

► **NSF Punished for 'Dubious' Research** Back in 1975, William Proxmire, who replaced Joe McCarthy as a Wisconsin senator, began issuing monthly "Golden Fleece" awards for "the biggest or most ridiculous examples of government waste." As chairman of the appropriations subcommittee that reviews the budgets of the National Science Foundation, he often singled out some of its projects for ridicule. One of the grants he labeled "sophomoric" was an NSF-funded study of romantic love by a University of Minnesota scholar. When Proxmire left the Senate in 1989, the Golden Fleece awards ended.

But in 1992, Robert Byrd of West Virginia, perhaps the Senate's most powerful figure, adopted Proxmire's idea and added a monetary punishment. He led a crusade to rescind \$2 million from the NSF budget, the exact total of 31 foundation grants selected solely on the basis of titles that sounded silly to him. And last year, Representative William Cray of Missouri was able to knock off \$174 000 from NSF's appropriation after he cited a grant for research on why community leaders did or didn't run for Congress. A majority of House members didn't think the study was the least bit necessary.

On 29 July, during a House debate on NSF's budget for fiscal 1999, Mark Sanford, a South Carolina Republican, introduced an amendment to "simply freeze" the agency's research funds at the current level of \$2.5 billion, by lopping \$200 million from the proposed budget. Sanford argued that the purpose of the amendment was to reprimand NSF for funding research "of questionable scientific value." He cited examples of "dubious" research topics—namely, geometry and its application to billiards, "social poker," off-color jokes, "cheap talk" and ATMs.

During the debate, Sherwood Boehlert, a New York Republican, leaped to NSF's defense. By reading the project titles only, he said, House members had "grossly misinterpreted" the research. Boehlert left the scientific explanation to Vern Ehlers of Michigan, another Republican and a former physics professor. In this case, "billiards" isn't the parlor game but rather a term used in physics theory to refer to rigid-body collisions and trajectories in turbulent flow; "social poker" refers to the development of a theory about the risks people are willing to take to join a group, sign a treaty or merge two or more companies; the study of jokes is not about all humor but about the motives behind stereotypes relating to racism, sexism and other prejudiced behavior; "cheap talk" relates to the cost of information in an economic model; "ATMs" doesn't stand for automated teller machines but for asynchronous transfer mode, used in high-speed networking to transfer large amounts of data over the Internet.

Sanford's amendment failed on a voice vote. It seems that House Speaker Newt Gingrich, a Georgia Republican and champion of science (see *PHYSICS TODAY*, August, page 53), had put his foot down on the proposed funding cut for NSF research.

► **IBM Sales to Russian Lab Lead to New Restrictions** After an 18-month investigation by the US Customs Service and the Commerce Department, IBM's sales subsidiary in Moscow pleaded guilty to illegally exporting 17 high-speed computers to one of Russia's principal nuclear weapons laboratories, Arzamas-16. Russia bought the computers in late 1996 and early 1997 in the mistaken belief that the Clinton Administration would approve the sale after President Yeltsin signed the Comprehensive Test Ban Treaty.

Russian officials say that in 1995, when US negotiators, led by Samuel (Sandy) Berger, Assistant to the President for National Security Affairs, were pressing them to join the CTBT, they dropped hints that Russia would later be able to buy high-performance computers from the US to simulate nuclear weapons tests and thereby ensure the reliability of the country's nuclear arsenal. US officials deny making any such offer.

Officials at Russia's Ministry of Atomic Energy (Minatom) insist that they were assured they are entitled to use the computers as a condition for signing the CTBT.

Sales of advanced computers to Russia's nuclear research and weapons labs require approvals by the Commerce Department and Defense Department. Officials at the US Justice Department argued that IBM never received Federal approval for the sale to Russia, although, they noted, there was no evidence that IBM's executives in the US were aware of the shipments made by the Moscow subsidiary. The company "acted in a highly responsible manner" by cooperating with the government, said Eric A. Dubelier, the assistant US attorney who prosecuted the case. In Federal District Court in the District of Columbia on 3 August, the company subsidiary, IBM East Europe/Asia Ltd, admitted to violating the export control law and agreed to pay a fine of \$8.5 million.

Ironically, if an official of Minatom, which oversees Russia's nuclear weapons labs in much the same way that the Department of Energy manages the US weapons complex, had not boasted to reporters in January 1997 about acquiring high-performance computers from IBM and Silicon Graphics, the US might never have known about the export of such equipment. Silicon Graphics, which took over Cray Research two years ago, has denied any wrongdoing, though its sales of supercomputers are the subject of a separate Federal investigation.

Congress reacted to the Russian admission by placing tighter controls on some computer exports, out of concern that President Clinton had gone too far in 1996 when he relaxed controls over the export of advanced computers.

► **Frustrated by Russia's Role in the Space Station** For the third time in as many months, the House Science Committee reproached the Clinton Administration for failing to adequately plan on overcoming Russia's financial troubles in building portions of the 15-nation space station. Committee chairman F. James Sensenbrenner Jr said he was frustrated by NASA's accounts that the Russian Space Agency (RSA) needs as much as \$100 million by the end of September to complete its work on the service module, which is to provide initial life-support capability, as well as propulsion for the station.

An independent review of the station concluded in April that the station could cost as much as \$4 billion more than NASA's projected \$21 billion and that much of the cost overrun would be due to Russia's apparent inability to pay for the station's components, which includes, besides the service module, the Progress resupply and Soyuz crew-transportation vehicles.

Called on the carpet were Jack Lew, the new director of the White House Office of Management and Budget, and Duncan Moore, associate director for technology at the Office of Science and Technology Policy. Lew testified that NASA and OMB had planned for contingencies and that the Administration is not yet ready to concede that Russia will fail to meet its commitments. The Administration provided \$250 million in NASA's budget in fiscal 1997 and 1998 "to address concerns related to Russian delays," and another \$1.2 billion is allocated to the station for fiscal 1999–2003 for contingencies. "We're not sitting here saying there's nothing to worry about," said Lew. "Quite the contrary, we're very worried."

Last year, a Government Accounting Office report on the space station projected that the station will cost \$94 billion over its entire life when shuttle flights and operating costs are included in the final accounting. Alarmed by the station's mounting financial woes, Representative Tim Roemer, an Indiana Democrat, attempted to scuttle the station when NASA's fiscal 1999 funding was debated on 29 July. For the fifth straight year his effort was soundly defeated by a vote of 109–323.

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