which were ignored except for one: that the Government Operations Committee establish a subcommittee to maintain surveillance over federal support of research and development.

Government Operations cannot write legislation or pass on appropriations, but it does have authority to investigate the conduct of any federal activity and to make recommendations. Reuss, a member of Congress since 1955, had generally been associated with economic and fiscal questions, through diligent and admired service on the Banking and Currency Committee and the Joint Economic Committee. There wasn't any visible indication that he was straining to undertake surveillance over research and development, but, when the subcommittee was established, seniority contributed to his receiving the chairmanship. Initially, his committee staff consisted of Harry Selden, a writer and editorial specialist who had served under Elliott, and Edna Gass, a longtime Reuss associate with a background in economics. Selden recently left the committee, and now Mrs. Gass holds the chief position, assisted by a former journalist and an attorney.

Theoretically, the subcommittee could look into anything related to federal support of research, but congressional committee preserves are balkanized and jealously guarded. Medical research was out of bounds because it had long ago been preempted by Representative L. H. Fountain (D–N.C.), head of the Government Operations Subcommittee on Intergovernmental Operations. Atomic Energy was similarly beyond reach: the Joint Committee on Atomic Energy does not stand for intrusions, and, besides, Representative Chet Holifield, chairman of the JCAE, is ranking Democrat on Government Operations; he also is chairman of its subcommittee on Military Operations, which covers the Defense research programs. Similar sovereignties reduced the choices in other fields, and, as a consequence, the Reuss subcommittee had to choose its subjects with a view to avoiding trespass.

Since research versus teaching didn't fall into anyone's preserve, it qualified for the first investigative venture. The ordering of research priorities gets a little closer to some sensitivities, and may arouse other chairmen, but, if handled in terms of the adequacy of the executive decision-making system rather than the value of specific programs, it might pass without friction, at least on Capitol Hill.

Significantly, the leadoff witnesses in the forthcoming investigation will be Charles L. Schultze, director of the Bureau of the Budget, and Donald F. Hornig, director of the Office of Science and Technology. The witness list is not yet completed, but so far its emphasis is on persons from private research organizations that have been examining the economic implications of research and development expenditures. The hearings will probably take place in mid-January.

As might be expected from his previous interests, and unlike his congressional predecessors in this area, Reuss tends toward an interest in the economic significance of research and development. "When you examine the federal budget," he said in an interview last week, "you see at once that research and development represents a huge chunk of discretionary expenditures. There is no readily accessible control over much of the budget, but the 15 or so percent that we spend on R & D is manageable. Therefore, it's worth looking at for that reason, but also because research and development, perhaps more than any other federal spending, molds the future." Does this mean, Reuss was asked, that he suspects some deficiency in the White House science office?

"I want to explore if it has been adequate," he replied. "The results so far have not satisfied my own preconception of what it should be." And he added, "I have a hunch that the hearings will develop a discernible failure to apply a Benthamite pleasure-pain analysis to various programs."

Reuss stressed that "we want to make it clear to other committees that we won't impinge on their jurisdictions. We will not attack research problems that fall under a given committee, but we will work on problems common to all."

In the announcement of the hearings, and in the interview, Reuss made frequent reference to the space program, raising, for example, the question of whether the 1970 moon landing goal is having the effect of deferring attention to other goals. He explained, however, that "we don't have any designs on the space program. We simply want to make sure that the decisions are being properly made."

It will take some skillful footwork to tread that line and it will also take a great deal of diligence on the part of the congressman himself to produce findings that will be taken seriously by the research agencies and his own colleagues on Capitol Hill.

—D. S. GREENBERG

The 200-Bev Machine: University Compact Offers Its Services

Universities Research Association, Inc. (URAI), a 34-institution compact designed to keep the peace in high-energy physics, has offered itself to the U.S. government as "contracting agency for the construction and operation" of the proposed 200-Bev accelerator.

URAI's creation was initiated last December by Frederick Seitz, president of the National Academy of Sciences, who, according to an Academy announcement, was "concerned lest the competition among scientific institutions for massive one-of-a-kind research facilities destroy the unity of purpose that once characterized the national scientific community." Though closely tied to the Academy by genesis and personal relationships, URAI is an independent entity, incorporated in the District of Columbia and operating under its own bylaws. But, at least on the science side of the science-and-govern-

*URAI members are California Institute of Technology, University of California (Berkeley), University of California (Los Angeles), University of Chicago, Carnegie Institute of Technology, University of Colorado, Columbia, Cornell, Duke, Harvard, University of Illinois, Indiana University, University of Iowa, Johns Hopkins, University of Maryland, Massachusetts Institute of Technology, University of Michigan, University of Minnesota, University of North Carolina (Chapel Hill), Northwestern, Notre Dame, University of Pennsylvania, Princeton, Purdue, Rice, University of Rochester, Rockefeller, Stanford, University of Texas, Tulane, Washington University, University of Washington, University of Wisconsin, and Yale.

