

campus, plans are going ahead for a marine biology program and an extremely ambitious and costly fine arts program.

Clearly, the money is there to support the material requirements for these ambitions. But what about the other ingredients—leadership, able students, an attractive environment for the faculty? Stony Brook hopes to build? Neither Toll nor Glass has ever before run a university, but if the views of those well acquainted with them are significant, the physicist and the biologist make an incredibly well qualified team for fulfilling Stony Brook's potential. Both have sterling scholarly credentials and hold the respect of their academic colleagues. Both are seasoned veterans of the committee room and well acquainted with the institutional peculiarities of the academic world. And both know Washington, which, despite New York's commitment to paying for excellence, will inevitably figure large in Stony Brook's building plans.

As for the student body, which will probably number around 10,000 by the end of the decade, the burgeoning population of Long Island provides an ample pool of high-quality undergraduates and, as the state system operates, Stony Brook will be the sole judge of its admission requirements. On the basis of experience elsewhere, it may be assumed that if an excellent faculty comes to Stony Brook, excellent graduate students will follow. New York City, which is perhaps just a bit too far for a comfortable evening visit, is still close enough to be an attraction for many prospective faculty members. Others have been pleased to note that the faculty club is located on a lengthy private strip of North Shore beach which was donated to Stony Brook along with the campus site. Few, it must be said, find any satisfaction in the campus architecture, which has marred the lovely setting with some unimaginative drab brick structures. But the next construction phase has aimed for higher esthetics, and the campus administrators who inherited the current plant hope that some cosmetic work can be done on the work of their predecessors.

Is Stony Brook, with two scientists at the helm, embarked on the course of research emphasis and bigness that has contributed to tensions and crises at other universities? Among the humanists on campus there seems to be little fear. "I already detect a tendency to bend over backwards to make certain

that the humanities are not short-changed," said one administrator. And, in Toll's view, the intellectual care and feeding of undergraduates is to be a prime concern of the university. "The university," he said in a recent interview, "should be oriented toward undergraduates. This is good for the undergraduates and it is good for the graduate programs and research. Undergraduate programs help pull the departments together. Otherwise, they go off into their own specialities and lose sight of each other."

Toll added that he hopes to employ methods that will prevent students "from feeling lost in the university. I would like to see activities outside of class that will give the student a sense of a relationship with the university. I'd like to see faculty members residing in the dormitories, and I'd like to have lectures in the dorms. Above all, I want the students to feel that they are somebody at the university and not just part of a great mass that moves through the campus without anyone taking notice of them."

Toll doesn't hold any doctrinaire views about teaching versus research. "I see nothing wrong with making research appointments, if it can be shown that the research has some kind of beneficial feedback effect on the teaching process. But I don't think research at an academic institution should be permitted to exist just for its own sake."

Why, when he had numerous attractive offers, did he take one from a relatively unknown institution? Toll's answer was virtually identical to what one hears from many of the people who are accepting offers to the institution: "We're practically starting from scratch there," he said, "and it's pretty exciting to be in on the beginning of a university that has every reason to believe that it can be one of this country's great institutions in a decade."

—D. S. GREENBERG

Indirect Costs: House Legislation Embodies New Cost-Sharing Formula for Federal Research Grants

Institutions of higher education seem to have felt it infra dig to protest too much in public about financial arrangements with federal agencies on research grants, but the formula for payment of indirect costs of research has been a persistent bone of contention. Congress this year appears to be making changes

which should go some way toward quieting complaints of inequities under the present system. These changes, however, would not fulfill the desires of those who would like to see the federal government pay the full costs of federally sponsored research.

The House of Representatives has passed the three major appropriations bills containing research funds, and in each case the old requirement that indirect cost payments (designed to cover costs of institutional overhead and administration) be limited to a flat percentage of the amount of the grant has been replaced with a general proviso that the federal government shall not pay the entire cost of a project.

Affected are the bills carrying appropriations for the Defense Department, for the Labor and Health, Education, and Welfare departments, and for Independence Offices (which include the National Aeronautics and Space Administration and the National Science Foundation).

The percentage formula which would be supplanted itself took several years to evolve. A few years ago limits on indirect-cost percentages varied from agency to agency. HEW grants bore a 15-percent limit; for Defense, the figure was 20 percent, and for Independent Offices, 25 percent. These variations were abolished, and the standard grant language currently states, "None of the funds provided herein shall be used to pay any recipient of a grant for the conduct of a research project an amount for indirect expenses in connection with such project in excess of 20 percent of the direct costs."

A key congressional figure in the development of both the percentage formula and the new provision has been Representative John E. Fogarty (D-R.I.), who, as chairman of the House Appropriations subcommittee on Labor-Health, Education, and Welfare, has presided over the rapid expansion of federal support of medical research. Fogarty has held firmly to the belief that a university that wished to do research under a federal grant should help pay the costs of that research. And it was Fogarty's subcommittee which engineered the percentage formula and has now put forward the new cost-sharing scheme.

Fogarty appears to have sought the change because he became convinced by the argument that the applying of a flat percentage, as had become the practice, on projects which differed

greatly in actual indirect cost to institutions resulted in real inequities.

