Conversion: Kennedy Plan to Change Research Priorities Approved

If the nation's unemployed and underemployed scientists and engineers all starve tomorrow or go to work driving taxis, nobody will be able to blame Senator Edward M. Kennedy (D–Mass.) for not having tried to help. Last Wednesday, 2 years of effort culminated when the Senate Committee on Labor and Public Welfare gave unanimous and bipartisan approval to Kennedy's omnibus bill to aid the nation's scientists and engineers.

The bill, which would spend $1.8 billion over 3 years to alter national research priorities, is expected to come to a floor vote before the Senate in August and will probably be passed. If also enacted by the House, the measure would drastically alter the character and orientation of the National Science Foundation.

Critics of the measure, who are chiefly Republicans, call it a piece of legislative overkill for the problem's actual size. Even NSF, which would be the chief recipient of the wealth, fell into line with the other executive agencies and objected to the measure.

However, proponents of the bill argue that it could be the focal device through which national research priorities, and the economy as a whole, could finally, actually shift. By now, the bill has the support of a minor juggernaut of lobbyists, from chuch groups to policemen's associations. Significant, too, is the campaign angle: S. 32, as it is known, puts some flesh on the Democratic candidates various economic game plans. Cosponsors of the bill include Senator George McGovern (D–S.D.), Hubert Humphrey (D–Minn.), and Edmund Muskie (D–Me.).

The bill would make the National Science Foundation the principal agency charged with research, development, testing, and evaluation of civilian research projects. Specifically, this would be achieved through broadening the purposes of NSF, as outlined in the 1950 Act that created it, and through setting up a new entity within NSF called the Civil Science Systems Administration (CSSA). The CSSA alone would control $1.2 billion of the total package.

Most of the remainder of the funds would go through NSF to scientists, engineers, and technicians "in transition"—that is, unemployed, underemployed, or switching jobs. The money would go to corporations for hiring and training, state and local governments, educational institutions, and other programs. A portable pension plan is also part of the omnibus package.

The bill's unanimous passage through the committee was itself something of a legislative tour de force. Kennedy had originally proposed a conversion act, a new cities act, and a loans proposal to aid the unemployed. But the recent success of the omnibus proposal, which combines most of the previous bills, indicates that the plight of the aerospace workers, their industries, and the scientific community is coalescing into a major national issue.

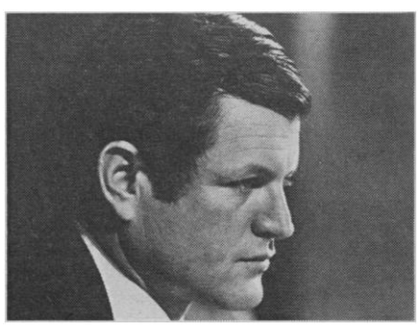
A number of key changes were made as the measure evolved, many designed to disarm any real or potential opposition. The crux of the bill is the principle, stated at its outset, that civilian research and development (R & D) funding shall be brought up to a level of "parity" with defense R & D funding. As McGovern found out in California, defense cutbacks are a hard thing to advocate in front of unemployed technical professionals, and the language of the bill sidesteps this thorny issue. This language helped in winning the support of some labor groups.

Another important decision was not to include an earlier Kennedy loan proposal in the package. The loan plan was first conceived as an immediate, emergency measure that could pass Congress quickly. Instead, however, it aroused far more opposition that did the rest of Kennedy's proposed legislation, from those who argued that special benefits, such as loans, were equally needed by bricklayers and other segments of the labor force. Hence, as recently as mid-June, the loans plan was dropped from the omnibus package in the hopes of speeding the latter's passage.

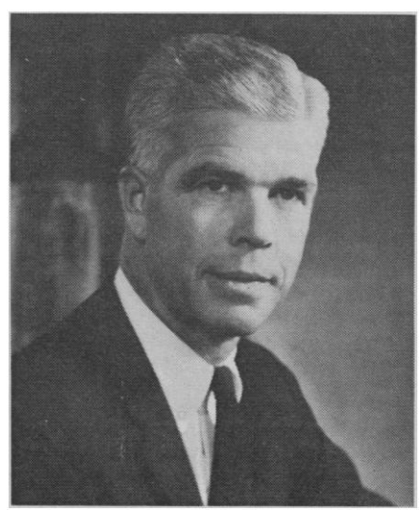
The support of some aerospace and defense industries was won because the bill allows the funds for retraining unemployed and underemployed scientists and engineers to go to corporations and other institutions as well as directly to individuals. In addition, the support of a key Republican Senator, Jacob Javits (R–N.Y.), was gained, in part, by adding a portable pension plan that had been deleted from the bigger pension bill he is sponsoring.

Thus, what was essentially a pet measure from one of the nation's leading Democratic politicians became transformed into a bipartisan measure in the course of the last 6 months, culminating in last Wednesday's action by the full committee.

The principal opponent for the last several months was Peter H. Dominick (R–Colo.), who, as the ranking Republican on the Senate labor committee, acts as spokesman for the White House.



