

mittee's representative on a similar international committee. He had an important part in drawing up the charter under which these three societies joined to form a new American Federation of Information Processing Societies, linked closely with an international federation similarly named. In 1959 he was one of a group of eight Americans who toured Soviet computer establishments at the invitation of the Soviet Academy of Sciences.

His many papers touched upon statistics, simulation and modeling, vehicular traffic control, and system design. But through his work his principal research efforts were concerned with reaching a better understanding of large-scale sys-

tems. In 1959 he agreed to collaborate on a book with chapter headings such as "Historical and social developments of systems," "General system theories and classifications," "Types of systems," "Descriptions of systems," "Characteristics of systems," and "Modes of solutions for system design problems." However, he soon realized that the subject of systems was not yet sufficiently advanced to allow preparation of such a book, and he directed his attention to the preparation for the McGraw-Hill Book Company of a system engineering handbook. The work he started on this project will be carried through to completion by his friends and associates.

In 1931 Harry married Elsie Guggen-

heim. Their first child, Lisa, was born in 1943, and their second, Erica, in 1953. They were an unusually closely knit group; in spite of his many research and professional activities, he always found time to devote to his family.

On 30 October 1960 Goode's very fruitful life came to an abrupt end in a traffic accident. Fittingly, the memorial service held two days later was conducted in an auditorium in which he had often lectured, located on the campus of the university to which he gave so much.

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Science in the News

Problems in Political Tactics: Tax Proposals for Education; Congress and Science Policy

A tax credit proposal to encourage private contributions to education was introduced last week by Congressman Carroll D. Kearns (R.-Pa.). The proposal is similar to ones endorsed in recent years by the AAAS, the Association of American Colleges, the National Planning Association, and the U.S. Chamber of Commerce.

The proposal is also similar to a number of measures introduced in the current Congress by conservatives, who see the approach as a way to increase support for education without the direct involvement of the Federal Government. Congressman Kearns, for example, suggested that his proposal might reduce the need for federal appropriations by "as much as \$2 or \$3 billion if private gifts of that amount were forthcoming." On this reasoning Kearns believes his proposal would make unnecessary most of the Administration's program for higher education.

The way the Kearns proposal and related proposals would work is that instead of offering taxpayers only a deduction from their taxable income for educational gifts, it would offer them the option of a direct deduction from their tax bill of a set proportion of their gifts, in this case 91 percent. This means that a low-bracket taxpayer can give \$100 to his alma mater at a cost to himself of only \$9; the proposal would make it possible for the taxpayer with a modest income to give to education at as little out-of-pocket expense to himself as the taxpayer in the over \$400,000 a year income class.

Hopefully, this would lead to a great increase in private giving. In the extreme case, a man who contributes \$100 a year to education, and who does not itemize his deductions (that is, who takes the standard 10 percent deduction) is now giving the entire \$100 out of his own pocket. If the Kearns proposal went through, he would, in theory at least, increase his giving to \$1000 in order to maintain his out-of-pocket expense of \$100.

Of course, he would also be free to continue giving only \$100 and pocket the \$91 as a tax windfall.

The Administration has taken no position yet on the bill or others similar to it, and probably will take none unless it is forced to: that is, unless the House Ways and Means Committee, which must initiate Congressional action on bills involving taxation, decides to hold hearings on the bills.

In the recent past such proposals have been quietly buried in the calendar of pending legislation, the fate of the great majority of the thousands of bills introduced every session. If the proposal is taken seriously enough by the Ways and Means Committee to schedule hearings, then the Administration will have to take a position, which will almost certainly be to oppose the bill.

Between 1952 and 1954 Congress doubled the allowable limit for tax deduction for philanthropic gifts from 15 percent to 30 percent of taxable income. Contrary to expectations, this produced no increase in giving. Different influences would be at work under the Kearns proposal, and it would surely produce some increase in giving, but whether it would be a substantial increase is uncertain. Tax rates have, after all, gone up enormously in the last 30 years, and therefore the inducement to tax-free giving has gone up enormously. Yet giving, as a percentage of taxable income, has remained constant at around 4 percent. Unless the increase under the Kearns proposal were more than marginal, the total

amount of private gifts for education would not be substantially increased, while the government's tax revenues would be reduced, thus reducing the amount of money available for federal education programs.

Tax Policy

This uncertainty about how much the proposal would actually increase support for education and how much it would simply add another loophole to the tax code virtually insures that the Treasury under the Kennedy Administration, as it did under Eisenhower, will oppose the plan quietly, by encouraging the Ways and Means Committee to bury it, and openly if hearings are actually held.

