to both questions is "yes" then, as

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Rees appropriately asks, can Britain afford to wait for 50 years before deciding what to do?

Management is best

The British government's wish to get rid of poor teachers is not a substitute for good management.

SIR Keith Joseph, said to be an abstemious man, is a glutton for punishment. Even before the full consequences are known of his defeat on his proposal to increase the cost of higher education to middle-class parents so as to find extra for British research (see *Nature* 6 December, p. 483), he was telling school-teachers (last week, at the annual northern education conference) that he will press ahead with a scheme for assessing the performance of working teachers, for rewarding those judged to teach well and for "weeding out" those whose performance conflicts with the educational interests of their students. The minister's difficulty, on this occasion as on others, is that he has identified a serious problem, or part of it, but failed to find a workable solution.

Talk of the assessment of teachers' performance has been in the air for more than a year, since Sir Keith published a white paper on the subject. That teachers probably differ in their competence is not in itself surprising. Reasonable people would be astonished if all teachers were equally able, or if there were not among them some whose performance is an actual impediment to the education of the young. This must be especially likely in a school system, such as the British, in which opportunities for in-service training are far too few, and in which teachers are not required to take advantage of them. But reasonable expectation is flatly contradicted by the assumptions on which British schools are run, and in particular by the peculiarly British convention that a professionally qualified teacher is king in his or her classroom. With the gradual transfer of responsibility for schools from central government to local authorities in the wake of the 1944 Education Act, teachers have won the right to defend themselves against charges of incompetence by simple reference to their professional qualifications. For practical purposes, they have life-long tenure. Further to undermine incentives to performance, both teachers and head teachers are paid on nationally negotiated salary scales with only minor and diminishing rewards for merit.

Sir Keith Joseph's proposed attacks on this cosy system has understandably raised a howl of protest. His case is all the more difficult to sustain because he has not explained how performance will be assessed. There are obvious dangers, not least that teachers will be assessed not by their own performance but by that of their students in public examination—one of the few numerical measures available. The mistake is the assumption that there can be a simple yardstick of performance, or that people's values in professional posts is susceptible to abstract assessment independently of the circumstances in which they work. It would be far better—but perhaps more difficult—that the minister should give head teachers the right and responsibility of deciding how much which teachers contribute to the attainment of a school's objectives coupled with a commensurate say in how individuals should be rewarded. Those who teach at management schools at British universities will readily advise the minister that he cannot hope to build an efficient teaching force without management structure of this kind.

The trouble is that the same principle should apply not only to the schools but to higher education. Academics' first reactions will be to say that the objective measurement of academic performance is impossible, given the diversity of the work academics do. And that view is correct. Some academics will also protest that attempts at the assessment of performance are an interference with academic freedom, which is less cogent. There is no reason why universities should not have a clear idea of their objectives, and civilized ways of ensuring that people contribute to those ends. Such devices are indeed essential if universities are to become more diverse in the years ahead. Nationally negotiated age-related scales of pay have become a hindrance. □