Academic freedom and security conflict

Challenge to access rule from Stanford

Washington

The National Academy of Sciences (NAS) moved quickly last week to disengage itself from efforts by the US State Department to restrict ideas that American university research workers are allowed to discuss with visiting Soviet scientists.

The academy was responding to complaints that, in administering the exchange programme between scientists from the two countries, NAS officials have been routinely passing on instructions from the State Department about limitations to be placed on particular individuals.

Scientists at Stanford University in California objected earlier this month to the academy when such a letter was received covering the proposed visit of Dr Nikolay V. Umnov, an expert in robotics and walking machines, to the university's department of mechanical engineering. It was to be one of a series of visits which the Soviet scientist had requested to universities throughout the country.

NAS officials told the university that Dr Umnov's visit had been approved by the State Department, but only under certain conditions. He was not to be allowed access to data about programming techniques for robots, nor was he to make any industrial visits to companies with Defense Department contracts. The State Department has said that, unless waivers were negotiated with the Department of Defense, Dr Umnov was not to be allowed access to unpublished results of Department of Defense sponsored research even if this was unclassified. The academy passed these instructions on to the five universities Dr Umnov was to visit.

Following a complaint from Dr Bernard Roth, a professor in the department of engineering the university's dean of research, Dr Gerald J. Lieberman, wrote back saying that Stanford was prepared to sponsor Dr Umnov's visit, but refused to accept the conditions imposed by the State Department.

"We are not willing to accept responsibility for Dr Umnov's actions — either on or off the campus — during his visit to Stanford," Dr Lieberman wrote. He added that the NAS memorandum was a surprise, saying that "we believe that the best interests of American science and technology are served by open exchanges of university research activities and hope that the academy will visibly support universities' position on this critical issue".

A spokesman for the academy said last week that it had been decided to suspend the simple transmission of restrictions required by the State Department until the governing board of the National Research Council and the council of the academy "has had a chance to examine the whole thing from the policy point of view". Both bodies meet next month.

As efforts have been made to tighten restrictions on visiting scientists, concern about the implications have been growing on US campuses. A year ago, Stanford sent a letter on behalf of the presidents of five major research universities to the Department of Defense, Commerce and State, complaining that such a tightening could seriously hamper the work of the scientific community. The president of the academy, Dr Frank Press, has also expressed publicly his concern about suggestions from the deputy director of the Central Intelligence Agency, about the need for greater caution in the publication of research results in fields such as lasers and computer software.

Last year a group set up jointly by the National Security Agency and the American Council on Education agreed to establish a system by which research results in cryptography could be voluntarily submitted to a review committee before publication, to determine whether the data should be withheld on national security grounds. The academy has to agree to accept a request that it nominate two members of the review committee, a move which could be taken as endorsing the idea

Harvard guidelines for avoiding fraud

Washington

A national conference involving both the National Institutes of Health (NIH) and the nation's research universities should be convened to consider a number of "unanswered questions" about dealing with suspicions of falsified research data, according to a committee of inquiry set up by Harvard Medical School to investigate the circumstances surrounding the admitted fabrication of data by a scientist studying the prevention of heart attacks (see *Nature* 24/31 December 1981, p.584).

The committee, chaired by Dr Richard S. Ross, dean of Johns Hopkins Medical School, has given its general approval of steps taken by the medical school after colleagues discovered that Dr John R. Darsee was faking some of the raw data in an experiment in May 1981.

In its report, which was published in Boston on Monday, the committee describes how Dr Darsee was stripped of his position as a research fellow, as well as being removed from staff positions at the Brigham and Women's Hospital, as soon as the fabrication of data had been confirmed, and that his NIH research fellowship was removed at the same time. The medical school denied on Monday that it had been wrong to keep Dr Darsee involved in research at another laboratory in Harvard, or that it had been slow to raise public warning signals about his research, claiming that it had been some time before an internal investigation revealed just how extensive the fabrication of data may have been, and that up to that point Dr Darsee had gained a reputation as a talented and hard-working research worker.

