Adapting to Pork-Barrel Science

Opponents of congressional earmarking of funds for academic projects shift strategy, but are finding that they face other issues of who gets what and how in science

BARRING drastic cuts in the cause of deficit reduction, the pork content of federal science funding this year will be the highest so far. Pork-barrel funding for science is commonly defined as funds earmarked by Congress for particular recipients without benefit of peer review. Such earmarked items, particularly for research facilities, have become a familiar feature of appropriations for academic science.

What has changed in the last year is the attitude of higher education institutions and their Washington lobby toward the phenomenon. When the bypassing of peer review in awarding science funds attracted attention earlier in the decade, the scientific community reacted sharply, opposing the practice as a threat to the established system of research funding. The new strategy is to work for federal support of construction of research facilities. Legislation for a starter program is now before Congress (*Science* 24 July, p. 351). The proposal calls for distribution of a portion of the funds among institutions with small research programs. This is intended to cushion the conflict between "haves" and "have-nots" that is seen as a main cause of the upsurge of pork-barrel funding.

A new study carried out at Caltech confirms the impression that the have-nots have been the primary beneficiaries of the earmarked science projects. In a list of institutions ranked according to total federal science funding, those ranked at 100 or below received 71% of earmarked funds in 1986.

Adoption of the new strategy seems to have been hastened by the inability of the members of the Association of American Universities (AAU), the primary organization of research universities, to form a united front to forswear pork-barrel funds (*Science* 22 May, p. 909). The shift in strategy by the haves, however, appears to be not simply a defensive measure against the pork-barrel challenge, but in part a response to broader changes in science and science politics that some observers expect to have significant effects on the distribution of federal science funds.

Certainly, there seems to be a consensus about the causes of the rise of congressional earmarking of science projects. Federal funding for construction of science facilities—fairly ample in the late 1950s and in the 1960s—virtually dried up by the early 1970s. Under the pressures of inflation and recession, universities found it difficult to raise money elsewhere for construction and rehabilitation of science facilities.

General trends in the federal budget also contributed. Norman Ornstein, a political scientist at the American Enterprise Institute in Washington, says he thinks that science pork-barreling became significant "when the proportion of the federal budget devoted to discretionary spending dwindled," making the contest for science funds more intense.

Robert Rosenzweig *says the perception of a link between science and economic development has the pork barrel rolling.*

A major ingredient has been added in recent years as concern about U.S. competitiveness elevated university R&D into a coveted regional resource. Ornstein says that the tremendous effort being made to build research capability is spurred by the belief that it means "not only prestige, but that the money will flow in."

Robert Rosenzweig, president of the Association of American Universities says, "The fat is in the fire. As the perception of a connection between science and technology and economic development intensified, science has been transformed from a private activity to one useful for achieving universal goals" such as health, national defense, and economic growth. Legislators feel that their "constituents have a valid interest to be gained and pursue it vigorously."

Ornstein sees this rationale "combined with a broader anti-elitist sentiment in Congress." This was manifested in the tax bill, in which, for example, the universities' business related activities were given harsh treatment. "The anti-elitists believe that there are extraordinarily talented people at institutions with less illustrious reputations, but the money is drained off by the old boy network," says Ornstein. They feel that "the Harvards of the world are getting grants because they have the facilities. Talented people are not able to compete because they don't have the labs." Pork-barrel projects are seen as a way "to even up the playing field."

John Silber, president of Boston University, is an outspoken exponent of earmarking in the distribution of science funds. A representative Silber comment on the subject came at hearings last June before the House Committee on Science, Space and Technology when he testified in favor of the facilities bill in this rhetorical question and answer: "Why do peer-reviewed NSF grants flow in enormous quantities to the same small number of wealthy universities? Because these universities, thanks to their wealth, already have in place research facilities and equipment that enable them to dominate the competition for NSF funds."

A pioneering role in opening new funding opportunities to less favored institutions was played by a Washington lobbying firm, now known as Cassidy & Associates. Press coverage of the awarding of funds for research facilities by earmarking to Catholic University of America and Columbia University in 1982 brought earmarking for academic facilities and the firm to more general attention (*Science* 16 December 1983, p.1211). The firm, headed by Gerald S. J. Cassidy, an attorney and former congressional staff member, is credited with recognizing that conditions were ripe for congressional intervention and having the skills to orchestrate it successfully. Roy Meyers of the Cassidy

firm was quoted recently as saying that Cassidy clients have received nearly 40% of the earmarked funds for science since 1980.

Increasingly, the initiative for earmarking is coming directly from the universities themselves, according to another political scientist and Congress watcher, Bruce E. Cain, who supervised the recent study done at Caltech. He suggests that universities, especially "non top-10 institutions," are aware of the opportunities and are becoming "more aggressive" in seeking earmarked funds for their projects and in approaching their legislators for help. Some appear to be employing people with Washington experience specifically for the purpose.

The study done at Caltech was produced as part of a summer undergraduate research program. Ordinarily, students in the program pursue science research projects, but, Cain says, pork-barrel funding offered an interesting science policy subject. Cain, who acts as a consultant on elections for the *Los Angeles Times*, says the *Times* was intrigued enough by the subject to fund the study.

