

Waste in research services damned

UK laboratories lack incentive to save costs

A damning indictment of peripheral waste in British government research establishments was published earlier this week by Sir Derek Rayner, one of the Prime Minister's favourite businessmen and her special adviser on efficiency in government. The report, based on surveys of 19 establishments and concerned exclusively with services for the support of research, suggests that savings of about a fifth in annual budgets would be possible without jeopardizing quality.

The survey is one of several being carried out of efficiency in different parts of the government's business. It consists of a summary of the several separate reports linked together by Sir Derek's own generalizations. One of his central complaints is that in government establishments the cost of support services, ranging from cleaners and doormen to specialist workshops, is lumped together as a central overhead and not apportioned to separate research projects.

The essential failure, says the report, is that neither the provider nor the user of laboratory support services has clear authority and accountability for judging value for money. Rayner says that research establishments should be reorganized in such a way that identifiable research managers are responsible for the whole cost of their projects.

In passing, the survey has uncovered a variety of memorable sources of waste. One establishment was found to have ten deliveries of internal mail each day while the National Physical Laboratory near London maintained eight vehicles that each made less than one journey a month. At the government's Building Research Establishment, a staff of six storemen handled an average of 10 transactions each a day, while the Royal Signals and Radar Establishment was found to have a stock of 17,500 items of scientific equipment with an average age of 8.7 years.

The Central Veterinary Laboratory is reported to have been breeding rats at a cost of £30 a head when suitable animals could have been bought in for about £2 each. The Royal Aircraft Establishment at Farnborough provides itself with an air taxi service at a cost a third greater than commercial charges.

The report on the coordinated survey complains that the government research establishments hold that outside suppliers should be used only when the establishment is too busy or cannot meet the technical need. This, the report says,

"is wrong and costly".

Establishments also tend to be extravagant of land and buildings. The report says that the National Physical Laboratory could save £635,000 a year by giving up 200,000 square feet of floor space and that the Central Veterinary Laboratory should dispose of 245 acres of land now used for breeding animals uneconomically. The report points out that establishments as at present organized have no incentive to make savings of this kind.

The Rayner report also complains that establishments charge too little for services provided to outside users and so "give away . . . public money". Some establishments provide research reports free of charge when they have a "commercial value", others sell products whose cost of production has been underestimated and others undercharge for services "in order to win contracts".

The cost of the bureaucracy itself seems to be substantial. In four establishments covered by the survey on which the report is based, the cost of checking invoices externally doubled the real cost of all the items purchased. But the gravamen of the report's complaint is that "the individual manager of a scientific project is not aware

of or responsible for the actual costs of the support he consumes". The report recommends that responsibility should be transferred to project managers.

The suggested savings on annual costs amount to 14 per cent of the budget now spent on support services within the 19 laboratories and would be made chiefly by shedding 1,518 support staff, or 19 per cent of the total now employed. The report also recommends the disposal of 270 acres of land, 450,000 square feet of accommodation and 200 vehicles, thus raising £6.65 million.

Ministers responsible for the laboratories concerned have apparently agreed in principle to the report's recommendations. Government departments will be performing similar scrutinies of other laboratories in the hope of finding similar savings elsewhere. The plan is to draw up "action plans" for streamlining the support services of individual laboratories by the end of the year. Much remains to be settled, however, not least the questions of how to shed posts and how to change the jobs of researchers so as to encompass greater management responsibility. The reactions of laboratories and staff unions will be eagerly awaited. **Judy Redfern**

New prospectus for European lab

Substantial changes in the direction and style of research at the European Molecular Biology Laboratory (EMBL) in Heidelberg were being put to the laboratory's council earlier this week by Dr Lennart Philipson, the director-general chosen by the council to succeed Sir John Kendrew's inaugural seven-year reign.

The plans are the outcome of consultation between Philipson and the staff of EMBL and of an almost total lack of contact between the incoming and the outgoing directors-general — ending in a most unknighly deed by Sir John. There have inevitably been clashes within the scientific advisory committee on the extent to which EMBL should pursue a structural approach to biology.

