

Surrender on technology support

The Clinton administration is sticking to its desire to fund key technology developments in industry, in the teeth of political and scientific opposition, and with little past success to build on. The president should give way.

THE relationship between science and technology tightens all the time and in many vital disciplines the distinction has almost disappeared. But in political circles there is a significant difference: government funding for science has universal support (at least in principle), but funding for technology does not. Hence the bitter battle in the United States between the Republican Congress and President Bill Clinton over the Advanced Technology Program (ATP), a scheme for giving grants to private companies to share the cost of developing technologies (not products) in key areas.

The ATP was born as a small, experimental programme under the Republican administration of President George Bush, but was targeted for rapid expansion by Clinton on his election in 1992. Its budget and scope then grew in leaps and bounds, from \$68 million in 1993 to \$410 million last year, and was to have reached \$750 million in 1997. Clinton and the Congress are now locked in battle about whether to spend \$300 million or zero on the ATP this year.

The National Institute of Standards and Technology (NIST), which administers the programme, has worked with industry to establish distinct programme areas for the expanded ATP. Within these programmes, companies compete for grants worth \$2 million or more for individual projects. This process has been widely praised. The recent suggestion from Robert Walker, chair of the Science committee of the House of Representatives and a leading opponent of ATP, that its grants were being distributed to particular companies as political patronage, was an unsubstantiated slur on NIST staff that adds nothing to this debate.

But more serious opposition to the programme has come from the scientific community, parts of which feel (wrongly) that money cut from ATP will flow to science. Last November, a National Academy of Sciences panel chaired by Frank Press, formerly science adviser to President Jimmy Carter, said it was "sceptical" whether programmes such as ATP were "the most efficient use of scarce federal R&D dollars", and that such programmes should continue "only if the case is convincingly made that the government is the funder of last resort for an important enabling technology and ... only on an experimental basis".

Under fire from George Brown (Democrat, California), the senior Democrat on the House Science committee, Press backtracked somewhat from this position, saying that he wanted only more "evaluation" of ATP (see *Nature* 380, 5; 1996). He should have stuck to his guns. At funding of hundreds of millions of dollars a year, ATP is not an experiment: it is an expensive act of faith. Clinton administration officials have argued that the programme needs a critical mass of \$1 billion a year (one per cent of US industry's total R&D investment) to have a measurable impact on US industrial competitiveness. But no-one will ever know if they are right: there is no accepted design for the "experiment", no agreed end-points, and no control. All we have is experience — and the history of government support for technology development is patchy. The less impressive examples include many tactical efforts to pass grants to industrial companies to help them do what they ought to be doing for themselves. In the United States, where neither private capital nor entrepreneurial spirit is in short supply, such efforts are harder to justify than elsewhere.

At a time when the US government has no money for the excellent university science funded by the National Science Foundation

(see page 187), no money to restore a tattered social fabric, and less than nothing in the bank, the onus remains very firmly on Clinton to prove that the Advanced Technology Program deserves the priority he has given it. That will be a tough task. □

German consensus undermined

Pressures following reunification threaten a fine example of collaborative support for science.

THE long-established system of support for research in Germany, involving both the federal and the 16 *Länder* governments, is looking increasingly fragile. The most recent symptom of decline arose earlier this month when Edmund Stoiber, the powerful prime minister of Bavaria, threatened to pull out of the finely balanced arrangement designed, as a product of Germany's post-war constitution, to avoid undue concentrations of power.

Within this system the federal and *Länder* governments share, according to fixed formulae, the costs of the four so-called 'pillars' of German research: the Max Planck Society (basic research), the Fraunhofer Society (applied research), the national research centres and the so-called Blue List institutes. Sharing costs means sharing political influence. It gives the federal government a fair say in steering national research and allows it to ensure that effort is well distributed throughout the country. In the case of the Max Planck Society, the host *Land* pays only a quarter, rather than a half, the rest being provided from a common fund, to which all *Länder* must contribute, but over which the society has full control. This system weakens the political influence of the host *Land*, giving the society the freedom to decide when and where to place, or close, research institutes on scientific grounds alone.

Until recently, complaints from governments of *Länder* with few Max Planck institutes, vexed at having to subsidize institutes in better-endowed *Länder* via the common fund, have been muffled. But the financial pressures of reunification, and the need to establish Max Planck institutes in the five new, and poor, *Länder*, are changing all that. A majority vote at the last meeting of the *Länder* prime ministers supported a move to abandon the common fund altogether, and make each host *Land* pay its full 50 per cent quota.

Stoiber, who likes to regard prosperous Bavaria as the country's science capital, was right to resist that proposal — although he did so for the wrong reason: he appears to fear only the steep bill that Bavaria would face if it lost its common fund. More questionable is his threat to pull out of the joint funding system altogether — a move that could cause collapse in 1999, when the system as a whole will be up for renewal.

The federal government is expected to form its views on the common fund in June. It should join Stoiber in resisting the fund's abandonment. The Max Planck Society is sensitive to the needs of the *Länder*, but in establishing new institutes must be guided by local scientific strengths, sometimes in the face of political pressures. The common fund strengthens its hand in this respect. It represents a principle that is all too easily abandoned when times are hard, and much more difficult to reinstate later. □