

Development of Federal Grant Allocations

By Cecile Goldberg *

THE ALLOCATION of grants among States, though not significant while Federal aids were but a small part of total government expenditures, has taken on increasing importance as the size and scope of grants-in-aid have grown. Total Federal grants to States for the fiscal year 1946-47 are estimated at more than \$1 billion, continuing a gradual upward trend. Grants for social security and related health and welfare programs constitute about 70 percent of the 1946-47 total; the other 30 percent is composed of aids for education, transportation, and the development and conservation of natural resources.

The importance of grants-in-aid was recognized by President Truman in his first Economic Report to Congress, when he pointed out that "the Federal Government is engaged in several programs of grants-in-aid to State and local governments involving large amounts of money. Further programs are planned. These programs . . . contribute greatly toward bringing all sections of the country up to the levels of productivity consistent with American standards of living." Therefore, the President reported, he had asked the Council of Economic Advisers to determine, in cooperation with other Federal agencies and State and local officials, "to what extent revised standards for the distribution of these grants may take into account more fully the needs for support that exist in various parts of the country."

The problem of the distribution of Federal grants-in-aid among States has received less attention in the past than questions of what function to aid or the proportions such aid should assume. Yet the Federal allocation influences the amount of money that a State has to spend for a particular service, which in effect determines

the level of adequacy of the program. Equally important to adequacy, of course, is the effectiveness of a program's administration, but only the nature and evolution of Federal allocation formulas are considered here.

Federal "grants-in-aid," as used here, refer to payments for cooperative programs, which are made from the Federal Treasury to State governments, including their appointed or constituent departments. Such grants have been or may be made for many and varying reasons: to stimulate new programs, to combine local control with national money-raising powers, to assure a national minimum in programs of vital interest to all, to equalize service levels and relative tax burdens of a program, to improve the combined Federal-State-local tax system, and to aid in maintaining or approaching full employment.

The purposes for which grants are made have been most important in determining the financial arrangements adopted. Often, however, the purposes have not been fully realized because the financial provisions have been poorly adapted to the objectives. Most of the earliest grants were designed to stimulate the adoption or expansion of certain State-local programs. More recently, especially since the passage of the sixteenth amendment, which empowers Congress to tax incomes, grants have been occasioned by the greater Federal fiscal powers and the growing reliance on government for various types of health and welfare services. When a national interest is recognized and when local administration has distinct merits, whether for administrative, political, or constitutional reasons, the allocation and matching techniques employed should be designed to maintain a basic minimum program without placing undue burdens on taxpayers in some States. Such techniques are particularly important in the more expensive and more essential health and welfare programs. If the Federal share in the total program is to

be fairly substantial, the most efficient and economical use of Federal aid would in many cases be a distribution that would take into account relative State-local need for and ability to finance the service—that is, an equalizing allocation and/or matching formula.

Allocation formulas cannot be considered apart from matching formulas when a matching requirement exists; it is the total level of activity effected by the operation of both formulas together that is significant. Matching funds required of the States usually bear some uniform ratio to Federal aid; for one program the matching varies with State per capita income when it falls below the national average.

Allocation formulas are of two major types, statutory and discretionary. Within either category, allocations may be based on one factor or a combination of several factors—uniform lump-sum amounts, some general or special measure of population, area, star-route postal mileage, representation in Congress, and so on. For several programs, they depend on the amount of State-local expenditures for the purpose. In a very few instances, they are based on some relatively complex measure of specific program need.

Over the years, as the State functions aided by the Federal Government have increased in number and broadened in scope, bases for the apportionment of funds among the States have also changed in character. The evolution of allocation formulas, however, has not been nearly so progressive as has the growth, both in size and purpose, of the grants themselves. Thus, although today many of the actual and proposed allocation formulas are better adapted than were earlier ones to meet varying degrees of need in the several States, large sums of money are still being distributed among the States with only approximate regard for need and, in almost every instance, with no relation to the relative abilities of States and their subdivisions to finance the services themselves.

Earliest Measures of Allocation

The earliest grants were allocated among States in the simplest manner,

* Bureau of Research and Statistics, Division of Finance and Economic Studies. This article was prepared as part of Bureau Memorandum No. 65, *The Principle of Equalization Applied to the Allocation of Grants-in-Aid*, by Byron L. Johnson.

Table 1.—Federal grants-in-aid to States by selected fiscal years, 1900-46¹

[In millions]

Function	Fiscal year ended June 30—					
	1900	1920	1930	1935	1940	1946
Total.....	\$2.8	\$34.0	\$100.5	\$2,196.6	577.5	\$757.9
Social security and related programs.....	.9	2.9	1.3	2.8	359.2	611.5
Public assistance.....					271.1	421.2
Employment security.....				1.3	61.7	55.7
Health and welfare.....	.9	2.9	1.3	1.5	26.4	134.6
Education.....	1.2	4.8	10.1	12.7	24.7	34.3
Public roads.....		20.3	75.9	274.7	164.5	74.5
Natural resources.....	.8	6.0	13.2	14.5	29.1	37.5
Emergency relief and public works.....				1,891.9		

¹ From the *Annual Reports of the Secretary of the Treasury*. See the *Bulletin*, June 1947, table 8, p. 39, for definition of functional categories.