In essence, Philipson's plans call for a shift in emphasis from structural biology towards cell biology, for concentration on fewer areas of research and for better integration of the costly instrumentation division with the laboratory's biological programme. Philipson also says that EMBL's outstations at Hamburg and Grenoble should grow and become more autonomous, and that the laboratory should increase its role as an international training centre, offering more technical courses and eventually a PhD programme.

Another of Philipson's plans is to replace the system of indefinite tenure for a few of the 250 of his staff with one of rolling tenure for up to a quarter of them.

In practice, this will mean that those with tenure will always be on five years' notice. Philipson believes this to be the best way of retaining flexibility while attracting good scientists for short periods. Philipson says that in part this proposal is a response to an unexpected legacy inherited from Kendrew. As soon as he was named director-general in November 1980, he says, he asked that no additions be made to the four tenured staff without consultation either with himself or with the chairman of this council. Kendrew, however, afterwards endowed eight staff members with tenure, five of them within his last three months, without consultation. He was, it appears, quite within his rights to do so (but when asked earlier this week about his reasons refused to comment).

The intended difference in style of research in the next five years reflects a change in both time and directors-general. Whereas Kendrew encouraged certain biological themes at the laboratory, he was prepared to back individuals whose research was not closely allied to any one of them. Philipson, however, tends to the view that backing individuals was even then an outdated approach, and says that the modern need is for a team approach to major problems in biology. Philipson thus intends to concentrate the biological research of EMBL on membranes and on the process of differentiation. Membrane biology is the one area of research in which

the laboratory has a high reputation. The work, however, has been mostly on mechanisms of transport across membranes, and Philipson plans to supplement this with a structural approach. As a start, he claims to have recruited a specialist Rosenbush from Basle, who has recently obtained some of the first ever crystals of a membrane protein, the structure of which will be worked out at EMBL.

The laboratory has much less of a reputation in differentiation, and Philipson's plans depend upon the recruitment of new staff. There may soon be a major project on the terminal differentiation of blood cells and later another on growth factors, but competition with other laboratories on differentiation in *Drosophila* is all ruled out. Other projects ruled out or resisted during planning include mobility within protein molecules, chromatin structure and protein folding.

Inevitably the emphasis on some areas of research will be at the expense of others. Whereas Kendrew felt it essential to have a foot in the door of neurobiology, Philipson will close the door. But Philipson, like Kendrew, is committed to instrumentation as a key to the success of EMBL, believing, however, that it should be better integrated into the research projects. About half of the laboratory's budget is spent on instrumentation, with the most advanced project that on low temperature electron microscopy designed to minimize damage to specimens.

The instrumentation division has also been essential to the unquestioned success of the synchrotron radiation outstation at DESY in Hamburg, where EMBL staff have been chiefly involved with building equipment for use by external collaborators. Philipson hopes to succeed where Kendrew failed by persuading the council to increase the staff at Hamburg from 17 to 25. He plans a similar increase at its neutron diffraction out station at Grenoble.

These plans are based on Philipson's appraisal that the outstations have done more than any other part of EMBL to justify its existence as a European laboratory able to engage in research that cannot be mounted nationally.

Both Kendrew and Philipson admit that such a description cannot be applied to much that goes on in Heidelberg, but Philipson emphasizes the increased role he intends for EMBL as a unique centre for training in molecular biology. It remains a manifest disappointment for many observers that the programme of research at Heidelberg is still much as it might be in any large well-funded national laboratory. And it could only justifiably be for that reason, monetary considerations apart, that Philipson might fail at the end of this year to get the 10 per cent budget increase needed to bring EMBL up to its full strength.

Peter Newmark

Chemical weapons treaty

Talking again

Washington

The Soviet Union may be willing to accept some provisions for on-site inspections in a treaty banning chemical weapons. The first hint of Soviet movement on this issue — which has been the chief obstacle in US-Soviet negotiations on chemical arms — came in a speech on 15 June by Soviet Foreign Minister Andrei Gromyko to the United Nations special session on disarmament.