The report of the review committee, which was set up at the invitation of the dean of Harvard Medical School, Dr Daniel Tosteson, says that it considers the medical school's response to have been appropriate for what was known at the time.

The committee makes two specific recommendations to the medical school. First, it should establish a committee of senior faculty members that can be called upon to investigate any suspicion of fraudulent data gathering. And second, the medical school should improve the internal communication system, so that people can be informed confidentially if a research worker under suspicion in another department has any connection with their own research. In the case of Dr Darsee, colleagues in the laboratory in which he was allowed to continue working were not aware of the charges made against him elsewhere in the medical school.

The committee also makes some general suggestions about how the scientific community might take steps to make it harder for an individual to publish false results. For example, it criticizes the practice of publishing small batches of research findings in a number of different publications, rather than concentrating them in a single, major publication, more likely to receive close scrutiny from the scientific community.

The committee also suggests that laboratories should agree on explicit procedures for data gathering, storage and analysis, and that these should be written up and be generally available to research workers. In Dr Darsee's case, he was unable to produce much of the raw data on which some of his research results were based, although the committee found that it was general practice in the laboratory that such data should be preserved.

Finally, the review committee suggests a national conference to look at the whole area of the falsification of research. Topics which it says a conference might address would include what the responsibility of an institution discovering dishonesty among its research staff should be with respect to other institutions, the scientific and medical community and the general public.

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of pre-publication review in selected areas of research.

Despite several meetings with government agencies held over the past year, university officials report little indication that the government is prepared to relax its restrictions, in view of the prevailing political climate in Washington.

Last Friday, the State Department said that Stanford University would not be included in Dr Umnov's visit since it had refused to recognize the department's restrictions on what he should be allowed to do. Scientists at the University of Wisconsin also said they were withdrawing their offer to host a visit from Dr Umnov in the light of the department's actions.

The Soviet scientist's trip will still include one week at Aubrun University in Alabama, and "two or three days" at Ohio State University. Professor Robert McGhee of Ohio State has said that, although Dr Umnov was originally to spend six weeks at the university, he was only prepared to accept the State Department restrictions for the shorter length of time. **David Dickson**

Polish academics

More pressure

There are unconfirmed reports from Poland that Dr Henryk Samsonowicz, rector of the University of Warsaw, has been dismissed for refusing to accept the new rules for the conduct of institutions of higher education laid down by the ruling Military Council for National Salvation. Earlier, Dr Samsonowicz was reported to have been among the many academics interned under martial law regulations, while other reports indicate that he has been expelled from the Communist Party.

According to Mr Artur Swiergiel, a member of the Mazowsze (Warsaw and home counties) regional executive of Solidarity, who is at present working on animal nutrition in Cambridge (England), the reported dismissal is only the tip of the iceberg. He expects a wave of dismissals among the university rectors elected in the past 18 months according to the new democratic procedures, but predicts that the expected purge will be far more sharply felt among junior academics and research students, as it was in 1968. He stresses that Western scientists who wish to campaign on behalf of their Polish colleagues should not concentrate only on the most eminent. Current lists include Dr Grzegorz Bialkowski, vice-president of the Polish Physical Society, and Dr Antoni Stawikowski, vice-president of the Polish Astronomical Society, but also their junior colleagues.

So far, Western scientists who have approached their local Polish consulates or embassies with requests for further information about interned colleagues have been met with suggestions that if the scientist in question could arrange a job for his colleague in some university or laboratory outside Poland, the authorities would be quite willing to grant an exit visa.

Such an arrangement, Mr Swiergiel stresses, should not be accepted unless there is clear evidence that the scholar concerned definitely wishes to leave Poland, since the army newspaper *Zolnierz Wolnosci* has indicated that Solidarity would have to shed "35,000 intellectual advisers" before it could be allowed to resume "purely trade union" activities. This theme has been reiterated by Stanislaw Ciosek, the Minister for Trade Union Affairs, in a recent meeting with "representative workers" from Lodz, who stressed that trade unionism in Poland must return to its "class basis".