As a takeoff point, the study used a Congressional Research Service (CRS) compilation, "Appropriations Enacted for Specific Colleges and Universities by the 96th through the 99th Congress," published in January as part of a CRS analysis of issues affecting academic research facilities. The Caltech study focused on the 1986 budget year. To ascertain whether the projects on the CRS list fitted the pork-barrel profile, the labor-intensive method of checking project by project with agency staff was used. The product, says Cain, was "a list of funds put in by Congress that did not receive prior agency approval or peer review."

The study affirms that the number of earmarked science projects had increased in recent years—from 19 in the 1979–1980 Congress to 121 in the 1985–1986 sessions with the number of recipients rising in that period from 12 institutions to 60.

The top 20 universities, which got 41% of total research funds, received only 1.3% of earmarked funds. Universities ranked from 100 down got 14% of the total federal research funds but 71% of earmarked funds.

By the report's calculations, earmarked funds accounted for a total $336.57 million in 1986. The breakdown by agency shows that the Department of Energy (DOE) was directed to award some $127 million or 38% of the earmarked funds. The Department of Agriculture gave out $75 million or 22% of the total and the Department of Defense $50 million or 15%.

As the Caltech report notes, until the early 1980s, earmarking for academic institutions was limited largely to a group of institutions, such as Gallaudet College for the deaf and Howard University in Washington, for which there was a long tradition of federal assistance for national purposes. Subsequently, the more familiar parochial pork-barrel pattern has dominated.

Most earmarked projects have congressional patrons who are influential because of either their committee assignments or status in the House or Senate. Both Massachusetts and New York are exceptions to the general rule that states that prospered under the status quo have done less well with earmarked funds. The Caltech study shows that Massachusetts got 8% of all research funds and 9% of earmarked funds while the figures for New York were 10% and 12%. In the case of Massachusetts, former House Speaker Thomas P. O'Neill, Jr., and Representative Silvio Conte (R–MA), ranking minority member of the House Appropriations Committee, are often mentioned as effective in behalf of a have state in the quest for earmarked funds.

"The anti-elitists believe that . . . the money is drained off by the old-boy network."

Although the sum of earmarked funds is substantial, it still makes up a relatively small portion of total federal funds for academic science. The Caltech study says that in 1986, $336.57 million were earmarked funds in a total of $10.5 billion that year. The trend is regarded as ominous by partisans of peer review, however, and the recent proposal by the House Appropriations Committee to limit a state to 14% of the funds available under a Department of Defense program of support for basic research in universities (*Science*, 11 December, p.1506) has further raised their anxieties. A faculty member at a major research institution reported that among his science colleagues news of the geographical cap "panicked everybody."

The major threat is seen as the extension of the pork-barrel process to individual research projects. So far, earmarked funds have been primarily directed at construction—bricks and mortar. NSF, the inner redoubt of peer review, has escaped earmarking and a General Accounting Office study titled "University Funding: Patterns of Distribution of Federal Research Funds to Universities" published early this year found only three instances of earmarking by Congress affecting the National Institutes of Health over two decades.

Ironically, the dynamics of congressional pork-barreling may provide some protection to individual research grants. In the past, typical pork-barrel projects have been roads, flood control schemes, federal facilities, and, more recently, sewage treatment plants and toxic waste cleanups, projects that are large and conspicuous enough to earn major political credits with constituents for the politician who delivers them. Cain suggests that academic research facilities fit the traditional description and are attractive to politicians. Research projects, however, are characteristically smaller in dollar value and in visibility. Therefore, they offer less "credit-claiming value," and may not be worth the effort and expenditure of political capital that landing pork-barrel projects require.

On the other hand, Cain says science may be increasingly exposed to the political process as a result of "underlying changes," particularly the spread of Big Science. Projects like the superconducting supercollider are already the object of intense competition in the political arena. But the increasing concentration of resources in research fields like chemistry and biology as well as physics could attract congressional attention. Cain offers the NSF's engineering research centers and new science and technology research centers as examples.

How will academe deal with these changes? Rosenzweig thinks that higher education is having trouble adjusting. "There have been real changes in the politics of higher education. It is a very different business than it used to be," he says. In particular, he thinks, "the higher education community is ill-equipped to deal with the new realities of resource constraints."

As for pork-barrel funding, he acknowledges that in the research universities the possibility "that research funding may be more affected is an object of intense concern." He called the facilities measure now before Congress the "best hope," depending on the "extent to which it can be sold as legitimate and adequate." He adds that other "specific actions to meet specific problems" may be needed.

The facilities measure is part of the NSF authorization bill currently stalled in Congress. This year's earmarked science items are wrapped up in the Laocoonian negotiations through which Congress is struggling to produce the ultimate deficit-fighting continuing resolution providing the money to enable government to grind on. At this stage, there is no master list of pork-barrel science projects. House and Senate bids have not been reconciled and science earmarks may be particularly vulnerable to late cuts. But soundings on science earmarks taken with Hill staff and agency officials indicate, as the Caltech study put it, "another all-time high." ■ JOHN WALSH