² Regular grants, excluding those for emergency relief and public works, amounted to \$304,700,000.

either in uniform amounts or in proportion to representation in Congress. The latter factor corresponds roughly to population (with some overweighting for small States) and thus is a crude measure of need.

The land grants for public schools and universities were uniform for each geographic subdivision. Those for public schools were initially one section of land out of every township, to be reserved for the maintenance of public schools within the township and to be granted to the inhabitants of the township. Later the grants were increased to two and, finally, four sections of every township. In addition, not more than two complete townships were to be given each State perpetually "for the purposes of a university," to be applied "to the intended object by the legislature of the State." Another section of every township was to be reserved "for the purposes of religion."

In 1837 the surplus above \$5 million in the United States Treasury was apportioned among the States "in proportion to their respective representation in the Senate and House of Representatives of the United States." The Morrill Act of 1862, making land grants to the States for colleges for agriculture and mechanic arts, used the same basis for apportionment. Each State was granted 30,000 acres of land or its equivalent in land scrip for each Senator and Representative in Congress to whom it was entitled by the apportionment under the census of 1860. This act was the first to aid a State function for which the Federal Government later assumed a continuing responsibility. It was also

the last of the general land grant acts.

Measures of Allocation Up to World War I

Except for the general "loan" of 1837, all grants to States until 1879 were land grants. In that year the passage of the act to aid education of the blind marked the beginning of a whole series of money grants to States under permanent legislation. From then until the First World War, though a number of Federal aid acts apportioned funds among the States in uniform amounts, distribution under some acts was made according to more refined measures of need, usually a population factor. A few acts used an entirely new basis.

Grants for manufacturing and distributing embossed books for the blind and "tangible apparatus" for their instruction, initiated in 1879,¹ were, and are now, allocated according to the number of pupils in public institutions for the education of the blind. This factor is a direct measure of the relative need for the service within each State.

Similarly, grants for homes for disabled soldiers and sailors are allocated among States on the basis of a uniform amount yearly for every inmate in such a home. The act of 1888,² initiating Federal grants for

¹ The benefits actually received by the blind under this program, however, are in kind. Federal funds go to the American Printing House for the Blind, which in turn distributes books and teaching equipment.

² The matching provision was incorporated in the appropriation act for the fiscal year 1890.

this function, provided for an annual payment of \$100 for each inmate. An early amendment set a historical precedent in that it was the first to require the States to match Federal funds with a similar amount. This principle of State matching has since become almost universal. Federal aid for homes for disabled soldiers and sailors was subsequently increased and since 1943 has been \$300 a year for each inmate.

The bulk of the grants during this period, however, consisted of uniform lump-sum allotments to States. No doubt a certain minimum sum is needed to provide the basic organization required in any State to perform the aided function, but such an allocation does not adequately measure each State's total need for a particular service. As an example of the lump-sum allotment, the Hatch Act of 1887, to aid in financing agricultural experiment stations, provided that each State receive annually \$15,000 for this function; an additional \$15,000 annually was authorized by the Adams Act of 1906. The second Morrill Act, passed in 1890, provided for a grant of \$25,000 annually to each State for the agriculture and mechanic arts colleges established pursuant to the land grants of 1862 for this purpose; and the Nelson amendment of 1907 increased this sum by another \$25,000 a year.

The first discretionary grant was authorized by the Weeks Act in 1911 for the purpose of cooperating with States in preventing and fighting forest fires along watersheds of navigable streams. The Secretary of Agriculture was empowered to enter into cooperative agreements on such conditions as he deemed wise, provided that each Federal allotment was matched by a similar amount from State and local funds.

Annual Federal grants for the maintenance and support of State and municipal marine schools, started in 1911, introduced the first "open-end" or indefinite matching grant. An open-end grant sets no specific limit on the amount authorized and carries the implication that the Federal Government will advance or reimburse all or some stated portion of State (and local) expenditures for the program and that a Federal deficiency appro-

priation will be made if necessary. In their more usual form, open-end grants offer Federal aid within some indefinite, but implicit, limit. In the case of the grants for marine schools the amount of the Federal grant was not specified except that the sums expended by States or municipalities would be matched dollar for dollar with a maximum grant of \$25,000 per school. This grant was thus logically a forerunner of the arrangement adopted for public assistance financing in the Social Security Act.