Under martial law, scientific exchanges between Poland and the rest of the world have come to a halt. In London, the Royal Society has no news of Wieslaw Stanczyk, who was expected to arrive in January to take up an exchange scholarship. From Finland it is reported that exchange fellows due in early December failed to arrive, although martial law was not declared until a few days after their expected arrival.

Scientific exchanges are based on two types of agreement — the purely academic negotiated with the Royal Society or British Academy and those which form part of the bilateral agreement on trade and technology. The financial mainstays of the latter are the various economic agreements negotiated over the past decade. These include a licensing agreement between Massey-Ferguson tractors in the United Kingdom and the Ursus motor works in the suburbs of Warsaw. In one of the latest moves in "solidarity with Solidarity", workers at the British plant have voted to "black" all spare parts and components from Ursus until martial law is lifted.

Vera Rich

UK nuclear power

At last, a plan

At long last the British nuclear industry has a timetable that can be believed in. The "wide-ranging" public inquiry into the design and siting of a pressurized water reactor (PWR) at Sizewell in Suffolk will begin in January 1982. The "task force" set up under Dr Walter Marshall, chairman of the United Kingdom Atomic Energy Authority, to speed up the design of the PWR last week reported that its pre-construction safety report was complete and in the hands of the customer for the reactor, the Central Electricity Generating Board. This is in line with the timetable set by Marshall last July, as is the date set by the board for the publication of its full safety review — the end of April.

The only fly in the ointment seems to be the Nuclear Installations Inspectorate, whose lack of inspectors appears to be putting back the publication of its own, independent safety report. The inspectors will now produce a summary review of the generating board's own safety documents in June this year, expressing their reservations (if any), but may produce nothing further before the public inquiry. The inspectorate's safety assessment is "an iterative process" says the chief inspector, Mr Ron Anthony. There can be no particular point at which it is best to hold a public inquiry: too early, and the inspectorate would have too little time to study the design; too late and it would not be possible to take the inquiry's findings into account without disrupting the project.

The task force report will not be published, but Dr Marshall last week outlined its main features. His study concentrated on the safety standards and the systems demanded by both the inspectors and the electricity board which — before the task force was set up in July last year — were estimated to imply that the British PWR would cost 50 per cent more than the American Westinghouse/Bechtel Corporation system. Marshall estimates that the extra cost will now be only 20 per cent. A quarter of that is attributable to measures intended to minimize loss-of-coolant accidents, a quarter to reduce the radiation exposure of workers and the remaining half to the use of two rather than one turbine for converting steam power into electricity.

The emergency core cooling systems will contain four separate high-pressure pumps (twice as many as in French and American PWRs) each feeding one of the four primary coolant loops and backed up by diesel generators; and the outer containment will be a four-foot thick concrete and steel shell, not the double wall originally planned. Radiation levels have influenced the British design because the electricity generating board is anxious that exposure at its projected plant should not exceed that at its existing nine plants. Thus the task force has attempted to reduce exposure by providing more space within the containment building (150 feet in diameter compared with 140 feet) and by the use of remote maintenance equipment.

The board thus hopes to bring individual operating exposures down to the level of the 0.25 rem per year or so experienced in the old Magnox plants. The key factors seem to be good chemical management of the plant, particularly of the primary coolant water, and efficient and fast maintenance procedures. Thus the emphasis is now less on the design (the original version of which called for nearly twice as much concrete shielding as the American baseline) than on the efficient operation of the reactor.

The eventual cost will be within the target Marshall set himself six months ago — no more than 70 per cent of the cost of an advanced gas-cooled reactor. At 1981 prices, this works out at about £1,000 million for 1,200 MW. Nevertheless, this is some four times the price of a PWR as estimated by the French, and the National

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