MRC research unit

Job vacancy

The immediate future of the British Medical Research Council's (MRC) Pneumoconiosis Unit in South Wales seems assured, although life there remains unsettled. Early last year, the unit had been the subject of a regular review by the MRC which had recommended staff cuts and greater emphasis on research supported by industrial contracts. The fears of staff that the MRC was preparing to wind down the unit for final closure in 1987 when the director was due to retire, were heightened when the director, Dr Peter Elmes, left his post last January. Those fears were allayed, however, when the MRC announced that it would appoint a new director — advertisements will be placed shortly. In the meantime a four-person committee is in charge of the unit's daily administration.

Dr Elmes's departure, however, highlights a problem for a handful of MRC units whose work is largely vocational. Those units must win some of their money from contracts placed by the Health and Safety Executive, to whom the MRC still hands over some of its budget under the Rothschild customer/contractor principle. Frustrations can arise when the contracts

are for routine toxicological studies which divert staff from fundamental research for which the units are primarily intended.

The MRC has used the problem to argue for an adequate budget to maintain fundamental research. But it has also urged the units to win more contracts from industry as well as the Health and Safety Executive to help it out of its fiscal difficulties. The more general problem, of course, is that routine toxicological studies on occupational hazards must be done and there are few suitable independent laboratories outside the MRC.

The MRC's plans for the Pneumoconiosis Unit have begun to take shape over the past two or three years. Hence there has been a shift in emphais from clinical to *in vitro* research and the unit's staff has been reduced. Since the MRC's review early last year, the unit has received regular visits from a committee to advise on its work and research commissioned by industry has increased. Dr Elmes, however, was not happy about the changes. He mentions delays to research work caused by lengthy negotiations with industrial customers, both at the outset of a piece of research and during its progress, and industry's reluctance to publish results quickly.

An illustration of some of the difficulties is provided by the case of kaolin workers in Cornwall. The MRC, according to Dr Elmes, had been unwilling to support studies into the causes of an excess of lung disease in the workers on the grounds that they did not constitute fundamental research. Industry and the Health and Safety Executive, which did come up with the money, awarded funds piecemeal for individual studies as the project progressed, thereby causing delay. Publication of the final results, which apparently suggest a link between kaolin exposure and lung disease has been delayed because of industry's desire to reduce the risk before it is widely known.

The MRC believes that many of these problems can be avoided if the terms under which research is conducted are made clear to industry at the outset. Hence, the council would like the Pneumoconiosis Unit to continue its efforts to win more industrial contracts. But the precise balance between applied and fundamental research, it says, remains to be seen. One important factor in determining the unit's structure will be the views of the new director.

Judy Redfearn

US science education

Nearing a crisis

Washington

Mr George A. Keyworth II, the President's science adviser, termed the "next few years" as "critical in science education in the United States". But he has extinguished any hopes that the Administration will do anything about it until the next presidential term.

In a speech to the National Science Teachers Association (a group whose ability to carry out its job has been impaired by Administration cuts of all funds for pre-college science programmes run by the National Science Foundation (NSF)), Keyworth repeated the unfortunate truths many US leaders have learned of late about how poorly, and how little, science and mathematics are taught in US schools.

For example, these subjects consume only seven per cent of elementary school teaching time, and even less time at the secondary level. The ability of students in science and mathematics has deteriorated steadily, and most people leaving school and going into non-technical professions have little idea of what science and technology are about. The public, he noted, spends $100,000 million annually to run US public elementary and secondary schools, while it spends around $6,000 million a year playing video games.

Keyworth absolved the federal government of any role in solving the problem, except to produce graduate students in science. "The alarm being raised about reductions in federal support for science education is misplaced. We ought to be alarmed that those organizations and people spending the really big amounts of money seem to assign low priority to science education.

"Our most important job is to work together to convince our local communities, school boards and universities that science is as basic as history, that students who must study English in the twelfth grade must also study maths. But the federal government cannot and will not make this happen. We parents, teachers and citizens must take up this challenge directly."

Rebutting this argument is F. James Rutherford, who designed some of the high school science programme set up as a response to the Soviet Union's Sputnik, and who testified a week after Keyworth's speech to the opposite effect. He said that US elementary and secondary education is so decentralized and so locally controlled that no one is spending "really big amounts of money". There is no central focus for change or curriculum development except at the federal level, said Rutherford, who is now chief education officer of the American Association for the Advancement of Science.

Keyworth had argued that the post-Sputnik science education effort simply did not take root and that geography and demography worked against it. Rutherford says the decline was a direct result of earlier cuts in the NSF programme for science education (which once consumed half of NSF's entire budget). The Reagan Administration, for two years, has run down the remaining $80 million of that money so that only $15 million will be left in 1983 and this is allocated to graduate student fellowships.

Rutherford notes that the timing of the Administration's initiatives precludes anything further happening during Reagan's current term as president. The Secretary of Education, Terrel H. Bell, has established a National Commission on Excellence in Education, due to report in October 1983, when the government's 1984 budget will be virtually complete. John Slaughter, director of NSF, has said that his most important task as NSF director will be to set up another commission, on pre-college education in maths, science and technology, to report in late 1983. Thus these studies would have no impact, Rutherford notes, before the 1985 budget at the earliest, after the next election.

So while Keyworth calls the problem critical, he does not propose to do anything about it, except to have the teachers lobby their communities, and weep.

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