The United States broke off negotiations in 1980 on a treaty that would ban not only the use of chemical weapons, which is already prohibited by international treaty (the Geneva Protocol of 1925), but also their development, production or stockpiling. Soviet refusal to accept any on-site inspections and the Soviet invasion of Afghanistan were cited at the time as the reasons for suspending the talks.

In his speech, Gromyko said that a chemical arms treaty should provide for "a

possibility of carrying out systematic international on-site inspections", of the destruction of existing weapons and of the continued limited production of toxic chemicals that would be permitted for defensive research purposes under a treaty.

The US State Department is officially saying only that it is studying the proposal and that it is too early to comment. The State Department is apparently wary of showing any favourable response until it can assess the substance of Gromyko's statement. The Soviets may elaborate on their proposal at the international disarmament conference which convenes on 20 July in Geneva.

A State Department official did say, however, that the Soviet proposal appears to address at least two of the three concerns the United States has been pressing — inspection of stockpile destruction and inspection of the permitted research production. The third area is inspection of the shut-down and elimination of existing chemical arms facilities.

James Leonard, who was the US representative at the Geneva disarmament

Industrial secrets still in demand

Washington

The arrest of 18 Japanese businessmen in the United States last week on charges of conspiracy to steal confidential computer information from International Business Machines Corporation may really have been just the latest instalment in a long tradition of international technical espionage. According to Professor Alfred Gollin, a historian at the University of California at Santa Barbara, it now appears that at least two self-appointed spies kept tabs on Wilbur and Orville Wright and reported to the British military.

One was C. S. Rolls (of the automobile

first powered flight, and apparently became quite friendly with them. Professor Gollin found that, for a private citizen, Alexander did have unusual entrée into government circles. This included a close working relationship with the secret Balloon School and with a key figure in the British army's aeronautical programme.

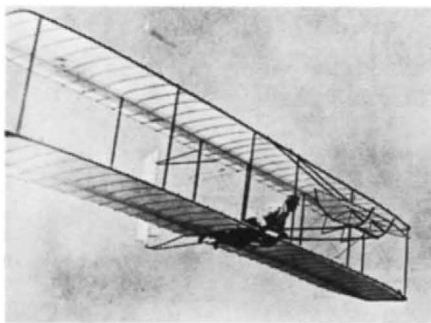
But Alexander also demonstrated the pitfalls of leaving the job to amateurs. He was actually invited by the Wrights to Kitty Hawk to witness their first flight on 17 December 1903, but went instead to the St Louis Exhibition — this was when world's fairs were still worth going to, no doubt.

The Wrights later became convinced that Alexander was in fact a spy. But by that time, the Wrights were embroiled in a patent fight and, according to Dr Tom Crouch of the National Air and Space Museum in Washington, "they thought everyone was spying on them".

In fact, says Dr Crouch, "they developed a conspiratorial mentality themselves", going so far as to send their younger brother, Lorin Wright, to spy on Glenn Curtis, their rival. In what became another amateur performance, Lorin simply marched into Curtis's factory and began taking pictures until he was discovered and had his film forcibly and prematurely exposed by a Curtis employee.

Dr Crouch suggests that any spying that did go on was motivated more by the commercial interests of individuals than the military interests of governments. On the other hand, Edwardian England clearly did have its worries about the Wrights' invention. "The story is not that man can fly", said a British newspaper publisher at the time, "but that Britain is no longer an island".

Stephen Budiansky



company) who in 1908 wrote to the British Committee of Imperial Defence offering to go to France and "draw out" the Wright Brothers. Rolls also bought a Wright biplane, which he offered to put at the disposal of the government. For several years before, the Wrights had negotiated with the British on a sale of their planes, but the deals repeatedly fell through.

The other unofficial spy was Patrick Alexander, an active member of the Royal Aeronautical Society. He first visited the Wrights in 1902, a full year before their