is good. . . . [Rock] has clearly demonstrated that the Church is not opposed to birth control as such but to the artificial means to control births. . . . He presents many cogent arguments for the formation of a public policy on birth control, and some of his suggestions could contribute to the establishment of domestic peace in our pluralistic society. With reason, he calls to task those who are unwilling to face the implications of the much publicized population explosion. He also makes an eloquent, and much needed, plea, for Federal grants to perfect the so-called Rhythm System so that it might become a means of controlling births which is not only morally acceptable but also scientifically accurate."

The reviewer then made it clear, however, that he felt that Rock's theology was not up to his medicine. The book, he said, "contains several statements which are theologically incorrect and certainly misleading. When he [Rock] speaks on the formation of the Catholic conscience, he fails to take into consideration the true complexity of this problem and so commits in the field of theology the same mistake he urges against the theologians in the field of reproductive physiology. . . . In his defense of the 'natural' and, to his mind, 'lawful' use of the progestational steroids as contraceptive devices, Dr. Rock does not meet the incisive arguments against his position which have been continually voiced by Catholic moral theologians. . . . Theologians," the Cardinal concluded, "must recognize the competence of Dr. Rock in the field of reproductive physiology but he must recognize their competence in the field of Catholic moral teaching. Fair-minded people will appreciate that such cooperation in no way curtails the doctor's scientific freedom. It would rather aid him in his dedicated pursuit of the ultimate truth in this matter, the defense and formulation of which in theological terms is not the task of the individual but that of the whole teaching Church."

A more critical attitude toward the Rock thesis was offered by the Right Reverend Monsignor John Knott, director of the family life bureau of the National Catholic Welfare Conference, in a review in the Washington *Post*. "The cause of honest discussion would be better served," Father Knott wrote, "if Dr. Rock and all Americans were to face the reality of the Catholic position on contraceptives. It has not changed and will not change. This may be an unpalatable fact of life to many people, but it serves no purpose to ignore or obfuscate it."

Finally, *Commonweal*, a liberal Catholic journal, noted editorially that the debate stirred by Rock's book was less a testimonial to the book's virtues than a reflection of the Church's reluctance to accept a re-examination of its position on birth control. "Is it any wonder, then, that a book as inadequate as Dr. Rock's should receive publicity out of all proportion to its merits and soundness. Where most Catholics tread with muffled shoes and theologians keep their doubts to themselves, anyone who speaks frankly is bound to be made a hero or a villain. . . . The time has come—not to praise Dr. Rock's book, but for the Church and its theologians to confront anew the issues which he raises."—D.S.G.

AID: Almost Everyone Favors Research on Development Problems But Going Has Not Been Smooth

In the first 15 years after World War II, while the United States was spending a sum approaching $100 billion on military and economic aid to other countries, virtually none of this money went into research to determine what should be done and whether what had been done was effective.

Then in 1961, in the latest in a long series of reorganizations, the foreign aid program was transmogrified into the Agency for International Development (with the convenient acronym AID), and a research unit with separate identity and a budget of its own was provided for the first time.

At the end of its first year of existence, this research unit came under scathing criticism from a congressional investigating committee for poor management of contracting operations.

Now, 7 months later, the effects of this investigation quite evidently linger on. Almost everyone seems to agree that the problems of development require a serious and well-organized research effort, but for reasons in part traceable to the investigation, AID's research operation has been living in limbo.

Lately, one Congressman has raised questions about the status of an AID employee involved in a case that attracted the special attention of the investigating subcommittee and this has brought the matter to the fore again within the agency. Word of the incident has circulated among other agencies and has been nervously interpreted by some people as raising a threat of direct congressional interference with personnel and research.

The failure of the foreign aid agency to carry out a systematic research program over the years can in part be explained by a factor which also contributes to the agency's sense of insecurity: foreign aid has always been viewed as a temporary program. From its beginning, almost the only thing permanent about the agency has been change—in purpose and organization.

