

necessarily unsound to undertake Voyager without having the experience of the 1971 Mariner, says "It's been my instinct to feel that we should get on somewhat firmer ground before committing the big money."

William Pickering, director of the Jet Propulsion Laboratory, which has had management responsibility for Mariner and which will manage part of Voyager, says that to attempt Voy-

ager without the benefit of Mariner would be somewhat analogous to carrying out the Apollo moon landing without having first tested landing conditions and techniques with Surveyor. Pickering does not say Voyager without Mariner is a bad idea. He does say, "The 1971 data would increase your confidence in the '73 mission."

In effect, Congress has decided to take a not too well-calculated risk—

to save \$216 million on Mariner, on the assumption that the Mariner mission would produce no information essential to the success of Voyager. The risk is being taken almost casually, for the hearing record suggests that the senators have given little thought to Mariner's importance as a precursor mission and a safeguard against the chance of a costly disappointment.

—LUTHER J. CARTER

Social Sciences: Progress Slow on House and Senate Bills

Twenty years ago, when the so-called hard sciences were first setting up housekeeping with the federal government, it was suggested that perhaps some support could be spared for the social sciences. In discussing this proposition, the late Representative Clarence Brown (R-Ohio) declared that support of the social sciences would result in "a lot of short-haired women and long-haired men messing into everybody's personal affairs." Explanations of greater subtlety were later devised to justify the mere crumbs, or absence of as much as crumbs, for research and training in the social sciences. But, whatever the rationale, the social sciences were accorded a low priority among the intellectual endeavors that merited federal support. The priority, of course, was never as low as the one accorded the traditional humanistic disciplines; nevertheless, relative to the wealth and attention bestowed upon the natural and physical sciences, the social sciences have not fared especially well. Last year, according to one compilation, the federal government bestowed upon them some \$221 million out of the \$5.5 billion that it spent on basic and applied research.

Whether with this sum the social sciences are actually suffering from financial undernourishment is a debatable matter; congressional witnesses drawn from the social sciences have recently argued both sides of the issue, though the majority of them feel more money

is urgently needed. There is no doubt, however, that the social sciences are now in line to get a good deal more money, for the ingredients are accumulating for Congress to do something generous for the social sciences, and, at this point, the uncertainties concern only what and when.

The source of the uncertainties is that, after years of relative oblivion, the social sciences are now the object of two separate, partially conflicting schemes of benefaction, each offered by an ambitious member of Congress who is in a good position, amidst the balkanized congressional committee structure, to waylay the other's proposal. Since the proper nourishment of the social sciences is a subject about which most congressmen care nothing, the manner in which the two social science champions handle their affairs will probably have a decisive effect on how Congress as a whole chooses to treat the issue.

On the Senate side, S. 836, a bill to establish a National Foundation for the Social Sciences (NFSS), is being pushed by Fred R. Harris (D-Okla.), who is chairman of the Subcommittee on Government Research of the Committee on Government Operations. (See Harris' article on his bill in the 4 August issue of *Science*.) What Harris wants to do is to provide money and visibility for the social sciences by establishing a new federal agency with a mandate to give them support for research and

training. His original design contained a number of curious curlicues, such as having the NFSS serve as the operating agency for foreign social science projects originating in the Defense Department. This particular feature reflected Harris' point of entry into the social science issue: general concern over the role of military and intelligence agencies in the support, open or covert, of supposedly benign academic research. Harris originally held that such research could be sanitized by channeling the money through a civilian-run NFSS. But the Senator now appears to be responsive to the warning that such authority to use transferred funds might taint all of the NFSS's foreign activities at a time when American scholars abroad often have a difficult time persuading local authorities that they are scholars and nothing but scholars. Now after months of hearings, Harris' design for the NFSS is verging toward near identity with the administrative structure and methods of operations of the National Science Foundation. The bill is yet to emerge from his subcommittee, but it is not likely to encounter any serious difficulties either there, in the parent committee, or on the floor. At age 36, Harris is one of the fast-rising youngsters of the Senate. Twenty members of the Senate have endorsed his bill, and Lyndon Johnson himself recently acknowledged Harris' industry and secure lines to the Senate's inner sanctum by putting him on the newly created Advisory Committee on Civil Disorders—which is no small accolade for a junior Senator who is trying to get ahead in this competitive world.

For Harris' bill to become law, however, it will have to make its way through the House; and the House, as it turns out, has already given its approval to a design that one of its own members worked out for helping the social sciences. The member is Emilio

Q. Daddario (D-Conn.), who chairs the Subcommittee on Science, Research, and Development of the Committee on Science and Astronautics. Daddario, whose subcommittee has jurisdiction over the National Science Foundation, believes there is no need to establish a new federal institution to support the social sciences. Rather, as he sees it, NSF should be encouraged to enlarge its role in the social sciences. And this is what is provided for in his bill, H.R. 5404, which easily passed the House last year and again this year. As far as the social sciences are concerned, the bill would enhance their status within NSF by explicitly including them among the disciplines eligible for support, rather than having them admitted, as they are at present, under the heading of "other sciences."