A deviation from the consistent use of lump-sum apportionments for agricultural education came with the passage of the Smith-Lever Act in 1914. This act, giving Federal aid for agricultural extension work, provided for the distribution of a large amount on the basis of rural population, to be matched dollar for dollar by State funds, as well as a much smaller sum in uniform lump-sum allotments.

Allocation Measures From World War I Until the Depression

The Federal-aid highway program, in addition to being the first really significant grant-in-aid program from a fiscal point of view, departed markedly from the traditional closed-allocation formulas. The Federal Aid Road Act of 1916 for aid in the construction of rural post roads laid down the basis for subsequent highway allocation formulas. Three factors were specified for use in the allocation of funds among States—area, population, and rural and star-route postal mileage—and all three were given equal weight. A limitation was placed on the formula, however, in that aid could not exceed \$10,000 per mile of road constructed. Dollar-for-dollar matching of Federal funds by State funds was required.

Except for highway grants, the other new or increased grants in this period tended to use lump-sum allotments or some general or specific population factor. At least one act permitted discretionary allocation. The matching principle became generally accepted during this period.

With the passage of the Smith-Hughes Act in 1917, Federal aid in the form of annual grants was extended to a new function—vocational education.

Funds for the various major groups of vocational subjects to be aided were, and still are, allocated among States according to some measure of population. Under this act, Federal grants for salaries of teachers, supervisors, and directors of courses in agricultural subjects are allocated on the basis of rural population; for courses in trade, home economics, and industrial subjects, on the basis of urban population; and for the preparation of teachers of vocational education subjects, on the basis of total population. For each category, the minimum annual allotment to a State was originally \$5,000 but was increased eventually to \$10,000. All Federal aid must be matched dollar for dollar by State and local funds.

Additional annual appropriations were authorized in 1929 for salaries of teachers, supervisors, and directors of agricultural subjects and of home economics. Funds for the former are allocated among States on the basis of farm population alone and for the latter on the basis of rural population; 50-50 matching is required for both. The use of farm rather than rural population as a base for the allocation of funds for agricultural subjects represents an effort to relate the distribution formula more closely to the population group to be served. The separation for allotment purposes of home economics from its earlier linkage with trade and industrial subjects appears to indicate a desire on the part of Congress to aid home economics departments in rural rather than urban schools. Further legislative refinements along these lines were made later, together with additional appropriations, and will be discussed below.

Closely allied to the grant program for vocational education is that for vocational rehabilitation, started in 1920. The Vocational Rehabilitation Act of that year provided grants to States for the vocational rehabilitation of persons disabled in industry and for their placement in employment. These grants are allocated among the States according to population, with a minimum allotment in any year of \$5,000 to a State and a requirement of 50-50 matching by the State. A subsequent additional appropriation, first made in 1930, fol-

lows the same pattern except that the minimum allotment under that appropriation is \$10,000.

Certain health functions received Federal aid for the first time during this period. A deficiency appropriation in 1916 started a series of small grants for special studies and demonstration work in rural sanitation. States requesting demonstrations had to agree to pay half the costs. The Chamberlain-Kahn Act of 1918 made appropriations for 2 fiscal years for the prevention and control of venereal diseases. Federal funds were distributed among the States on the basis of population, and in the second year the allotments had to be matched equally from State funds. The Sheppard-Towner Act of 1921, which provided funds for the promotion of the welfare and hygiene of mothers and infants for a period of 6 years (later extended another 2 years), heralded the entrance of the Federal Government into the field of maternal and infant health. These funds were distributed among States partly on a uniform lump-sum basis and partly according to population; \$5,000 of each State's lump-sum allotments and the total population allotments carried a requirement of equal State matching.

During this period also, the Federal Government increased its grants for several Federal-State functions already established: education of the blind, State homes for disabled soldiers and sailors, highways, agricultural experiment stations, and extension work. Each additional grant was allocated among the States on the same basis as its predecessors, though minor changes were made in the highway grants.

The 1921 Highway Act brought the 1916 allocation formula into basic legislation ("section 21") for the interstate and intrastate Federal-aid highway system. The major modification of the formula at that time was an increase in the Federal percentage (normally 50 percent) for States containing unappropriated public lands exceeding 5 percent of their total area. In these States the Federal share was increased by one-half the percentage that the area of such lands is of the total area of the State. The maximum

Federal aid per mile was also increased, and in the cases just mentioned this maximum was further raised in proportion to the increase in the percent of Federal aid granted.

A Federal grant was made by the Clarke-McNary Act of 1924 for cooperative farm forestry and forest-fire prevention. The funds were to be used at the discretion of the Secretary of Agriculture, who was again empowered to enter into cooperative agreements with State officials. Federal aid had to be matched by an equal amount of State funds.