What began as a program specifically aimed at the economic rehabilitation of the war-ravaged nations of Western Europe and of Japan has evolved into an effort to promote modernization in the underdeveloped nations. Military assistance, which once had a major stress in the foreign aid program, is now given primarily to countries bordering Communist countries.

In industrialized Europe and Japan the aims of the aid program could be furthered fairly effectively through economic aid in the form of grants, loans, and technical assistance. In the underdeveloped nations, it soon became clear, problems of health education and general administration stood in the way of material progress. The foreign aid program therefore had to be modified to meet these new and more complex conditions, even to the extent of our espousing social progress as we have done most avowedly in the Alliance for Progress program in Latin America.

In recent years a feeling has grown that the problems of development would yield to research, but it has also been noted that scientists and technologists of the Western world were not working very hard on these problems.

While George B. Kistiakowsky of Harvard was serving as President Eisenhower's science adviser, a start was made in planning a research office for the foreign aid agency, and Jerome Wiesner, who became science adviser to President Kennedy, pressed ahead with the idea. The development assistance panel of the President's Science Advisory Committee wrote the report which provided the basis for the research office included in the reorganization of the aid agency in 1961. The chairman of this panel is Walsh McDermott, chairman of the department

of public health at Cornell Medical College.

What the PSAC panel envisioned was a small research and development office which would perform little actual research itself but would stimulate and support R&D activity on development in the universities and foundations, private industry, and other government agencies. The instruments to be employed were the familiar ones of contracts and grants, studies by field teams, meetings and conferences.

For director of the unit, the panelists said what was needed was a "man of eminence" and added the special qualification that he "must command the respect of the scientific and engineering communities." The professional staff was to be made up of a small group of specialists in fields relevant to economic development—education, science, health, administration, transportation, and so on.

Congress, though with no great show of enthusiasm, did approve the proposal for a research office and appropriated $6 million for operations in fiscal year 1962, a sum scaled down sharply from the $20 million requested by the administration and the $50 million recommended by the PSAC panel as a first-year budget.

There was a delay of several months before the fledgling research office could begin to function. The new AID administrator, Fowler Hamilton, was confronted with the formidable task of reorganizing AID as well as with the agency's ordinary herculean problems, and, as one observer outside the agency put it, Hamilton did not feel that research "was a priority No. 1 problem."

The search for a director of the research office occupied several months, and the talent hunters at length settled on Edward Fei, an economist and specialist in development problems from the University of Wisconsin. He had taken leave of absence from the university to head the AID group preparing for United States participation in the U.N. Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas, held in Geneva last February.

Fei was made acting director of the Office of Research Evaluation and Planning Assistance Staff—in which post he was to report directly to Hamilton—and acting director of research. He was a newcomer to AID, taking over a new office for which policies were only vaguely defined. Significantly for later events, REPAS was not assigned legal counsel or contracting officers of its own.

Fei had to try to recruit a staff whose members not only were competent in their own specialties but knowledgeable in the problems of development. At the same time, Fei was feeling heavy pressure to show results in what was left of the waning fiscal year in order to justify an increased budget the next year.

When the AID administrator granted Fei's office separate contracting authority, apparently in a move to clear the track, the ingredients for REPAS's troubles with Congress were complete.

Congressional interest in REPAS was disclosed last summer when hearings on the unit's contracting operations were called by the foreign operations and monetary affairs subcommittee of the House Government Operations Committee. Among the duties of the foreign operations subcommittee is the study of foreign aid operations with a view to determine how economically and efficiently they are conducted.

A Serious Subcommittee

Chairman of the subcommittee at the time of the investigation was Porter Hardy, Jr., (D-Va.), who had had other experience of congressional inquiries as a member of the Armed Services Committee's investigations subcommittee, which spends a good deal of time looking into military-industrial complexities.

Hardy's foreign operations subcommittee, which in recent years has conducted four studies of foreign aid, acquired a reputation on Capitol Hill for serious digging for facts and sound documentation. Hardy himself sometimes adopts an abrasive style in subcommittee hearings, but the committee generally limits itself to the subject of the inquiry at hand and therefore has made fewer headlines than some other probers who follow where fancy or opportunity leads.