Almost everyone agrees that a major rewriting and simplification of the tax code is overdue, and therefore hardly anyone familiar with the difficulty of putting across a tax-reform program is willing to support a new set of deductions unless there is overwhelming evidence that the proposals will really do what they are intended to do, and unless there seems to be no other way to accomplish the objective than by further complicating the tax code.

Neither seems clear in this case, while the likelihood that passage of the proposal would bring a wave of requests to offer the same benefits for contributions to research, to culture, and to good causes generally is quite clear. The difficulty is that although a reasonably good case can be made for almost any of the existing or proposed tax breaks, the total of all of the breaks adds up to a headache for taxpayer and tax collector alike.

The sum of this is that the Kennedy Administration, which has considerably fewer qualms about enlarging the role of the federal government in education than the Eisenhower Administration did, is hardly likely to support an approach which the old Administration rejected, despite its admittedly desirable objective.

Political Tactics

Quite aside from this, the Kearns-type proposals raise a problem of political tactics. It is standard procedure for opponents to any program before Congress, when they are threatened with a defeat, to offer their own scaled-down plan to accomplish whatever is being debated. Congressman Kearns, for example, voted against

federal aid for education in the last session. If the scaled-down proposal goes through, it can be argued that there is no longer any need for further action, at least for a few years until we can see whether the more modest program will do the job.

This means that if the Administration were to support the Kearns bill, or related proposals, such as that offered by Senator Goldwater, it would be helping to defeat its own program in return for a program with great public appeal, but one which may not help very much in providing more money for education.

The prospect, then, for Kearns-type legislation is close to nil. It will be opposed on grounds of tax policy, and on grounds that it is no adequate substitute for the direct federal assistance in the Administration's program, and although a President cannot get everything he wants from Congress, on an issue like this there is not much chance that Congress will force him to take something he doesn't want.

The issue also illustrates one reason why Congress is so fond of the committee system. If a proposal with as much popular appeal as the tax credit plan ever reached the floor for a vote, every Congressman would be under heavy pressure to vote for it whether he liked it or not. This awkward situation is avoided when the bill is quietly allowed to die in committee.

Congress and the PSAC

A far deeper problem for the Administration than the tax credit substitutes for its education program is involved in dealing with Congress on science policy. The problem has been quietly growing for several years as science has taken an increasingly important position as a distinct policy area, which makes increasingly significant the considerable lack of understanding between the scientific advisers and the committees on Capitol Hill which decide how much money they can have and where it will be spent.

Two things seem to especially annoy the Congressmen. One is that they do not like to be told just what should be done, but why it should be done, and so far, at least, the scientists have not been as successful as either they or the Congress would like in explaining the why's of the policies they recommend. This is not surprising:

scientists, after all, do not always understand the why's of politics, and politics, being in the realm of everyday experience, is a good deal easier to explain to a nonpolitician than science is to a nonscientist.

This apparently unavoidable difficulty is compounded by a second factor, which is the position of the President's Science Advisory Committee, which, as part of the President's office, is shielded from Congressional inquiry by executive privilege.

In one sense this is perfectly normal: not many dispute the fact that it is perfectly proper for a president to have personal advisers on his staff, and that presidents understandably would not want these advisers to be liable to be summoned before a Congressional committee to find out what kind of advice they are giving. In any case, this "executive privilege" is well-established in law, and presidents have regularly invoked it when Congress has tried to find out what is going on in the White House. But it merely stops the inquiring Congressman from getting very far; it does not quite satisfy his curiosity.

What causes misgivings is not that the science adviser is not available in his role of personal adviser to the President. Here his role is similar to that of, say, McGeorge Bundy, the Harvard dean, and W. W. Rostow, the M.I.T. economist, who serve as special assistants for national security affairs.

In this role the science adviser is in every sense simply a member of the personal staff of the President, and Congress recognizes that, curious though it may be about what goes on in the White House, it has no authority to question members of President's staff.

A less clear situation comes up in considering the science adviser in his role as chairman of the Science Advisory Committee. There is no legal question: the committee, its staff, and its special panels, which in the course of a year will use the services of dozens of the leading scientists in the country, all clearly exist to serve the President; there is no statutory requirement that they exist; they are paid out of the general funds available to the President for running his office "to be accounted for solely on his certificate." The whole operation could be scrapped at any time at the whim of the President. But since the committee has become in effect the ranking body concerned with over-all national science policy it is

unthinkable that it, or something like it, should not exist.

The committee has no exact parallel: the National Security Council, for example, is an even more important body concerned with over-all national security policy, but its existence is required by law, there is some public accounting of the money spent on it; and its members, except for the President and Vice President, can be questioned by Congress, not, of course, in their roles as members of the council, but as operating heads of departments concerned with national security affairs.

