

the nucleus for a national library away from Bloomsbury. Certainly it was a mistake for Lord Eccles, once a Minister of Education, to make the absurd declaration that "Under the existing British Museum Act, no minister has any power to move a single volume from Bloomsbury to Bayswater, or from either place to some other place". New legislation is easier to come by than are good ideas.

In the event, of course, everything will depend on what the committee under Dr F. S. Dainton recommends, and one of the useful products of the debate in the House of Lords was the announcement by the Government of the four members of the committee who will share the unenviable task of deciding what should happen now. They are all distinguished men, although none of them is a librarian. Their biggest difficulty in the six months or so ahead will be somehow to pick out solid ground among the mass of contradictory opinions which must surely assail them. The trustees of the museum would be well advised if they could somehow bury their chagrin at how the Government has dealt with them, for, if they fail to present a rational case for the preservation of their own version of the *status quo*, the chances are that the decision will go in favour of a separation between the museum and the library. Indeed, whatever strength there may be in the case the trustees have hiding up their sleeves, the advantages of a properly unified library will outweigh the advantages of a combined museum and library. In other words, there is a danger that the trustees' bluster at the way in which the Government has behaved itself will very soon seem to be bluster at the awkward implications of logic.

Small Cheer for Non-proliferators

It is something of a puzzle to know whether to be cheerful or otherwise about the results of the long session of the United Nations Committee on Disarmament which adjourned its meetings in Geneva last week for the Christmas holidays. For the past few weeks the chief participants at Geneva—the United States and the Soviet Union—have been suggesting that agreement on a non-proliferation treaty might have been close at hand. But it seemed to have become plain, by the end of the session, that the more cheerful predictions were based on the assumption, or perhaps the hope, that serious problems would somehow vanish. Yet there seems no real prospect of a rapid solution to the problem which dominated the last few meetings of the committee—the issue of whether the Euratom countries should be allowed to substitute to some degree inspection of nuclear installations by Euratom itself for the inspection by the International Atomic Energy Agency that will apply to everybody else. France is not, of course, represented on the committee, but it seems that the Federal Republic of Germany has not been the only sponsor of the view that Euratom inspection should be allowable. The Italian delegation at Geneva seems also to have been working for this objective.

Perhaps the most alarming feature of this development is that the European advocacy of Euratom

inspection has come as such a surprise to the nuclear powers. It is now roughly a year since the argument was first raised outside the meetings of the committee on disarmament. The fact that Euratom itself seems to be in a sickly condition as a means of prosecuting research and development in nuclear energy is neither here nor there—the Euratom safeguards system is still a going concern. But the Soviet Union is unlikely to be able to agree to much less than full-blooded inspection by the International Atomic Energy Agency in Vienna. Evidently the British and American governments were hoping to take some of the edge off these proposals by announcing that civil nuclear plants in Britain and the United States would be subjected to inspection by the international agency even though nuclear powers would not formally be subjected to inspection of any kind under the terms of the treaty which have so far been negotiated. The trouble, of course, is that even such a gesture of voluntary submission may cut both ways. Although nations in Europe concerned about the supposed potential loss of commercial secrets might benefit from knowing that the United States and Britain would run similar risks, the Soviet Union is likely only to be embarrassed by this precedent, and there is no suggestion that France would be prepared to follow suit. In all these circumstances, it would not be entirely surprising if the next meeting of the disarmament subcommittee, provisionally set for January 19, 1968, is eventually postponed.

Less for United States Science

THE war in Vietnam and the need for economic restraint at home have combined to squeeze United States spending on research and development quite drastically. Although spending in other directions has also been cut, research and development seem to have been hardest hit. In spite of a request for \$5,100 million for NASA, for example, Congress approved only \$4,588 million, the deepest cut it has ever made in the United States space effort. And the Department of Defense, although it emerges with a total budget at about the same level as last year, has been told to cut its support for basic research from \$399 million to \$361 million, more than 10 per cent. This was part of a much more drastic cut demanded for the whole Defense Department—it was asked to cut some \$2,000 million from its total budget, but only in activities unconnected with Vietnam.

Other agencies were treated more gently. The Atomic Energy Commission got an allocation of \$2,509 million, a 14 per cent increase over last year, although less than the original budget request. High energy physics research showed a \$10 million increase, and support for controlled thermonuclear fusion research went up from \$22.6 to \$26.2 million. Reactor development was increased by about 10 per cent, to \$507 million, and the Plowshare programme, which seeks to devise peaceful uses for nuclear weapons, went up from \$13.3 million to \$20.7 million. In other departments, the rule of thumb seems to have been to cut down programmes to a size midway between the actual figures for last year and the Administration's suggestions for this. Exceptions were the individual institutes within the National Institutes of Health, which each got exactly what had been requested. The

National Bureau of Standards, with \$32.5 million, is marginally worse off than last year. The National Science Foundation, on the other hand, has done rather better this year than last. Its budget will be \$495 million, an increase of \$15 million over last year. Elementary and secondary education shows an increase of over \$200 million, to \$1,667 million, but higher education has been cut by \$20 million, to \$1,158 million.