ment relationship, the new organization looks like the unanimously chosen administrative device for handling the big machine. Present at the first organization meeting last January were Donald F. Hornig, the White House science adviser, and Glenn T. Seaborg, chairman of the AEC, which is the exclusive source of funds for the $350-million accelerator. Seitz is a member of the President's Science Advisory Committee, of which Hornig is chairman; Hornig and Seaborg are members of the Academy; and many of the 34 university presidents are well interlocked with the federal science advisory system, or would like to be.*

In any case, it seems probable that URAI will get the job. If there are any objections they are likely to come from smaller institutions which, as things work out, carry little weight in Washington and virtually none at all in high-energy physics. Furthermore, with politicians throughout the land lobbying for the machine and high-energy physicists having nightmares about being excluded from it, it would be hard to develop support for turning the accelerator over to a single institution or even a regional alliance. URAI is Seitz's answer, and, as the saying goes, you can't beat something with nothing.

URAI is expected to function in the style of Associated Universities, Inc., the nine-university compact that runs the Brookhaven National Laboratory for the AEC and the National Radio Astronomy Observatory at Green Bank, W.Va., for the National Science Foundation.

Meanwhile, the site selection process goes on. AEC teams have visited all of the 85 sites that are considered to meet the basic criteria, and their reports are being forwarded to the Academy's site selection committe for evaluation. AEC officials say the committee may possibly send its recommendations to them toward the end of January. What happens then can only be guessed. The Academy committee will probably pick as many as five sites, and the AEC will presumably then pick the winner.

But it is difficult to conceive of the White House permitting a $350-million decision to be made purely in terms of the personal preferences of a relative handful of high-energy physicists. Undoubtedly at least some of the politicians will reason that, if the high-energy physicists think this machine is so important, they should be willing to put up with some of the less charming locales that are clamoring for a slice of federal science largesse. Berkeley, where the machine is being designed, has not been ruled out, but one gets the impression that Berkeley is viewed as having the best case technically and the worst politically. It is now a thriving and productive high-energy center, and, as far as one can see in the unpredictable high-energy field, the capacity of its present machine will have been pretty well exploited by the time the 200-Bev is operating, in about 7 or 8 years. But, with virtually every state now clamoring for what it conceives to be its fair share of federal research funds, California—the leader in R&D receipts—is handicapped by its own success. And it probably isn't helped by having two Republican senators.

Berkeley supporters argue that, if the Lawrence Radiation Laboratory is to maintain its preeminence, it needs a commitment soon. One answer is that the Berkeley group can commute, just as droves of other physicists do. But it is unquestionably more pleasant to have your machine within walking distance, and there is no doubt that an accelerator is better than an airport for recruiting and holding a superior staff of physicists. It is possible, of course, that pure science rather than pure politics will determine the answer, but, if the price of advancing science, technology, and prosperity in some have-not region of the nation is a delay in attaining maximum productivity of the machine, who can say with certainty that that price is not worth paying?

Whether URAI can suppress the combative inclinations of the high-energy physicists remains to be seen. Partly as the result of a process of professional selection, they are an ingenious, energetic bunch, and they are stirred to battle by the realization that, in addition to highly charged particles, the big machine also turns out Nobel prizes and other glory. "Time on the machine" is the issue underlying much of the strife. Who gets the time, when there isn't enough for all the ambitious applicants, is never going to be a courteously settled question, no matter what the organization. When the Academy announcement made reference to "the unity of purpose that once characterized the scientific community," it was talking about another age of science. Today, ironically, the number of high-energy physicists is increasing and the number of machines for "frontier" research is declining, simply because the older machines become played out and the new ones cost so much. A scarcity economy prevails, and scarcity is not conducive to peace.

High-energy physics is, of course, not the only field where this problem of "big science" is manifesting itself. URAI has not specifically indicated any other areas in which it might take an interest, but Gaylord P. Harnwell, who is president of the University of Pennsylvania and president of the URAI Council of Presidents, left the way open. He stated, "We would not deem it inappropriate at a later date to extend the offer of our services to other scientific agencies of the government for the conduct of such other national facilities or programs as lay within our fields of competence."—D.S.G.

Vietnam: Growing War and Campus Protests Threaten Student Deferments

One domestic casualty of the widening war in Vietnam is the liberal student-deferment policy in force since the early 1950's. Obtaining accurate information on the number of students actually inducted or reclassified I-A would tax even a very patient computer, since such data exist only in the files of the more than 4000 local draft boards that actually implement the Selective Service System. But the Scientific Manpower Commission*, an independent agency which, among other functions, helps students, scientists, and engineers obtain deferments, believes that California draft boards, for example, have reclassified nearly all students registered with them I-A—a surmise confirmed by the experience of the physics department in one major eastern university, which is reported to have had 19 of its students,

* 2101 Constitution Ave., NW, Washington, D.C. SMC is a nonprofit organization, supported by several scientific societies.