Measures of Allocation During the 1930's

The depression and the resulting changes in the role of government caused a tremendous expansion in Federal grants to States, both as to functions covered and the amounts of money involved. The urgencies of the day focused greater attention than previously on the problem of distribution of these large sums of money. Consequently, many of the allocation formulas written into legislation or adopted by administrative interpretation of general statutory language were more complex than the earlier ones, largely because of the effort to measure need more accurately. The first active recognition of the principle of equalization came in this period. Certain of the existing formulas were changed somewhat to adapt them better to the ends sought. At the same time, however, many old formulas with their less exact measures of need were repeated in new legislation.

Relief, public works, and employment office acts.—The first of the depression grants came with the Emergency Relief and Construction Act of 1932 to relieve destitution, broaden the lending powers of the Reconstruction Finance Corporation, and create employment. To accomplish part of this objective, \$120 million in Federal aid was appropriated for highway construction work, to be distributed according to the section 21 formula ($\frac{1}{3}$ area, $\frac{1}{3}$ population, and $\frac{1}{3}$ post-road mileage). The amounts apportioned to the States were available as a temporary advance and could be used by the States to match their regular Federal-aid apportion-

ments. These amounts were to be reimbursed, however, beginning with the fiscal year 1938, by annual deductions from the regular allotments.

Subsequent highway-aid legislation, designed to increase employment through emergency construction, did alter the distribution formula, however. Grants for this purpose under the National Industrial Recovery Act of 1933, the Hayden-Cartwright Act of 1934, and the Emergency Relief Appropriation Act of 1935 provided for the apportionment of seven-eighths of the funds for the Federal-aid highway system according to the usual formula; the other one-eighth was allocated on the basis of population. This, in effect, gave the population factor the greater weight of $1\frac{1}{2}$, as compared with weights of $\frac{7}{24}$ for area and for post-road mileage. This adjustment in the formula channeled more of the highway aid into the most populous States, where the unemployment problem was more acute. Matching was dispensed with during this emergency period.

The 1935 Emergency Relief Appropriation Act also gave Federal aid for the elimination of hazards at grade crossings. The distribution of these funds was based on an adaptation of the highway-aid formula. One-half of the funds was distributed according to the population, $\frac{1}{4}$ according to mileage on the Federal-aid highway system, and $\frac{1}{4}$ according to railroad mileage (instead of area). No State matching was required.

To supplement the normal Federal aid functions, enormous grants were made at this time for public works and direct relief. The Emergency Relief and Construction Act of 1932 had provided that the Reconstruction Finance Corporation might make "self-liquidating" loans to State and local governments to aid them in providing necessary relief. This device, intended to stimulate State-local expenditures, did not prove effective and was soon replaced by grants. The Federal Emergency Relief Act of 1933 authorized grants of \$500 million for relief. Half of these grants could be used to reimburse one-third of the expenditures of State and local governmental units for relief; the remainder was to be used

when the funds available within a State from all sources, including Federal, were found to be less than estimated relief needs. Not more than 15 percent of the total Federal appropriation under this act could go to any one State.

From the date of this act through the fall of 1937, when the grant programs under the Social Security Act were in virtually full operation, Congress authorized more than \$3 billion for relief purposes through the medium of the Federal Emergency Relief Administration. (Another \$3 billion was expended directly rather than through grants in 1936 and 1937 by the Works Progress Administration.) These grants deserve close interest because of their size and the various methods of allocation used. It was left to the discretion of the Administrator of the FERA to distribute most of the funds among the States, and the traditional matching requirement was waived in most cases.

According to one authority, the 1933 legislation was the product of a compromise between two schools of thought in Congress.³ One, fearing the use of discretion by an administrative official, wanted to write the allocation formula and matching provisions into the law. This group felt that the matching approach was desirable because it "gave more to those States with the greater expenditures, or 'need'." The other group believed that State expenditures did not necessarily represent an accurate measurement of need and that reimbursement would only increase the inequity, since the States spending the most would receive the most. This school held out for administrative discretion in the disposal of the funds.

Before the first year was out, all relief grants were made on a discretionary basis; later grants did not include matching provisions, on the ground that 50-50 matching defeated the principle of equalization and was ill adapted to the exigencies of the relief situation of 1933-35. The activities of the FERA represented the first attempt by the Federal Government to distribute funds on a "variable grant" basis.

³ E. A. Williams, *Federal Aid for Relief*, 1939.

From the end of 1933 through the first half of 1934, grants were made on the basis of statements submitted by the State officials on relief needs, State and local funds available, and the amount of Federal funds needed. This basis was abandoned in the fall of 1934 as being too subjective. Then, mathematical formulas were worked out to determine the relative ability of a State to finance a share of the program. To ensure that each State was making the same effort and bearing the same burden, quotas were worked out on the basis of various series of economic data, including measures of State production, sales, income, wealth, bank deposits, population, tax collections, governmental receipts and expenditures, and assessment ratios. Four tentative quotas were computed from these data, and a fifth was devised to take into account some factors that could not be measured, such as restrictions on taxation and indebtedness and local attitudes. The final quotas were used as a basis for negotiation between the States and the Administrator. This method resulted in great divergences among the States in the Federal Government's share in the relief programs.