In 6 days of hearings in August and September the subcommittee concentrated on four of some 30 REPAS projects funded in fiscal '62: (i) a $28,625 contract for a solar-powered boat; (ii) a $400,000 contract for 1000 transistorized televisions for research in education; (iii) a $1,250,000 contract to the University of Wisconsin for a study of land tenure practices in Latin America and their effect on land reform; and (iv) a $340,000 contract to the American Bar Foundation for a study on legal aspects of land reform.

On the land-reform study contracts REPAS was criticized not only for "circumventing federal regulations" on contract procedures but also for possible duplication of other research, failure to coordinate the two REPAS projects, and not setting precise research objectives.

The subcommittee also said that the haste in which the contracts were negotiated "stemmed from a desire to obligate funds which if unexpended by the end of the fiscal year would revert to the Treasury."

In a separate report on the contracts for the solar boat and TV sets the subcommittee was even more censorious. In the first two of its findings and conclusions the subcommittee charged that REPAS "entered into contracts without following normal and businesslike procedures to assure procurement of property and services to the best advantage of the Government." It also charged, "The Acting Director of REPAS, who, under this contracting authority, has obligated approximately $8½ million during his first 6 months in office, lacks administrative and contracting experience, and should have been supported by administrative, legal and contracting personnel from elsewhere in AID."

The report goes on to cite 21 points of principle and detail. In the case of the transistorized TV's, the subcommittee questioned the "urgency" claimed for the contract and asserts that AID did not provide "any real justification for the purchase." Haste in negotiation was again noted, and the report says, "As a result of the Communications Resources Division's actions which eliminated competition, AID paid a premium price for the receivers."

The TV contract, incidentally, was later canceled, the only one of the four in question to be so dealt with.

The solar-boat contract called primarily for a collapsible boat for use on tropical rivers and for a propulsion system, a modularized panel of solar cells with an output of 100 watts as a battery-recharging center. What was contemplated was a 3 months' trial on the sluggish rivers of Surinam to test the performance of solar-powered battery-recharging gear with communications equipment and various low-wattage power tools. The point of the expedition was to subject the fairly fragile equipment to the climate and

actual treatment it would get in an underdeveloped country. It was hoped that the expedition would stimulate industry's interest in solar power and thus aid in ultimately lowering the present high price.

While the subcommittee was skeptical of the expedition idea, its major discontent centered on what it saw as loose contracting practices and a legal conflict-of-interest issue affecting an AID employee.

A central figure in the solar-boat project was John Hoke, who had served 4 years in Surinam as an AID communications media officer and was a prime mover in the solar-power project when he returned.

Hoke has a background as a biologist and talents, as one AID official friendly to him described it, as a "gadgeteer." While in Surinam, Hoke had gotten interested in solar cells, and when he returned to the United States in October of 1961 he raised the possibility of the solar boat. When Hoke left the agency the next month, he sought to win support for the project from the Army and from private industry; he was unsuccessful, though he drew expressions of interest in both sectors. Hoke returned to AID as a $35-a-day consultant on communications in January of '62. The contract for the solar-cell project was signed with a West Coast electronics firm the following May.

The subcommittee was highly critical of the contract's history and in the report noted that "it appears that AID uses a device known as an 'unsolicited proposal' as a means of avoiding competitive bidding."

The report reserved some of its barbs for Hoke, saying that he had failed to "delineate between his official and his personal position." The subcommittee concluded that the enthusiastic Hoke had taken a prominent role in the negotiations and that his conduct had been very freewheeling for one representing the government in contract dealings.

Hoke also had, while he was off AID's rolls, initiated talks with *National Geographic* about writing an article on the projected expedition to Surinam, and he maintained this contact after he rejoined AID. The subcommittee construed the talks as indicating that Hoke planned to accept a $1200 payment for the piece, though in government employ. Hoke testified at the hearings that he intended to be guided by AID regulations on such matters.

