# News and Comment

### AID: A New Research Director and an Activated Advisory Apparatus Relied On To Get Research Moving

Some changes have been made in the research office of the Agency for International Development (AID), which for a number of years has been one of the underdeveloped areas of the nation's foreign aid program. The agency has announced the appointment of a science director who will also act as science adviser to Administrator David Bell. Also, AID's science advisory machinery seems in recent months to have moved definitely off dead center.

In the new post of science director is F. Joachim Weyl, now deputy chief and chief scientist of the Office of Naval Research (ONR). Weyl will retain his posts at ONR and split his time between the two agencies.

On the AID organization chart science director Weyl is a subordinate to Leona Baumgartner, who heads the Division of Human Resources and Development, but as science adviser, Weyl will have direct access to Bell and in this role is counted on to apply a scientist's perspective to problems of the agency as a whole.

Agency officials hope that new management, strengthened organization, and higher status will give the AID research effort a fresh start. An independent research office was finally created in the 1961 reorganization of the foreign aid operation, but last year the research section struck a reef when a Congressional subcommittee sharply criticized procedures on several research contracts. These difficulties were discussed at some length in this space (p. 792, 17 May 1963).

Recently an administrator's dilemma, inherited by Bell when he took over AID at the end of last year, was resolved when an employee, John Hoke, who had championed a "solar boat" project which aroused special Congressional ire, left to work for a private research firm. Representative Porter Hardy (D.-Va.), who was chairman of the foreign operations subcommittee of the House Government Operations Committee at the time of its inquiry into AID research, had pressed for Hoke's dismissal. Acceptance of Hoke's resignation "without prejudice" by the agency would appear to relieve Congressional pressure without what would be interpreted as a Congress-inspired "purge."

Edward Fei, a University of Wisconsin economist who was acting director of the research operation during its time of troubles, has moved to an economic analysis post with AID.

The bolstering of the research effort has gone ahead on another front. A Research Advisory Committee activated in February, with Walsh McDermott of the department of public health of Cornell Medical College as its chairman, is at full strength and has had several meetings in which it has been educating itself on procedures and problems and discussing specific programs. The committee now has 14 members drawn from the physical, biological, and social sciences and from industry. The advisory committee and its growing list of consultants are being relied upon to help enlist the more active help of the scientific community with problems of development.

A parallel development has been the signing of a contract with the National Academy of Sciences for the formation of a panel to advise AID on science and technology as applied to development in Latin America. According to AID, this special panel will function as part of the academy's international branch which is headed by Harrison Brown of California Institute of Technology.

But the key role in the reorganized research effort is reserved for the new science director. The 48-year-old Weyl is a mathematician who first entered government service during World War II when he worked for the Navy Bureau of Ordnance's research group on high explosives. In 1947 he joined ONR's mathematics branch and has served the organization since then in posts of increasing responsibility.

Weyl sees a parallel between the role of AID in the current incipient phase of research on development problems and the role of ONR in the period immediately following World War II when there was a scattering of scientists from wartime posts and a hiatus in government support of basic and applied research. ONR at that time was one of the agencies which took initiative in forging the relationship between government and the research community which has become literally a vital one for the nation. Weyl feels that a similarly important step must be taken in enlisting research in the effort to apply modern science and technology to the problems of underdeveloped areas. Weyl insists the job must be done, if not by AID then by some other agency.

Weyl is still at the stocktaking stage in his new job, but he stresses that one thing that must be done is to collect and systematically analyze data on AID projects relevant to major development problems. He notes, for example, that programs to increase agricultural productivity have failed in some places and with some crops. Other projects have succeeded. Weyl thinks that by reviewing the experience carefully, we can "improve the score."

#### **Human Resources**

Weyl thinks that AID must be concerned with both short-term and longterm projects. To him the people in an underdeveloped country are "the most powerful tool of all" and he cites the need for research on the question of how to improve education systems in underdeveloped nations. One example of a project promisingly under way, says Weyl, is the effort to develop a mathematics curriculum and teaching techniques for African schools. This project is led by M.I.T. professor Jerrold R. Zacharias, who is also a member of the AID research advisory committee.

There is no doubt of Weyl's seriousness about grafting research successfully onto the foreign aid program or of the backing of AID officials like Bell and Baumgartner. But there is no ignoring the fact that AID has provided a hostile environment for a serious research effort.

Whether this is really changing should SCIENCE, VOL. 141 be indicated in the treatment of the research section of the AID budget by Congress this year. Some \$15 million is being asked, a doubling of the estimated \$7.7 million spent in fiscal 1963. However, the chairman of the House foreign aid appropriations subcommittee, the puissant Otto Passman (D.-La.), has been promising major surgery on the AID budget this year, and it would not be surprising if the funds requested for research were whittled down.