An approach to the problem of unemployment through placement of unemployed workers eventuated in grants to States for the establishment and maintenance of public employment offices. The Wagner-Peyser Act of 1933 set up in the Department of Labor a United States Employment Service, which was empowered to make grants of money to States over a 5-year period. At least 75 percent of the funds had to be allocated on the basis of total population, and all Federal aid had to be matched by a similar amount of State and local funds together; furthermore, at least 25 percent of the population allotment, and not less than \$5,000 in any event, must be from State funds alone. The act was amended in 1935 to require a minimum grant to each State of \$10,000 annually.

During this emergency period, the work relief, highway, and public employment office grants were also supplemented by grants for general public works. The National Industrial Recovery Act of 1933, in addition to

making grants for highway construction projects, allowed a large sum for public works. The Emergency Relief and Construction Act of 1932 had authorized "loans" from the Reconstruction Finance Corporation to States and localities, but title II of NIRA initiated the extension of grants in the field of general public works. The Federal Emergency Administration of Public Works, created by title II, operated Federal projects and administered grants and loans for State and local public works projects. Additional funds for this purpose were authorized by the 1935 Emergency Relief Appropriation Act.

PWA allotments were not lump-sum grants distributed annually among the States on any quota system based on population or any of the usual standards of previous Federal allotments.⁴ Funds for each project were applied for directly by the governmental unit undertaking it, and each project was judged on the basis of its own soundness from the legal, engineering, and financial points of view. Although no quota system was established, serious consideration was given to criteria which might be useful in determining need for Federal aid and making allotments. The main factors considered were population, unemployment, amount of relief expenditures, number of families being given assistance, per capita Federal revenues by States and regions, and area. None of these factors, it was felt, reflected adequately the need for public works. Instead of a completely objective formula, rough quotas were worked out by giving a weight of $\frac{3}{4}$ to population and of $\frac{1}{4}$ to the estimated number of unemployed. These were used merely as a guide to prevent concentration of funds in a few States.

The legislative maximum for Federal aid was 30 percent of the cost of labor and materials on each project. There was some consideration of varying the percentage and employing the maximum as a reward for economical expenditure; in the end, however, a uniform ratio prevailed. The maximum was raised to 45 percent in 1935, and since this percentage pertained to

⁴ Juanita K. Williams, *Grants-In-Aid under the Public Works Administration, 1939*, chapter 4.

the total cost of the project and not merely to labor and materials, the Federal share was thus virtually doubled.

The Social Security Act.—These temporary depression measures were eventually superseded by a long-range approach to the problem of unemployment and economic security. With the passage of the Social Security Act in 1935, several new types of grants were adopted. By far the most significant of these were the grants for the three public assistance programs, which put the open-end matching grant into use on a large scale. The grants are open-end in the sense that there is no maximum on the total Federal aid authorized and in that Federal aid will match all reimbursable. State-local expenditures. There are maximums, however, on the Federal aid per individual recipient per month.

Federal aid for old-age assistance and for aid to the blind, under the original act, was limited to 50 percent of the payments, up to a Federal-State total of \$30 a month per recipient. An additional 5 percent of the total amount granted for assistance payments was provided for use in financing the costs of administration, or payments to individuals, or both. Federal grants for aid to dependent children were $33\frac{1}{3}$ percent of the expenditures for assistance, up to a monthly total of \$18 for the first child and \$12 for each additional child in the same home.

These provisions were liberalized somewhat by the 1939 amendments to the Social Security Act. The maximum Federal aid per recipient per month was changed from \$15 to \$20 in both the old-age assistance and aid to the blind programs. In aid to dependent children, the Federal share was increased to 50 percent of the payments up to \$18 for the first child and \$12 for each additional child in the same household. The legislation also changed grants for administrative costs for aid to the blind to 50 percent of the expenditures by States and localities for this purpose.

The 1935 act also created an unemployment insurance program on a Federal-State basis and provided for payments to the States to cover 100

percent of the cost of the "proper and efficient" administration of the State unemployment insurance laws.

The Social Security Act also established the present three grant-in-aid programs of the Children's Bureau—maternal and child health, crippled children, and child welfare services. Under the 1935 provisions, grants for maternal and child health services totaled \$3.8 million annually. This total was divided into two funds: Fund A provided \$1 million to be allotted among States in uniform lump-sum grants of \$20,000 and \$1.8 million on the basis of the number of live births, and Fund B provided \$980,000 to be allotted according to financial need, as determined by the Secretary of Labor, after taking into consideration the number of live births in each State. The Fund A allotments had to be matched by an equal amount from State and local funds, but no matching was required for Fund B allotments.

