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Distribution of Federal Research Funds

The allocation of federal research funds is likely to be a continuing source of controversy. In 1962 ten institutions received 38 percent of the total, while 25 received 59 percent. At least two factors contributed to this concentration. First, a number of universities managed large research establishments for the Defense Department, the Atomic Energy Commission, or the National Aeronautics and Space Administration. A second factor is the known excellence of the institutions receiving funds. A few universities have obtained many of the best men, who in turn generate first-rate research proposals.

Policies of government agencies differ with respect to distribution of funds. The Defense Department awards research contracts to those most capable of getting results. Since the principal business of the organization is defense of the nation, such a policy seems in order.

The National Institutes of Health and the National Science Foundation have succeeded in attaining a fairly widespread distribution of their funds. Lumping the two together for simplicity, one finds that, in fiscal 1962, four populous eastern states received $7.0 per capita. Five middle western states obtained $3.4, while eight southeastern states received $2.1. However, considered on the more realistic basis of dollars per *scientist* in these regions, the distribution was roughly even. For the eastern group the figure was $2000; for the middle western group, $1590; and for the southeastern group, $1600. These figures indicate that these two granting agencies have tried to distribute their funds broadly.

Despite such efforts, the fact remains that support is concentrated in a relatively few schools, and that some 700 institutions in this country which award baccalaureate or higher degrees in science receive no research grants from the National Science Foundation.

In considering policies with respect to distribution of funds for academic research we should ask ourselves: What should we be trying to do? What is the bottleneck today? Is it a need to acquire knowledge at a faster rate, or is it a need for more trained scientists? If the bottleneck were new findings, we would be justified in persisting in giving excellence overriding priority in the distribution of funds. The current flood of publications scarcely supports this view. Many believe that adequate training of students should have a priority in the academic world at least equal to that of research results. In the coming decade increasing numbers of students will enter universities, and an additional new group of professors must be prepared to teach them. Our future economic health depends on an adequate supply of first-class scientists for industrial organizations.

We have been told repeatedly, and we believe, that research lends excellence to teaching. The argument is that research keeps professors more alive and abreast of current developments. However, if the scientist at a university does not teach or if he directs only a few graduate students, he serves a limited academic function. With most of the grant money going to a few institutions, the remaining hundreds of schools having little or no funds for modern equipment are falling farther and farther behind in quality of staff and teaching.

Excellence in research productivity should continue to be a primary criterion in the choice of grantees, but agencies such as NSF should give weight to the training aspect in making allocations of funds.—PHILIP H. ABELSON