Two Approaches

In concept, the Harris and Daddario proposals are not mutually exclusive. Each proponent acknowledges that diverse sources should exist for supporting the social sciences. Thus, on the basis of how the federal government has done business heretofore, there is no reason why the National Science Foundation could not expand its social science role while, at the same time, Harris' National Foundation for the Social Sciences came into existence.

The difficulty, however, is that the legislative terrain does not favor so generous a resolution. The passage of two bills concerning the care and feeding of the social sciences is not impossible. But neither Harris, in his 3rd year as a Senator, nor Daddario in his 8th year as a member of the House, has yet scored with any significant piece of legislation, and, with the possibility of first success now visible, neither is inclined to step aside for the other's prescription for aiding the social sciences.

If and when Harris' bill emerges from the Senate, its fate is likely to be strongly affected by the decision on which committee gets to consider it in the House. In the view of the Harris entourage, this is an open question, to be decided by the House Parliamentarian when the bill is introduced in the House, which has not yet happened. But Harris' staff believes—or at least hopes—that the Harris bill properly belongs to the House Education and Labor Committee. On the other hand, it is the view of Daddario and his staff that the Harris bill should be

assigned to the House Science and Astronautics Committee, for consideration by the subcommittee on Science, Research, and Development—Emilio Q. Daddario, chairman.

The rules of the House offer no clear-cut guidance, since they give Education and Labor jurisdiction over "matters relating to education," and they give Science and Astronautics general jurisdiction over "Scientific Research and Development," as well as specific jurisdiction over the space program, NSF, and the Bureau of Standards. The destination of the Senate's social sciences bill is thus open to argument, but it is worth noting that in the House, it was Education and Labor that handled the bill for establishing the National Foundation on the Arts and the Humanities. To complicate the matter further, it was the Labor subcommittee of Education and Labor that did the job, since Representative Frank Thompson (D-N.J.), chairman of the subcommittee, was a key backer of the bill.

Committee Selection

In any case, there is little chance that Harris' bill, although it emanates from the Senate Government Operations Committee, would be assigned to the House Government Operations Committee. Since the Senator chairs a Government Operations subcommittee, he has to work with what he has. But, while it is not unique, it is something of a fluke for Government Operations to serve as a fount of substantive legislation. Under the rules, Government Operations is charged with determining whether the government is carrying out the intent of Congress, not with setting up new agencies. Obviously, the rules are malleable, but no one considers it likely that the House's counterpart of Harris' subcommittee would receive his bill.

On the Senate side, the jurisdiction for Daddario's bill is already settled. It has been assigned to Labor and Public Welfare, of which there is no counterpart in the House. But following House passage last year and again this year, the bill has made no progress in the Senate. A staff member on Senate Labor and Public Welfare said that the bill has to take its turn behind a big backlog of previously scheduled business, and he further offered the view that it is difficult to get up any sense of urgency about the social sciences.

At this late stage of the session,

with Congress preoccupied with civil rights, taxes, and Vietnam, it is extremely doubtful that significant momentum can be imparted to either the Harris or Daddario proposal. But, in looking ahead, is it unlikely that Lyndon Johnson would be unreceptive to a suggestion that he say a kind word to the House leadership in behalf of a beneficial committee assignment for Harris' bill?

"Have-Nots" vs. "Establishment"

In term of their effects on the progress and employment of the social sciences, it is difficult to say which proposal would have more impact. The NSF, long experienced in rolling with the congressional punch, says it has sizably increased support for the social sciences; at the same time, other agencies have increased their spending in this field. But money is not the only, or even the main, issue underlying the different approaches that Harris and Daddario are taking toward the social sciences. As in the case with virtually all the politics concerning relations between the federal government and academe, lines are blurred, the distinctions often are unaccompanied by real differences, and alliances tend to overlap. But there is no doubt that the Harris and Daddario proposals emanate from very different perceptions. Harris, from the academically "have-not" southwest, is very much the outsider who, after a look at the fiscal structure of federal-university relations, feels that something has to be done to alter, if not bust up, what he conceives to be an elitist, self-serving system that has guaranteed affluence for the hard sciences and a relatively few institutions. Thus, he not unrealistically regards NSF as a creature of the physical sciences and dismisses NSF's assurances that it can be counted on to take care of the social sciences. Daddario, on the other hand, has proceeded from the assumption that the prevailing system of federal-science relations is essentially sound and requires no more than a tune-up to maximize its performance. All along he has essentially followed a course of working inside what some would call the "establishment." He has cultivated close ties with the National Academy of Sciences; it performs studies for his subcommittee, and he, in turn, calls in the academicians for amiable colloquies on science policy. His bill and the accompanying report for revising NSF run to many pages

but actually provide for few substantive changes.

At this point, Congress is weary from a long session and clogged with matters far more pressing than the precise ad-

ministrative setup to be adopted for aiding the social sciences. But it is reasonable to expect that, within a year or two, if not sooner, Congress will finally settle upon one or another

of the social science formulations. At this point, the legislative politics would seem to give a slight edge to the Harris bill, but it is still very early in the game.—D. S. GREENBERG

Toward the Excellent: Health Science Advancement Awards

Just as the National Science Foundation created a program 3 years ago to increase the number of institutions with recognized excellence in the sciences, the National Institutes of Health has established a program to build new centers of excellence in institutions with graduate biomedical facilities.