The committee report appeared in late September, and subsequent events have been influenced by changes at AID and within the committee. Hamilton resigned as AID Administrator and returned to his New York law practice. He was replaced by David Bell, who was director of the Bureau of the Budget.

In January Bell wrote a letter to the subcommittee chairman which, in effect, was a blanket concurrence with the subcommittee's recommendation and an assurance that the changes urged in the report had been made or would be made.

In the organization of the 88th Congress, Hardy moved into the chairmanship of the Armed Services investigations subcommittee and, perforce, gave up his government operations subcommittee chairmanship to Representative John E. Moss (D.-Calif.), who now heads the reconstituted subcommittee on foreign operations and government information.

Last month, Hardy, who remains a member of the foreign operations subcommittee, wrote to Bell inquiring about Hoke's status. Hoke last February was made a temporary employee of AID at a middle-level rating in the communications division. He has continued to work on micropower problems and has produced plans for a hand-wound generator which represents AID's first patent applied for in its history.

Hardy understood from Hamilton that Hoke would be released by AID when his contract expired last fall. But Hardy, in his recent letter, made a point of saying his "overriding concern" was not the disposition of Hoke's case but, rather, the fact that the case "raised questions concerning the reliability, integrity and judgment of AID officials."

As this is written the Hardy letter is still on Bell's desk, and the whole matter of AID research remains a problem for the new Administrator.

This is not to say that nothing has been done. The agency is engaged in perhaps the most earnest self examination in its history, and this includes a serious review of research programs and procedures, according to Bell's January letter.

REPAS, administratively, has been shuffled into a subordinate box on the agency chart and has become part of a new Office of Human Resources and Social Development, headed by Assistant Administrator Leona Baumgartner, former commissioner of public health in New York City, one of whose main tasks is to find answers to AID problems with research.

Significantly, an advisory committee on research, made up of nongovernment experts, is now being activated after a hiatus of a year and a half. McDermott is chairman of the group, and several members of the original PSAC panel are members, so for the first time since it began to operate, the research unit will have supporting expertise and the links to the national scientific community that everyone agrees the AID unit must have.

Internally, there is no question that the morale of the research unit has been weakened and that its effectiveness has been undermined. The number of contracts awarded, for example, has fallen off sharply. In the bureaucracy, any section of an agency which offends Congress falls under a kind of quarantine.

And AID is among the most sensitive of agencies about legislators' feelings. AID officials face an annual agony in House appropriations deliberations on foreign aid, which are dominated by Representative Otto E. Passman (D.-La.), who has made himself inspector general and chief surgeon of foreign aid. And this year may be a particularly trying one, since talk of a tax cut on top of a whopping budget deficit is likely to put the AID request for $4.5 billion on the economy chopping block.

An unknown quantity in the Congress-AID research quandary is the new management of the foreign operations committee. So far, Congressman Moss is keeping his own counsel and has his subcommittee staff looking searchingly into REPAS and related records. There has been no sign of instant hearings or headhunting from the new chairman, only the hopeful hint from staff members that Moss wants to look at the research unit and its activities in relation to the whole AID operation—a difficult task, but one well worth trying.

The opening episode of research in AID revealed poor management that extended considerably beyond and above the research and communications sections. Criticism of errors, however, should not obscure the fact that much useful work has been done as well, and this work should not be lost.

Bell, who apparently believes in the value of research on development problems, has the unenviable job of deciding, in an inherited situation, what steps

to take by way of correction and discipline. He must do this under the appraising eyes of Congress and in the knowledge that morale in his agency and the future of its research office will be affected.

It is worth noting that AID's troubles with Congress over research, like those of the National Institutes of Health, are over matters not of substance but of procedure. Congress may not understand research but it does have strong views on contracting, and this is perhaps the moral of the tale for the research-supporting agencies.

—JOHN WALSH

Federal Grant Policy: Academy Requested to Undertake Study

The council of the National Academy of Sciences, at its 8 June meeting, will consider a request from the American Society of Biological Chemists that the Academy undertake a review of the government's research grant policies.