In many cases, further cuts are threatened by a plan recently announced by the Administration. This is intended to force agencies to cut their expenditure below the levels proposed to Congress by the President. Under the formula, some programmes are to be cut by 10 per cent of programme costs and 2 per cent of payroll costs. The idea behind the reductions was to try to persuade the House Ways and Means Committee to look more kindly at the Administration proposal for a 10 per cent tax increase. The committee has so far remained unconvinced, preferring to cut public expenditure rather than raise taxes. Much will depend on whether the projected budget deficit for this year is greater than that for last year or not. In some cases the cuts imposed by the Administration will be less severe because of the reductions imposed by Congress, but the AEC, for one, seems likely to be a sufferer if the plan goes ahead.

The effects of these cuts will not be fully appreciated in the universities until the spring, when arrangements for the academic year beginning in September 1968 will have to be made. Administrators seem to be most uncomfortable about the possibility that smaller research budgets will make it much more difficult to retain new graduates as assistants, who shoulder collectively a good deal of the teaching burden at a great many universities. But there is also talk of how laboratories dependent on the mission-oriented agencies for finance may have drastically to alter plans for the years ahead. In the circumstances, it will not be much of a surprise if many organizations find themselves running for cover at the National Science Foundation.

British Computers

FOR some months, the leading British computer companies, International Computers and Tabulators and English Electric/Elliott Automation, have been coyly denying rumours of a liaison. But now the secret is out—at the annual general meeting of ICT on December 13, the company chairman, Colonel A. T. Maxwell, admitted that discussions were in progress. The match-maker has been the Ministry of Technology, which has never hidden the fact that it is interested in a rationalization of the British computer industry. So far, the Ministry says, only ICT, English Electric and itself are talking, but it is probable that other British companies are taking more than a passing interest. The talks, which have been in progress for a few months, are likely to be concluded within “months, rather than weeks”.

The argument used in favour of the merger, if it comes about, will be that the UK market is too small to support two companies competing across the board. Too much duplication of research and production, it is said, is more than Britain can afford in a market still dominated by United States companies. As well as the production of central processors, both firms make a wide range of peripheral devices. Although ICT estim-

ates that the British market is going to show a growth rate of around 15 per cent for the next few years, American competition, chiefly in the form of IBM, is likely to swallow up about half of that. ICT says that it has one-third of the British market, the same proportion as that taken by IBM. If this sounds like drastic American penetration of the British market, it is worth remembering that IBM has something between 70 and 80 per cent of the world market; judged on this scale, the performance of the British companies in recent years has been quite respectable.

English Electric, although it is still making a few Leo and KD machines, is concentrating now on its System 4 range. There are several models in this ambitious range, the first to use wholly integrated circuitry, and they range from the 430, which costs about £100,000, up to the 475, a multi-access computer costing around the £1 million mark. English Electric says that it has had orders for the range worth £25 million. The plans for a big computer, originally proposed by Elliott Automation before it was taken over by English Electric, now seem to be in the melting pot, and a joint planning group has been set up to decide what should be done. The integration of English Electric and Elliott Automation is now going ahead quite quickly, but there is still work to be done, including most probably the unravelling of an arrangement negotiated by Elliott's with National Cash Register.

ICT also makes a full range of computers, less ambitious technically than the System 4, but successful commercially. At the annual general meeting last week, Colonel Maxwell was able to announce cheerful increases in profits, up from £2.22 to £2.87 million.

ICT, then, is in better shape than before, while English Electric is still struggling. No amount of confident talk can conceal the fact that substantial production difficulties have arisen with System 4. In the circumstances, ICT sometimes looks as if it is waiting for English Electric's position to get weaker still before it steps in with a firm merger offer. This may be the reason why Colonel Maxwell assured his shareholders that ICT would be the largest single component in a combined company. Quite clearly neither company is as keen on merger as the Government, and it is probable that some “lubrication”, in the form of cash from the Industrial Reorganization Corporation, will be needed before terms are finally agreed. But the fact that the two companies market directly competitive ranges means that no easy merger is likely—in this case there can be no talk of the two ranges being complementary. The chances are that one would have to go.

Proton Accelerator Delayed

THE meeting of the council of Cern held at Geneva a week ago served principally to confirm what has been clear for some weeks now—that the 13 members of Cern are not yet able to commit themselves to the project for building a 300 GeV proton accelerator. That said, it does appear that the tone of the meeting was cheerful and even constructive, so that even though the deadline originally set for a decision about the machine has now been passed, the hiatus in the planning is more accurately described as a postponement than an abandonment.