

methane to give *N*-methylidihydroactidione ($C_{16}H_{27}NO_4$). These facts and other transformations are best interpreted on the basis of the proposed structure I.

A detailed account of the work will be reported in a forthcoming publication.

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Present Distribution of Medical Research Funds by Governmental Agencies

In my former communication on "Distribution of American Research Funds" (*Science*, February 6, pp. 127-130) primary emphasis was laid on the seemingly undue concentration of such research grants in the northeastern section of the country (states bordering the Atlantic Ocean from the District of Columbia northward). The regional and institutional inequalities in distribution were related principally to institutional representation on disbursing or advisory committees. Data presented in that first article dealt mainly with grants made by private and semiprivate foundations, although one U. S. Public Health report showed a fairly equitable geographic distribution of almost \$2,000,000. Even there, however, the evils of committee representation were strongly in evidence.

Thomas B. Turner (*Science*, April 16, p. 391) has defended this favoritism shown to institutions of the northeastern coastal states on the basis of their greater research facilities and trained staffs of investigators. However, Prof. Turner frankly restricts his interest to the present ability of such institutions to prosecute research and get things done, stating that the larger problem of scientific development of the country as a whole was beyond the scope of his communication. No thoughtful person would doubt that the states of the northeastern seaboard do possess superior facilities and personnel for research; otherwise, there would exist no justification for all the funds which have been poured into them through past decades.

Scientific development of the country as a whole is of much greater importance through the decades ahead, however, and should transcend petty regional jealousies and rivalries for funds available. Since no National Science Foundation has yet been established by Congressional action, let us look further into the distribution made by certain governmental agencies which are attempting to stimulate and support medical research over the country. Of these agencies, the U. S. Public Health Service is easily the most important, having distributed roughly \$10,000,000 in the 20-month period from January 1, 1946, to August 31, 1947 (*Publ. Hlth Reps.*, Suppl. #205, January 1, 1948). Careful analysis of this sum's distribution in the form of some 700 research grants yields the following pertinent data:

Excluding from consideration 17 grants made to national associations or to individuals whose whereabouts could not be determined, we find that 294 grants (or 43% of the total number) went to recipients in the northeast-

ern area, which holds only 30% of the country's population, as against 389 (or 57%) over the remainder of the country. This 43% of the total number of grants brought to this small northeastern area 47% of all funds distributed. There were 67 institutions or individual recipients in the Northeast and 91 elsewhere, grants to the former averaging \$15,400 each and those to the latter \$13,100.

Johns Hopkins, Harvard, Columbia, and New York Universities and the University of Pennsylvania head the list of recipients, constituting 5 of the 6 highest. These 5, plus Cornell, received 65% of all funds distributed to the northeastern area, while the highest 6 in the remainder of the country (the Universities of Chicago, Utah, Minnesota, Michigan, and California, and Washington University in St. Louis) received 39% of that area's funds. Although the Public Health Service did not this time publish the names of scientists serving on its lists of advisory panels, the similarity in distributional characteristics leads one to suspect the same relationship of committee representation and recipient rating as was set forth in my earlier article.

In grouping the U. S. Public Health Service grants according to institution where the work was to be performed, a number of grants made in the name of an individual were considered as made to the institution when the individual in question was known to be closely associated thereto.

One additional government granting agency for which partial data have been supplied is the Medical Sciences Division of the Office of Naval Research. In its list of universities and nonprofit organizations in which fundamental research is being supported, 39 are found located in the northeastern coastal area and only 38 scattered over the remainder of the country. New York, Massachusetts, and Pennsylvania lead the list in numbers of institutions receiving support, with 12, 8, and 6, respectively. Numbers of different projects supported in each institution were not given, nor were the sizes of grants specified.

It thus seems evident that governmental agencies—probably influenced by the constitution or their advisory panels of scientists—are still reflecting the past dominance of the northeastern seaboard in scientific matters. It also seems evident that there exists serious need of a National Science Foundation, if the scientific potentials of *all areas of the Nation* are to secure equitable chances for development. Any legislation setting up such a Foundation should specifically require its membership to be drawn from *all areas of the Nation* and its benefits to be distributed so as to achieve maximal scientific development in *all areas of the Nation*. To leave selection of Foundation members to presidential or political whims may end in the same disproportionate distribution that has just recently occurred under the Smith-Mundt Bill. Of the 5 members of the Educational Exchange Commission recently appointed under that Bill, four are from the northeastern coastal area and only one from the remainder of the country!

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