Grants for services for crippled children totaled \$2,850,000 annually under the 1935 act, of which \$20,000 went to each State and the remainder was allocated on the basis of need as determined by the Secretary of Labor, after consideration of the number of crippled children in each State who needed the services and the cost of furnishing such services to them. The entire grant for this purpose had to be matched by a similar amount from State and local funds.

The original grants for child welfare services amounted to \$1.5 million annually, \$10,000 to be allocated to each State and the remainder to be allotted on the basis of State plans, except that each State's share was not to exceed its proportion of the total rural population. No matching percentage was mentioned, but it was specified that the grant was to be for payment of part of the cost of these services.

The 1939 amendments to the Social Security Act increased the appropriations for these grants. For maternal and child health, the sum to be allotted on the basis of live births was increased from \$1.8 million to \$2.8 million, and the financial-need portion was raised from \$980,000 to \$1,980,000. Grants for services to

crippled children were increased from \$2,850,000 to \$3,870,000. In addition to the previous uniform allotment of \$20,000 to each State, \$1,830,000 was provided for allotment on the basis of need, and both amounts were to be matched (Fund A). An additional \$1 million was authorized, with no matching requirement (Fund B), to be allocated on the basis of the financial need of each State for assistance in carrying out its plan. The Secretary of Labor was given discretionary powers for allocating these funds, after taking into consideration the number of crippled children in need of the services and the cost of furnishing such services to them; these two factors were the same as those in the other (Fund A) allocation made according to need. Grants authorized for child welfare services were increased by \$10,000 because of the extension of the title to Puerto Rico.

The unmatched grants made by the Children's Bureau on the basis of financial need are allotted by administrative discretion. For maternal and child health, the Bureau in the past has used formulas that have taken into account the number of live births in each State, sparsity of population, excess infant and maternal mortality, and the continuance of special projects initiated during earlier years. The Fund B allotments for services to crippled children have been made according to a detailed set of formulas, based on the following factors: the number of crippled children in need of such services, the cost of furnishing services to them, per capita income, sparsity of population, cases of poliomyelitis, deaths of children from heart disease, number of crippled children on State registers, special programs for care and treatment of children with rheumatic fever or heart disease, and other bases of special needs. In the case of both grants, the factors have been weighted and have been changed from time to time, as have the weighting ratios. As of July 1, 1947, the Children's Bureau began using a simple equalization formula for Fund B apportionments.

The 1935 Social Security Act also contained provisions regarding grant-in-aid programs for vocational

rehabilitation and for public health work.⁵ The new funds for vocational rehabilitation were allocated among States in the manner provided by the 1920 act, as amended—that is, on the basis of population, with a minimum allotment of \$10,000 and with the allotments dependent on equal State-local matching. The 1939 amendments increased the total grant from \$1.9 million to \$3.5 million and the minimum allotment per State from \$10,000 to \$20,000. Hawaii was granted \$5,000 for this purpose in 1935, and this sum was raised to \$15,000 in 1939.

Grants for public health work amounted to \$8 million annually, to be allotted to States on the basis of population, special health problems, and financial needs. No matching requirement was included. The amount was raised to \$11 million by the 1939 amendments, but the bases for apportionment were kept intact. The interpretation of these bases is discretionary under the law, and the percentage weighting of the three factors, as well as the series used to reflect the latter two, has varied from time to time. The U. S. Public Health Service issues annual regulations on the required amount of State-local matching of Federal funds.

Though by far the largest grant-in-aid programs of the thirties, whether emergency or permanent, dealt with the problems of unemployment, public works, welfare, and health, there were numerous changes in or additions to the older grant-in-aid programs. These included vocational education, agricultural extension work, agricultural experiment stations, and colleges of agriculture and mechanic arts. There were also changes in a few new small programs created by Congress—farm forestry, wildlife restoration, and venereal disease control.

Other grant legislation of the 1930's.—The George-Elzey Vocational Education Act of 1934 made additional grants for agricultural,

⁵ Later, title VI, relating to grants to States for public health, and title V, part 4, relating to grants to States for vocational rehabilitation, were deleted from the Social Security Act because of enactment of other legislation in these fields. See pp. 9 and 10.

home economics, and trade and industrial subjects of \$1 million for each category for each of the 3 fiscal years 1935-37. Grants for the first two were allocated on the same basis as those of 1929—farm population and rural population, respectively. The distinction made in that year in separating home economics allotments from the category of trade and industrial subjects was here carried one step further. Trade and industrial subjects were established as a separate category by this act, with allocations made on the basis of nonfarm population. Minimum allotments to a State for any 1 year were \$5,000 for each category, and equal State-local matching of all funds was required.