NIH traces the inception of its program to concepts that were incorporated into two influential studies: (i) the 1960 President's Science Advisory Committee report, *Scientific Progress, the Universities, and the Federal Government*, which advocated doubling, by 1975, the "number of universities doing generally excellent work in basic research and graduate education"; and (ii) a 1964 report by the National Academy of Sciences—National Research Council Committee on Science and Public Policy, *Federal Support of Basic Research in Institutions of Higher Learning*, which endorsed the award concept "in support of research and graduate education in institutions with potentiality for becoming strong in the future."

The new program of Health Science Advancement Awards (HSAA) is a departure from NIH's traditional emphasis on specific research projects. The award, which will be administered by NIH's Division of Research Facilities and Resources, is designed to strengthen broad segments of biomedical facilities at institutions that are already strong in some biomedical areas although not yet considered "excellent." Through the awards, NIH hopes to create between 25 and 40 new centers of biomedical excellence by 1975.

NIH began the program last year on a pilot basis following a year of study. Pilot grants of \$483,000 and \$359,000, respectively, were awarded to the Uni-

versity of Virginia, at Charlottesville, and Cornell University. Both received continuation grants this year when NIH entered the program on a full-scale basis and made new awards, totaling \$3.6 million: to the University of Colorado at Boulder and Denver, \$687,000; University of Oregon, Eugene, \$695,000; Purdue University, Lafayette, Ind., \$564,000; Vanderbilt University, Nashville, Tenn., \$620,000, and Washington University, St. Louis, Mo., \$592,000. Each award may be renewed for five consecutive years.

The sums were awarded after competition which initially involved 128 applicants. Each submitted 5000-word summary proposals, which were reviewed by an *ad hoc* panel of 22 members* who narrowed the number of institutions under consideration to 32. These were then reviewed by a subcommittee for General Research Support Programs of the National Advisory Health Council. Fifteen institutions were invited to submit detailed applications and 14 were received. After the applications had been studied, 2-day site visits were made to the 14 campuses

* *Ad hoc* panel and consultants who reviewed and visited the 1967 HSAA applicants were Robert A. Alberty, M.I.T.; L. M. N. Bach, Tulane; Douglas D. Bond, Western Reserve; Stephan L. Chorover, M.I.T.; D. Eugene Cope-land, Tulane; David Crockett, M.I.T.; James P. Dixon, Antioch; Murray Eden, M.I.T.; Leonard Fenninger, U.S. Public Health Service; H. Fernandez-Moran, Chicago; Reginald H. Fitz, New Mexico; Benson E. Ginsberg, Chicago; Robert J. Glaser, Stanford; David R. Goddard, Pennsylvania; George P. Hager, North Carolina; Harry Helson, Kansas State; S. Richardson Hill, Jr., Alabama; George Kalnitsky, Iowa; Clark D. Ahlberg, Syracuse; George P. Manire, North Carolina; Maclyn McCarty, Rockefeller University; Russell Mills, Kansas; Carl V. Moore, Washington University; Allan Moritz, Western Reserve; James Quigg Newton, Jr., The Commonwealth Fund; Ray. D. Owen, Cal. Tech; Ernest Pollard, Pennsylvania State; David D. Rutstein, Harvard; H. Eldon Sutton, Texas; Frederick P. Thieme, University of Washington; Sidney F. Velick, Utah; and Gordon W. Whaley, Texas.

by NIH staff members and consultants. They then prepared summaries which were studied and ranked by the *ad hoc* panel and ten consultants. These recommendations were reviewed by the subcommittee which had done the previous screening and the National Health Advisory Council which in turn selected the five HSAA recipients.

The HSAA is clearly not intended for institutions on the low end of the biomedical rating scale, and in fact, some universities which have received substantial NIH funding for research in the past may be eligible for the new awards. NIH has concluded that universities which have been heavily funded for research may be strong in a number of areas but still may not be rated as excellent in some interdisciplinary biomedical areas. In some instances, HSAA's may be granted to institutions for the improvement of departments related to the health sciences which are not affiliated with their medical schools.

Two schools that have received the HSAA rank among the top 20 institutions receiving NIH research support money during the last fiscal year: Washington University, which received \$8.3 million, and Cornell, \$7.7 million.

Each of the schools with HSAA's will use the awards differently, but all plan to use some portion of the funds to enlarge their staffs with permanent and visiting faculty members.

Inevitably substantial staff increases will lead to the "pirating" of faculty members from the "excellent," but this is something with which NIH is relatively unconcerned. Thomas J. Kennedy, Jr., director of NIH's Division of Research Facilities and Resources, noted that pirating can only be viewed as adverse if the academic system is viewed as finite. Kennedy does not believe it is and he has said he thinks the so-called excellent biomedical institutions can lose some of their top faculty members and still maintain a position of eminence.

In addition to faculty expansion, award money will be used by most of the grant recipients to acquire new