The request, in a resolution passed by the society's membership at its April meeting, reflects growing concern, both scientific and political, over the relationships between federal agencies and their grantees. The resolution follows.

The condition of mutual dependence between the federal government and institutions of higher learning and research is one of the most profound and significant developments of our time. It is abundantly clear that the fate of this nation is now inextricably interwoven with the vigor and vitality of these institutions. In turn, the fate of these institutions is dependent upon the wisdom and enlightenment with which federal funds are made available in support of their activities. It is imperative, therefore, that the conditions governing this mutual interdependence be subject to continuing appraisal and that the policy underlying administration of federal programs in support of research assures that this relationship will continue to be mutually beneficial.

The basic instrument which has served to define these relationships has been the research grant, a device which should place the federal government and the grantee institution in a relationship of trust while conveying to the individual investigator public funds to be prudently expended in the accomplishment of his research objectives.

The necessity for clearer definition of the relationships involved has been brought into focus by the criticisms recently directed by the Intergovernmental Relations Subcommittee of the House Committee on Government Operations against the management of the research grants program of the United States Public Health Service. While regretting the manner of criticism of the House Committee and their failure to provide constructive leadership, we suggest that the time is indeed opportune and the moment critical for appraisal of the relationships which properly should obtain among the federal government, universities and scientific investigators if the national interest is to be served.

Accordingly, we, the members of the American Society of Biological Chemists, do urgently request that the National Academy of Sciences undertake a critical appraisal of these relationships in the support of fundamental research, not only by the National Institutes of Health but by all other federal agencies which are substantially so committed. It is our earnest hope that, following such appraisal, the Academy will enunciate the principles and philosophy which could serve as basic policy in the future conduct and administration of federal programs in support of fundamental research.

Hailsham vs. Cambridge: British Science Minister Will Get Degree

Ending the eruption which transformed the usually genteel ritual of awarding honorary degrees into a major academic controversy, the faculty of Cambridge University has agreed, after all, to give Lord Hailsham, Britain's Minister for Science, an honorary degree.

Faculty dismay over Hailsham's analysis of the emigration of British scientists to America was so severe that the university administration temporarily withdrew its nomination. Hailsham had blamed the widespread emigration on "America's need to live parasitically on other people's brains." The dons thought that this view was "impolite," and that the problem had at least as much to do with the organization of education and research in Britain (*Science*, 8 March and 19 April).

When, last week, the administration violated the gentlemanly tradition by which candidates are discreetly affirmed by the faculty and subjected Hailsham's candidacy to an actual vote, the results were close—304 to 284. Hailsham will get his degree, but he seems to have left a great many Cambridge fences unmended.—E.L.

Project Westford: Air Force Experiment Opens Successfully

The controversial space "needles" experiment, Project Westford, has finally gotten under way. In an announcement on 12 May from M.I.T.'s Lincoln Laboratory, which is conducting the project for the Air Force, it was reported that the needles had been launched from an Air Force satellite into successful orbit, and that radar contact had been made. No date was given for the launching.

The Laboratory reported that "the fibers are still in a compact cloud, centered about the dispenser package and circling the earth every 166 minutes in a near-polar orbit some 2000 miles high at an inclination of approximately 87 degrees. The cloud is expected to fan out . . . until the dipoles form a complete narrow ring or belt around the earth."

The announcement predicted that the fibers would have a life span of not more than 5 years. "By that time," it said, "the solar radiation pressure will have forced all the dipole fibers down to lower altitudes where the atmospheric density is greater and they will harmlessly disappear."

The link between the Air Force and the scientific community on Project Westford is William Liller of the Harvard Observatory. Liller, representing the Westford committees of both the International Astronomical Union and the Space Sciences Board of the National Academy of Sciences, will relay tracking data on Westford to interested observers. He may be contacted at the Harvard Observatory, Cambridge 38, Mass.—E.L.

Disarmament Agency: A New Look in ACDA's Research Programs

Two new research contracts signed last week by the Arms Control and Disarmament Agency with M.I.T.'s Center for International Studies mark a change from ACDA's emphasis on inspection and verification techniques.