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.

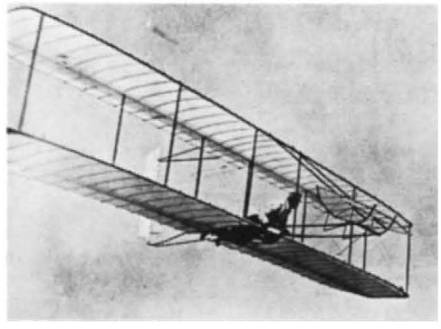
James Leonard, who was the US representative at the Geneva disarmament

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



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 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**

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