Edward M. Kennedy



Peter H. Dominick

Dominick voted with the other Republicans on the committee to report the bill out favorably. But he plans, nevertheless, to raise certain criticisms when it comes to the floor of the Senate.

One criticism is whether the NSF would be capable of managing an extra $1.8 million through fiscal 1975. All the executive agencies were asked to comment on S. 32 and its proposed reorientation of NSF.

H. Guyford Stever, the new director of NSF, replied, opposing Kennedy's bill on the grounds that it would shift the emphasis of the NSF away from basic research to the support of development, testing, and evaluation. The chairman of the Council of Economic Advisers also contended that the bill would direct NSF's mission away from the support of basic research.

Another objection to the bill is that the development work in priority civilian fields is already being carried out by the mission-oriented agencies. Thus, the Department of Housing and Urban Development petulantly observed that the "applied research and demonstration authority which the proposed S. 32 would authorize for the NSF would overlap the authority presently existing in this Department, thus fragmenting the resources which would be made available by the Congress for applied research activities." The Department of Labor pointed out that, with HUD, it was "sponsoring a $1.3 million pilot program to test the feasibility of redirecting unemployed scientists and engineers to employment in State and local governments," thus overlapping one of the provisions of the Kennedy bill. Other agencies had much the same objections.

A third kind of objection was raised to the size and power of the proposed CSSA, which, under the bill, would control more than a third of the NSF's total budget. Stever, for example, feared that the CSSA would become, in effect, the tail wagging the dog. The bill, he said, "would structure CSSA so as to place it within the Foundation, yet would give it such independence as to make it virtually another Federal agency. . . . I foresee serious administrative and policymaking problems under such a structure." Several of the agencies responding to the request for comments said that the language of the bill was so vague, and the amounts of money so large, as to engage the federal government in a series of uncontrollable and ill-defined programs.

Despite these problems, the measure has managed to come a long way down the political road. Kennedy's staff now claims that the bill is fully bipartisan and not part of the Democratic campaign effort to unseat Nixon. But it obviously won't hurt the Democratic campaign, either.

Even the conservative Republicans on the labor committee voted for the measure last week, and that could be an important bellwether. They voted for it not because they all agreed with it, philosophically or monetarily, but because it offers concrete, and if anything overstated, aid to the voters back home. Whatever S. 32 is or is not, it is certainly a far cry from the shadowboxing that the Administration has so far presented in the guise of aid to the nation's many unemployed and underemployed scientists and engineers.

—DEBORAH SHAPLEY

Aldrin and Dieldrin Follow DDT

The environmentalists' 10-year campaign against DDT was not just a crusade against dichloro-diphenyl-trichloroethane, but an attempt to rewrite the rule book of environmental policy making. The DDT battle won, a victory formalized in last month's ban on almost all of its remaining uses (*Science*, 23 June), the knell was sounded for other persistent pesticides. Last week the Environmental Protection Agency took another step in the elaborate administrative procedure for outlawing the organochlorine pesticides aldrin and dieldrin.

About 18 million pounds of the two pesticides were used in 1970 (compared with 14 million pounds of DDT), and their discontinuance will lead to losses estimated at $50 million. There is no evidence that past or present use of the pesticides has caused human injury. It says much for the new rules of the game that EPA Administrator William D. Ruckelshaus nevertheless decided to ban all but a few specific uses of the pesticides. This decision, announced in March on the basis of advice from a committee of outside scientists, was challenged by the manufacturer and has now been reaffirmed by Ruckelshaus. The next step in the appeals procedure will be a public hearing similar to the recent marathon on DDT.

As the basis for a decision of such economic impact, the scientific committee's findings on aldrin and dieldrin were remarkably tentative. The committee, chaired by Richard D. O'Brien of Cornell University, observed that the chemicals had done no demonstrable injury to man, and that some of the usages harmful to wildlife have been voluntarily abandoned by Shell Chemical Co. "Nevertheless," the seven scientists opined, "we feel that we must strive to find alternate methods of pest control, including nonchemical methods, for all compounds which lead to persistent residues in humans or wildlife, even when such residues are not demonstrably harmful."

Ruckelshaus has not only accepted this prevention-better-than-cure philosophy, he has added a gloss of his own to the committee's findings on carcinogenicity. The committee's cancer expert, Stephen S. Sternberg of Sloan-Kettering Institute, noted that the closest dieldrin comes to causing cancer is in increasing the incidence of a naturally occurring tumor in a single strain of mice. "No carcinogenic action has been demonstrated for dieldrin in rats, dogs, or primates," Sternberg says. In last week's decision to reaffirm the cancellations of aldrin and dieldrin, Ruckelshaus stated that he had found DDT to be a potential human carcinogen and that "appraisal of similar laboratory evidence concerning dieldrin leads me to make the same finding here."

Sternberg says dieldrin has not been shown to be carcinogenic in primates; Ruckelshaus, presumably on the same evidence, says it is a potential human carcinogen. The two opinions are not necessarily inconsistent, but they do reflect a shift from the traditional requirement for environmentalists that, to get a pesticide usage struck down, they had at least to produce a dead body.—N.W.