The George-Deen Act of 1936 authorized a permanent annual appropriation of more than \$14 million for grants for vocational education. Allocations for agricultural, home economics, and trade and industrial subjects followed the pattern of the George-Ellzey Act. In addition, grants were provided for courses in subjects dealing with distributive occupations and for the preparation of teachers for all aided subjects. These new grants were allocated on the basis of total population. Minimum allotments varied with the size of the grant to be allocated. This act also carried with it a new type of matching provision, a "ratchet" provision designed to increase the States' share in the total program over the years by gradually increasing the percentage of Federal funds requiring matching.

The rural population base and matching requirement tradition of grants for agricultural extension work were modified by a 1935 authorization of \$1 million for 1 year for additional cooperative extension work and the employment of specialists in economics and marketing. These funds were to be allocated at the discretion of the Secretary of Agriculture, and no matching was called for. The Bankhead-Jones Act of 1935 reverted to the lump-sum and population allocations, but this time farm population was used as a base, and the act again waived the matching requirement. The smaller authorization of 1939 was another discretionary grant with no matching requirement.

The allocation of grants for agricultural experiment stations, hitherto on a uniform lump-sum basis, was changed in the case of the additional grants authorized by the Bankhead-Jones Act. The new funds for research into basic laws and principles relating to agriculture, especially methods of production, distribution, and extension of markets, are allocated among States according to rural population; equal State matching of these funds is required.

Similarly, the Bankhead-Jones Act broke the tradition of lump-sum allotments for grants for agriculture and mechanic arts colleges. The additional funds authorized by this act included not only a \$20,000 uniform lump-sum allotment to each State but also a considerable sum to be distributed according to total population. No matching was required, however.

Of the other grant legislation during the 1930's, grants for cooperative farm forestry were on a discretionary basis with no matching of funds required; additional funds for education of the blind followed the established formula; and grants for venereal disease control were on the usual public health basis, substituting "the extent of the venereal disease problem" for the more general "special health problems" factor. Receipts from Federal taxes on firearms, shells, and cartridges were granted to States for wildlife restoration and allocated one-half according to area and one-half on the basis of the number of holders of paid hunting licenses in each State; the minimum allotment to any State was fixed at \$15,000 a year, provided the State spends \$5,000 from its own sources. One-third of the Federal allotment must be matched in full by State funds.

Grants During World War II

The emergency period of defense and war brought Federal aid to some new functions and some further changes in allocation and matching provisions as new grants were made to several of the established Federal aid functions. Some of the peacetime functions were geared to wartime exigencies.

Vocational education grants, for example, were extended in 1940 to

the training of defense workers. The first authorization of this nature was for courses of less than college grade in occupations essential to national defense. Grants to States were made in the amount of the cost of such courses, pursuant to plans approved by the Commissioner of Education, with the Federal Government bearing the main financial burden. Later authorizations extended the purposes to include engineering courses of college grade, courses for designated rural and nonrural youth, courses for youth under the National Youth Administration, and equipment.

Grants for marine schools were liberalized in 1941; the Federal Government continued to match sums spent by States and municipalities, but the maximum grant was raised to \$50,000. To receive the additional money (over the old maximum grant of \$25,000) the schools must admit out-of-State students on terms prescribed by the Maritime Commission; the per capita costs of such students are paid from Federal funds.

As an agricultural parallel to these two training programs, grants were extended to States in 1943 to provide needed farm labor. These grants were allocated on the basis of the Food Production and Distribution Administrator's determination of need and were funneled through the agricultural extension services of the land grant colleges. No matching was required.

The Vocational Rehabilitation Act Amendments of 1943 greatly expanded the program in terms both of amounts available for expenditure and of coverage and made special provision for war-disabled civilians. The population apportionments were abandoned at this time, and the formula was remodeled somewhat on the public assistance basis of uniform Federal matching of State-local expenditures. The amount authorized yearly is the sum that shall be necessary. On the basis of State plans, the Federal Government pays to each State all the necessary cost of payments to war-disabled civilians; one-half the cost of rehabilitation and medical examinations; one-half the cost of rehabilitation services for disabled persons, other than war-disabled civilians, who are needy; and 100 percent

of the cost of proper and efficient administration of the plan. If during the first 2 years under the new law the Federal Security Administrator found that a State had "substantially exhausted" its funds available for these expenditures, he had power to increase the amounts payable to the State before July 1, 1945. Thus, the States were encouraged to establish and expand these services. These grants would appear, from the wording of the act, to be open-end in that there is no dollar limit to the amount of Federal aid beyond the amount of approved local expenditures. The Comptroller General recently stated his opinion, however, that "there is no legal obligation on the Federal Government to make payments to the States unless and until the Congress makes money available for said purpose" and that when the amount thought to be necessary is appropriated each year, it constitutes the total cost to the Federal Government for that year. What the effect of the antideficiency laws and the Comptroller General's opinion will be on this and other so-called open-end grant programs remains to be seen.