The so-called Wooldridge report on the National Institutes of Health, *Bio-medical Science and Its Administration* (see *Science*, 26 March), may also have given impetus to the change. While the Wooldridge panel took no position on whether or not the government should pay full costs of research projects for which it makes grants, it did say, in effect, that if NIH is going to pay less than the full costs of the projects it supports, the computation should be on the basis of the total cost of the project rather than on the present system of computing direct and indirect costs.

The provision in the three House bills is as follows. "None of the funds provided herein shall be used to pay any recipient of a grant for the conduct of a research project an amount equal to as much as the entire cost of the project."

As it stands, the section appears to be an open-ended one, and some university officials have been highly apprehensive over how the blanks are to be filled in.

The Appropriations Committee report called on the Bureau of the Budget to promulgate regulations on the section not later than 1 July. But the Bureau, in a demonstration of bureaucratic circumspection, has not done so. For the Budget Bureau could be accused of jumping the gun, since the section has not been written into law.

The Senate Appropriations independent offices subcommittee, as a matter of fact, recently struck the new cost-sharing language from its bill. So the fate of the provision will have to be determined when the three appropriations bills go to the House-Senate conferences to reconcile differences. A House-Senate conference on the Independent Offices Appropriations bill has been set for next Tuesday.

Even on the House side the new provision is viewed with reservations—in the defense appropriations subcommittee, for example—because the language is so general.

While the record does not show it, Fogarty is understood to feel that a 5-percent maximum should be placed on an institution's share of the research costs. On many projects the percentage would be less, and in special cases, such as the support of a primate center, where costs are high and benefits are widespread, the university would ap-

parently be expected to supply only minimal support.

In its report Fogarty's committee also added an interesting suggestion: "For administrative purposes," it stated, "the committee believes that a determination of the extent of Federal participation might be made on either a project-by-project basis, or an institutional basis."

With details of the new provision not yet clear, university misgivings about the new provision seem to center generally on its compulsory-cost-sharing feature. Some observers suggest that the new approach may create difficulties for universities which now use federal research funds to pay the portions of faculty salaries justified by faculty time spent on research projects.

Other institutions which refuse to use federal funds to pay tenure faculty—usually institutions with greater resources—could presumably declare faculty salary for research time on federal projects to be part of the institution's cost-sharing effort. Less affluent universities, which use federal funds pro rata to support salaries, would have to find cost-sharing funds elsewhere. For them, life on a sliding scale might prove financially more arduous than playing the percentages is now.—JOHN WALSH

Announcements

The Education Committee of the American Physiological Society plans to revise and extend its list of **Laboratory Experiments in General Physiology** for university and college use. The list was originally prepared in 1959. University and college teachers who have used any of these experiments in their teaching laboratories are invited to send the committee their comments, criticisms, and adaptations of the experiments made for particular uses in their own laboratories, or any new experiments they have taken from current research and adapted for teaching. (S. R. Tipton, Department of Zoology, University of Tennessee, Knoxville 37916)

The National Bureau of Standards Institute for Basic Standards recently established a **temperature scale from 4° to 14°K**. Based on the acoustical thermometer, the scale bridges the gap between the lower limit (10°K) of the NBS 1955 Provisional Scale and the temperatures defined by the T₅₈ Helium 4 Vapor Pressure Scale (2° to 5°K).

A thermometer calibration service has been initiated from 2° to 20°K at 1-degree intervals, and the first such calibration was recently completed for industry. The establishment of the new scale and calibration service is the result of a 9-year research program conducted by H. H. Plumb and G. Cataland, of the institute's low-temperature laboratory.

Grants, Fellowships, and Awards

Short-term fellowships in tropical medicine are being offered by the Louisiana State University medical school. Recipients will study in nearby Latin American countries, and their work will stress the research needs of the area. Transportation and per diem allowances are furnished. Applicants may be teachers or advanced graduate students in any subdivision of microbiology, public health, or nutrition, or teachers or residents in infectious diseases, pediatrics, or dermatology. (G. A. Thurber, Louisiana State University Medical Center, New Orleans 70112)

The Inter-University Committee on Travel Grants announces opportunities for advanced graduate students and scholars to study and do **research in the U.S.S.R.** and Bulgaria, Czechoslovakia, and Hungary, during the 1966–1967 academic year. Participants will be chosen through a national competition. Applicants must be citizens or permanent residents of the U.S. and be proficient in the language of the country in which they wish to study. (H. Mehlinger, Inter-University Committee on Travel Grants, Indiana University, Bloomington)

Applications are being accepted for pre- and postdoctoral fellowships in **brain research** at the new Center for Neurobiological Sciences of the University of Florida, Gainesville. Appointments may be for 9, 10, or 12 months, and applicants must be U.S. citizens.

Predocctoral fellowships carry stipends of \$2400 a year, plus \$500 for each dependent. Candidates must be accepted by one of the departments participating in the center (anatomy, physiology, psychology, or zoology) and by a faculty member of the center from that department. Applications must be received in time to begin a term at the university; the trimesters start 31 August, 5 January, and 28 April.

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