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acy; and, "in any case, they cannot have the specialized backgrounds required in the many technical fields under their jurisdiction. Second, day-to-day management of a modern university requires a vast number of nonacademic administrators who have no special orientation toward the university or its purposes and who could just as well keep the vital "paper gas" flowing in business or government. In many cases they make decisions which impinge strongly on scientific or academic issues. It is symptomatic of this situation that the study "The Administration of Government Supported Research at Universities" (News and Comment, 29 April) was carried out by the Budget Bureau rather than by the universities. Inaction by the universities on this matter would be expected if the government were engaged in trying to reduce support and curtail the freedom of universities to manage federal funds. The reverse is true, and we now have the Budget Bureau suggesting "research agreements" to replace research grants or contracts. The research agreement presumably would fit the nature of most university research more appropriately than the grant or contract does and would enlarge the area of freedom of the research scientist or at least legalize the freedom he already exercises. It may also serve to shift responsibility for allocation of funds from the granting agency to the university administration.

But in order for the proposed system to operate effectively there must be an impedance match between federal and university administrations; at present many scientists have reason to believe that the match is poor indeed. There is widespread doubt that universities are capable of managing research funds wisely or of making the crucial decisions which will influence science in fundamental ways.

Universities would do well to borrow a page from the book of the federal agencies written since World War II. This book teaches that a proper impedance match between the scientific community and government agencies has been achieved when active and leading scientists have a significant role in policy and in budget allocations and when the government administrator has training and background in the field for which he is responsible, knows the scientists in his field and their work, and is encouraged by his agency to seek new ways to advance his science. The paral-

lel in the university would find for each broad and active research field a dean who knows the overall field closely. The dean would work closely with an advisory panel of scientists, including members from other universities, and they would jointly be responsible for allocation of funds for education and research and for decisions affecting the future of the field in other crucial ways. A structure of this sort, combining specialized knowledge and administrative responsibility, is essential if universities are to assume the more important role which is implied in the Budget Bureau study.

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### International Education Dialogue

The recent congressional hearings on the International Education Bill show the growing interest of the U.S. government in funding programs for international studies. All persons concerned with the crisis in education in developing countries welcome our widening interests, but they wonder if our new plans offer a genuine dialogue.

They demand both technical assistance and associated science-teaching programs, but rarely can we give assistance without adding our social ideas as part of the package. Much as the developing countries call for a wide variety of assistance programs to become effective, it is hoped, before they and we are overwhelmed by problems of survival, they need dignity and acceptance as colleagues working for the common good. Other nations see much of our international dialogue polarized into an offensive parochialism as a price for assistance. Our ideas of science education are exported, and much of this is right, but in this process there is little humble search for new ways of seeing others and understanding ourselves.

There are now several centers, in addition to the Division of Science Teaching at UNESCO, for collecting information on science education programs in various countries, but none is based on service as a means to obtain information and create the needed climate of friendly inquiry between different peoples and between physical sciences and the social sciences such as cultural anthropology.

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SCIENCE, VOL. 152