at all—to provide them with the incentive and the education they need.

"A Federal scholarship program designed *to identify*, in time, those students with great potential, *to encourage* able students to develop their talents and *to help* students regardless of the low socioeconomic conditions of their families by making available small scholarships and by providing hope would go a long way toward reducing the barriers of equal opportunity."

In a chapter titled "Effectiveness of financial aid in reducing talent loss," the author of the report frankly acknowledges that the major assumption underlying his recommendations is unproved when he says that there is "no direct and conclusive evidence" that providing help for the talented but needy would lessen the waste of human resources. Some evidence there is, but it is viewed as still inconclusive.

Scholarships Not Enough

Simply making scholarship money available will hardly do the job. For the task of locating and encouraging those with undeveloped potential among poorly motivated students, particularly in inferior urban and rural schools, would require a major program on a national scale employing techniques that are only now being developed. The report indicates but does not emphasize that the problem is particularly difficult as it applies to Negroes and other minority groups.

Federal scholarship programs, with the exception of the GI Bill, which was veterans' legislation rather than education legislation, have never fared well in Congress, although the Senate has been more kindly disposed than the House. Opposition has centered on the questions of the cost and propriety of a major, permanent federal scholarship scheme, and there is no sign of a change of heart in the House.

Colleges and universities, which might be expected to send forth strong advocates of a national scholarship program, have displayed an ambivalence in pressing the matter. The fact is that public institutions, which charge their students low tuition and fees, are primarily interested in federal programs for the expansion of facilities and faculty development, and the public and private sectors of the community have tended to make common cause in putting these needs first. As a result, there has not been and is not now an effective lobby for scholarships.—J.W.

Changes at NIH: More Studies Underway; New Institute Makes Researchers, Kennedys, Happy

If, tucked away in a locked closet somewhere on its vast campus in Bethesda, Maryland, the National Institutes of Health were harboring an important fugitive, the number of investigators knocking at its doors could hardly be much increased. NIH's research programs will get the exclusive attention of a panel currently being assembled by Jerome Wiesner, the President's science adviser, that is expected to report to the President next spring; the National Academy of Sciences' Committee on Science and Public Policy has begun a review of research-grant policies of federal agencies that will have strong implications for NIH; and if the House accepts a resolution just introduced by four members of its Rules Committee that a special committee be appointed to make a thorough study of the overall research programs of the federal government (budgeted at over $14 billion for fiscal year 1964), NIH will find itself being inspected from that quarter, too. In addition, NIH is the object of continuous, affectionate attention from appropriations committees in both House and Senate, and of the equally continuous, though less affectionate, scrutiny of a House Government Operations subcommittee headed by Representative L. H. Fountain (D.–N.C.). And finally, through its jurisdiction over the Public Health Service, of which NIH is a division, and especially because of its current interest in a proposed reorganization of the PHS, still another House committee—Interstate and Foreign Commerce—has been keeping an eye on NIH as well.

The reason for all this interest is not hard to find—money. National expenditures for medical research have grown (maintaining, roughly, a proportion relative to all research and development funds of 5 to 7 percent) from $148 million in 1950 to $1.6 billion in 1963; the government, whose support for medical research outside its own laboratories was virtually nonexistent until 1947, has supplanted private and industrial sources as the principal angel of medical research; and a continually expanding share of the government's largesse has fallen to NIH to distribute. The government supports 62 percent of all medical research in this country, 40 percent of which comes through NIH, and NIH grants accounted for 40 percent, also, of the government's support of basic research in all fields in colleges and universities in 1962. This was an increase of 31 percent since 1952; during the same decade the proportion of research financed by the Defense Department decreased from 70 to 28 percent.

NIH has thus rather suddenly come to have a powerful influence not only on medical research but on all research. What NIH chooses to do, and how well it does it, are matters of great significance not only to the scientific community but to the politicians and government officials who feel a final responsibility for its use of public funds; hence the proliferating investigations.

When they arrive at the gates, investigators will find NIH growing and changing, as befits an institution on which Congress, despite recent irritation in some quarters with NIH grant policies, is about to bestow a record budget. For 1964, NIH will have at its disposal something between the $930 million on which it operated last year and the $980 million the President has asked. The House lopped off $18 million, $12 million of which was for construction of model treatment facilities for the mentally ill and mentally retarded, on the grounds that the plan lacked "definitive details"; the Senate has not yet completed its work on the appropriation.

Between an expanding budget, changing health patterns within the country, and developing needs in medical research, NIH has begun to outgrow its basic disease-oriented structure. The categorical institutes, established between 1937 and 1955, remain intact, but two new institutes have recently been created to support basic research that is not immediately directed toward the conquest of a specific disease. One of them, the National Institute of General Medical Sciences, has been in existence since 1958 as a division, and raising it to the level of an institute primarily means that it acquires more status. The second, the National Institute of Child Health and Human Development, is more of a departure.