Role of the Committee

The peculiar position of the Science Advisory Committee is exaggerated here to make clearer the distinction between it and other parallel bodies in the government. Yet the difference is real enough so that one of the leading arguments for establishing a cabinet department of science has become the desire to remove at least some of its functions from the President's confidential staff to a place where Congress can keep a closer eye on how national science policy is made.

The difficulty is compounded by the nature of the advice the committee gives, which falls in an area where neither Congress nor the President has much of the independent expertise which both command on other policy matters. There is some feeling in Congress that this is an area where, more than in any other area, the President is forced simply to take advice, rather than receive information and then make up his own mind. Therefore, this reasoning goes, he and the country should be protected by making sure that it is possible to have independent criticism of the advice he is getting. One way, and perhaps the only way, to do this, and a way which especially appeals to Congress, would be to give Congress some authority to inquire into how policy is being made.

These comments by no means give a full or fair picture of all the factors involved; they are intended only to summarize the kind of misgivings that exist about the role of the committee. An excellent argument can be made for keeping the Science Advisory Committee just the way it is.

But whatever the wisest kind of organization, the President clearly has at least a touchy problem in political tactics in dealing with Congressional feelings on these points.—H.M.

News Notes

Venus Studied with Radio Signals

First success in a 2-month experiment in which radio signals are being used to study the planet Venus has been announced by the National Aeronautics and Space Administration. Hugh L. Dryden, deputy administrator of NASA, and William H. Pickering, director of the Jet Propulsion Laboratory, announced reception of strong, clear radio signals reflected back to earth from Venus in a 70-million-mile round trip that took about 6½ minutes. The transmission was completed at 9:34 P.M. EST, 10 March, at the Jet Propulsion Laboratory's Goldstone Tracking Station, 50 miles north of Barstow, Calif., in the Mohave Desert. The Jet Propulsion Laboratory is operated for NASA by California Institute of Technology.

Dryden said that signals have been bounced off Venus in other experiments but that this is the first time such signals have been immediately detectable without elaborate analysis and processing. The objectives of the experiment are to (i) determine whether Venus spins on its axis and, if so, at what speed of rotation; (ii) determine the orientation of the planet's spin axis; (iii) investigate the nature of the surface of Venus as determined by the reflectivity of its surface; and (iv) further define the measuring stick of the universe, the approximately 93-million-mile astronomical unit. (The length of the unit, the mean distance from the earth to the sun, has been defined only to within about 10,000 miles.)

Venus, which lies between Mercury and the earth, is the planet nearest the earth and long has been of interest to astronomers, but its atmosphere of dense clouds has hindered observation. Every 19 months Venus approaches to within about 26.2 million miles of the earth; its maximum distance from the earth is 162 million miles. This closest approach, known as the inferior conjunction, occurs this year on 11 April.

At the present stage of development of radio communication it is impractical to attempt radio contact with Venus except during comparatively brief periods before and after inferior conjunction. However, the Goldstone experiment will continue for several weeks after the 11 April date.

AEC Acts to Separate Regulatory Function

Chairman Glenn T. Seaborg of the Atomic Energy Commission has announced that the commission has acted to separate its regulatory function from the operational and developmental functions at the general manager level. The first step in this separation is the designation of Harold L. Price as acting director of regulation; he will report directly to the commission. Price has been director of the Division of Licensing and Regulation.

Price has been authorized to discharge the licensing and other regulatory functions of the commission, other than those where the final decision rests with the hearing examiner or the commission, or those which involve the commission's authority to approve the issuance of regulations. General manager A. R. Luedecke will continue to administer the commission's operational and developmental activities.

In a report made to the Joint Committee on Atomic Energy of Congress, in February, the commission outlined certain contemplated changes in the regulatory organization. This first step is taken in accord with that plan. These actions do not in any way prejudice possible additional steps the commission might wish to take following consideration of a similar study being completed by the staff of the Joint Committee on Atomic Energy.

Price will submit to the commission a report on the staffing of the regulatory function. He will have the cooperation of the general manager and the general counsel in the preparation of this report. Pending completion of the staffing report, the Divisions of Licensing and Regulation and of Compliance and the Office of Health and Safety are transferred to the acting director of regulation.

Robert Lowenstein has been designated acting director of the Division of Licensing and Regulation, succeeding Price. Lowenstein has been serving as counsel for the division.

AAAS Socio-Psychological Prize

Through the generosity of an anonymous donor, the AAAS offers an annual prize of \$1000 for a meritorious essay in sociopsychological inquiry. Previous winners of this prize and the titles of their essays have been: Arnold