Perhaps a more direct test will be whether or not funds are provided to enable Weyl to hire some first-class specialists to strengthen the AID research staff. In the reorganization act of 1961, some "supergrade," higherlevel executive appointments for scientists and others with technical training were authorized, but appropriations for pay were never voted and the jobs were never filled.

Amidst these uncertainties, it is understandable that Weyl, an experienced and knowledgeable government official with a career in the balance, has not cut his moorings with the Navy.

-John Walsh

## Scholarships: A New Study on Who Gets Them and Who Needs Them by American Council on Education

It is probably true that any poor but bright and sufficiently determined American boy or girl who wants a college education can get one, although it may take the exertions and the luck of a modern Horatio Alger hero. The studies, however, show that a great many young people capable of college work, especially those with the socioeconomic odds against them, don't win through. And, since trained brainpower is now a valued national resource, the question is being asked whether the nation can afford to waste the talents of so many of the able but needy who either don't try to overcome the odds or fall by the wayside.

These points are made in a study on aid to undergraduates, released last week by the American Council on Education (*Financial Aid to the Undergraduate: Issues and Implications*, available from the A.C.E., 1785 Massachusetts Avenue NW, Washington 36; \$2).

In the study, the director of the council's office of statistical information and research, Elmer D. West, provides what is essentially a review of current available data, along with a set of conclusions based on the data. The report marshals facts on scholarships, family income of college students, trends in tuition, fees, and other costs and in general provides pertinent information on financial aid, particularly on who needs it and who gets it.

The major conclusion of the study is that a great increase in financial aid to undergraduates—in scholarships, loans, jobs—is desirable, and that what is needed to reduce the loss of talent from a particular sector of society is a new federal program to identify students with high potential early, encourage them to prepare for college, and provide "small scholarships" for those from families in the low-income brackets.

Three reasons why self-reliance and self-help may not be enough to get the able but nonaffluent student through to the bachelor's degree these days, West suggests, are rising enrollments, rising costs, and rising standards.

Enrollment for degree credit in institutions of higher education in 1961 was 3,845,956, according to the report, and the estimate is that by 1970 the figure will have climbed to 6,936,000. Whether the scholarship, loan, and job opportunities can be increased proportionately is an open question. If not, an alternative, the report notes, is that "institutions accept in greater proportions those who can finance their education and pay less attention to those who cannot"; it adds, however, that "this last alternative probably will be unacceptable."

Tuition has been rising at a faster rate than the total costs of education, and this trend naturally affects students in public institutions less than those in private ones, where tuition represents a much larger portion of total costs. The report shows that in the 5 years between 1957 and 1962 the increases in average charges for tuition in the first two school years of the period were 8.4 percent for resident students at public institutions and 16.9 percent for students at private colleges and universities. Over the last three school years the increases were 10.1 percent and 18.9 percent, respectively.

The paradoxical fact that able but needy students get a rather modest share of scholarship funds is explained in the report as follows.

"Students coming from higher socioeconomic groups are more frequently awarded scholarships than are students from lower classes, whether or not financial need is a criterion. This may be because the former prefer to attend more expensive name colleges and the latter are content with colleges less well-known and less expensive." The report, for example, quotes an earlier study which showed that in 1957 "only 18 percent of the scholarship holders at Harvard come from families with incomes below \$4000."

The importance of such factors as ancestry, environment, and socioeconomic status are shown in data accumulated by the National Merit Scholarship program over a number of years, in which a good deal has been learned about the backgrounds of merit scholarship winners. Of 831 winners in a typical year the fathers of about 25 percent were manual workers. In other words, says the report, the larger number of lower-level workers produced a quarter of the winners, while the smaller number of higher-level workers produced three quarters. The report says that, in 1956, while it took 12,762 "professional, technical and kindred workers" to produce one National Merit Scholarship winner, it required 3,581,-370 "laborers, except farm and mine."

Generally, then, the predicament of the student working his way through college can be summarized this way. Tuition, fees, and living costs are going up steadily. Scholarship money is concentrated in private colleges and universities rather than the public institutions where students with meager resources tend to go. Rising academic standards put special pressure on those who must spend substantial time on jobs to pay their way.

#### A Task Undone

In its conclusions, the report says, "there are economic barriers, and particularly socioeconomic barriers, which deprive capable students of a higher education and deprive the nation of their services at the level at which they could perform. . . .

"The task is not yet being done satisfactorily by the states, by private individuals and organizations, or by colleges and universities. The data show conclusively that there is a segment of the population with insufficient funds to educate their children to the maximum level of capability. There is no reason to assume that national needs for educated manpower will diminish; in fact all the evidence is that needs will increase. All youth with talent are not being identified early enough—or