The Institute of Child Health and Human Development became operational on 1 July; it is headed by Robert A. Aldrich, formerly chairman of the Department of Pediatrics at the University of Washington. For the first year of its life, the new institute will operate on $34 million transferred to it from the programs and budgets of other in-

stitutes, and it will take over responsibilities for the borrowed programs. About $25 million of its funds are already attached to active grants; the rest is new money, free to be used for grants and fellowships in new directions. The institute will not, however, initiate an intramural research program for at least another year. The new institute will begin at a point a good deal below that of NIH's biggest spender, the National Cancer Institute, whose 1963 budget was $155 million, but it is substantially larger than NIH's smallest component, the National Institute for Dental Research, whose 1963 budget was a mere $21 million.

The Child Health and Human Development Institute, unlike the rest of NIH, will focus on normal patterns of growth, development, and behavior. Specifically, it will support basic research in all phases of human reproduction, from cell differentiation to problems of early infancy; in normal growth and development and special child health problems; in gerontology; and in mental retardation. NIH has supported such studies in the past, as the fact that the programs will be transferred rather than new indicates, but its administrative structure was limited by law to institutes addressed to "[a] disease or groups of diseases," and identification with familiar dread diseases is credited with helping NIH coax money out of Congress. As a result, however, basic research on normal human development has been farmed out to the various institutes to administer and has lacked the kind of overall direction that separate status and the national advisory councils provide NIH's full-fledged components.

According to Aldrich, who has himself been the recipient of NIH grants, the need to pin a disease label on NIH-sponsored research in human development began, in the middle 1950's, to produce a certain restiveness among grantees in such fields as obstetrics, pediatrics, and child psychiatry. In time, according to Aldrich, NIH administrators were persuaded that a separate institute devoted to the study of normal processes was a good idea, Congress passed a law enabling the Surgeon General to create such an institute, and the institute was begun, with the great good wishes of all concerned.

If Aldrich is as able an administrator as he is a diplomat, the National Institute of Child Health and Human Development will have a rosy future. The story of the new institute is not so much the story of academic logic rewarded (though the research needs cited by Aldrich did play a significant role) as a story of medical research only narrowly evading the bear-hug embrace of politics. In this case, the leading bear was the President himself, representing the Kennedy family's long interest in mental retardation.

The Kennedy Hand

Among the task forces set up to advise Kennedy, when he was President-elect, was one on health and social security, headed by Wilbur J. Cohen, who later became the assistant secretary of Health, Education, and Welfare. Cohen's task force recommended the immediate establishment of a National Institute of Child Health, within NIH, by administrative action of the Surgeon General. There was some feeling that NIH was being told what to do, and Kennedy was quickly informed that such an institute would require congressional authorization. In his first health message to Congress, on 9 February 1961, Kennedy requested such enabling legislation, but in the meantime, and only 1 week later, the Surgeon General did exercise his authority to create a Center for Research in Child Health within one of NIH's established research divisions.

Within NIH the initial reaction was one of opposition. At about the same time there was considerable talk of establishing a special Institute on Aging. NIH officials, always under pressure from special interest groups to create institutes for their own favorite causes, began to envision themselves swamped by a scientifically nonsensical proliferation of specialized institutes devoted to whatever diseases, stages of life, or even petty irritations happened to engage the affection of the politically powerful. But as it became obvious that NIH was not going to be able to resist the attention of the Kennedys, and that something was going to happen, it also became obvious that NIH had to remain in control, to make sure that whatever happened, happened right. NIH began to use its own power—which, though it hardly measures up to the Kennedys,' is by no means negligible—to influence the shape of its new addition. The end result, a single institute devoted to broad problems of human development, incorporating both child health and aging, and a good deal in between, appears to be completely satisfactory to NIH officials and presumably will help reduce the discontent of the formerly homeless grant applicants in these fields as well.

Although division of responsibilities between the old institutes and the new will inevitably be somewhat vague, especially in the beginning, it is not too hard to see the Kennedy hand in the new institute's concern with mental retardation, a field which might with equal plausibility remain within the National Institute of Mental Health (NIMH). In fact, the largest transfer of funds from any categorical institute to the Institute of Child Health and Human Development is the $6,464,000 that is coming from NIMH and which includes $3,200,000 specifically earmarked for research in mental retardation. And if there are any doubts that the Kennedy presence will remain an important influence on the new institute, the bodily presence of the President's sister, Eunice Kennedy Shriver, on the 12-member National Advisory Child Health and Human Development Council should go a long way to dispel them.

—ELINOR LANGER

Federal Support: Academy Study To Cover Grants and Contracts

The National Academy of Sciences' study of federal policies concerning the support of research will cover basic research *contracts* as well as grants, the Academy has announced (*Science*, 5 July 1963). The study, headed by George B. Kistiakowsky, is seeking "constructive suggestions and criticisms" from scientists with experience in federally supported research. Communications should be sent to: the National Academy of Sciences, Committee on Science and Public Policy, Washington 25, D.C.

Announcements

An **industrial liaison** program has been established at Lehigh University's materials research center. Through the program, business and industrial firms may participate in materials research and development projects at the university; special seminars, conferences, and lecture series will also be scheduled. Further information on the program is available from J. F. Libsch, Materials Research Center, Lehigh University, Bethlehem, Pa.