Another emergency program was reestablished with the authorization in 1944 of additional funds for forest-fire prevention, this time especially in critical areas of national importance. The grant was \$1 million annually during the existing emergency, to be allocated at the discretion of the Secretary of Agriculture, with no State matching requirement.

The rest of the new wartime grants were for health and highways. One large new program not written into permanent law is that for emergency maternity and infant care. Because of the success of a demonstration program in Washington State, financed by the Children's Bureau, funds were authorized in 1943 for a Nation-wide program under a general appropriation act as an extension of the maternal and child health program under the Social Security Act. Originally designed for the care of wives and infants of enlisted men in the lowest four grades, the emergency program was extended for a 3-month period later in 1943 to cover those of all enlisted men, in-

cluding the three higher grades. The allocation of these funds among States is discretionary, and they are used to pay the entire cost of the services, within the limits per case set by regulation.

The Public Health Service Act of 1944 revised and extended the public health program and repealed title VI of the Social Security Act pertaining to public health. Grants covered by the new act are for general public health services and the prevention, treatment, and control of venereal diseases and tuberculosis. All three grants are allocated among States on the basis of (1) population; (2) the size of special health problems, the venereal disease problem, and the tuberculosis problem, respectively; and (3) financial need. State matching of Federal aid is determined by regulation rather than by statute. According to the U. S. Public Health Service regulations promulgated July 12, 1946, the State must match at least 50 percent of the Federal grants for the general public health and venereal disease control programs and 100 percent of the Federal grant for the tuberculosis control program.

The Defense Highway Act of 1941, authorizing aid for the construction, during the national emergency, of roads needed for national defense on the "strategic network of highways" approved by the Secretary of War, made grants for five separate categories. Grants for critical deficiencies in highways and bridges on the strategic network were allocated half according to section 21 of the 1921 act, with the Federal Government's maximum share in the total program set at 75 percent, and half on a discretionary basis with no matching requirement. Grants for engineering surveys on the strategic network were allocated according to section 21 and had to be matched equally by the States. Funds for access roads to military and defense establishments and for flight strips were also allocated on a discretionary basis, but no State matching was required for these.

Toward the end of the war, this act was followed by the Federal Highway Act of 1944 for the postwar construction of highways and bridges, grade-crossing elimination, and the

preparation of such plans. Grants amounting to \$500 million a year for 3 successive postwar years were authorized, to be matched in full by State-local funds. Some refinements made in the allocation formula represent a compromise between urban and rural interests. The section 21 formula is retained for the allocation of funds for Federal-aid interstate highways and is only slightly modified by the substitution of rural population for total population in the distribution of one-third of the funds for secondary and feeder roads. The more important innovation is in the appropriation for highways in urban areas; these funds are to be allocated among States on the basis of the population in urban areas of 5,000 or more in each State. Future Federal highway grant legislation will indicate whether the act of 1944 is a significant modification of the traditional formula of section 21, or a temporary compromise giving supplementary grants to urban areas for the alleviation of their present traffic problems.

A few months before the passage of the postwar highway act, advances to State and local governments for planning public works were authorized under the War Mobilization and Reconversion Act. They were not ordinary grants-in-aid, but rather loans and advances, to be repaid when the actual construction was undertaken. They followed, however, an allotment procedure similar to that for some grants: 90 percent of the sums appropriated were to be allotted according to population and 10 percent at the discretion of the Federal Works Administrator.

Grant Actions of the Seventy-ninth Congress

The Seventy-ninth Congress passed several major pieces of grant-in-aid legislation, and its committees considered a great many more. In addition, Congress gave much attention to bills proposing systems of equalization ("variable") grants and, though rejecting most of the far-reaching proposals for change in existing formulas, it enacted the first grant-in-aid law to spell out in detail an equalization formula (the School Lunch

Act). Equalization formulas are "variable" in that allocation and matching vary directly with need and inversely with fiscal ability.

New grant legislation in 1945 for agricultural extension work, like the Bankhead-Jones Act of 1935, substituted farm population for the old rural population base for the allocation of the great bulk of the new funds. A smaller sum of \$500,000, however, is distributed on an entirely new set of factors: the allocation is based on "special needs due to population characteristics, area in relation to farm population, or other special problems," as determined by the Secretary of Agriculture. Not more than 10 percent of the sum shall be allotted to any one State for any 1 year. These discretionary allotments must be matched by an equal amount of State funds, while those based on farm population need not be matched.

The Federal Airport Act, to provide Federal aid for the development of public airports, extended grants to a new function. This program has much in common with that for highway aid, particularly with regard to financial arrangements. The act authorizes \$500 million for a 7-year program; of each annual appropriation, 75 percent of the amount available for grants for projects within States must be apportioned among the States—one-half according to population and one-half according to area. These amounts are available to pay the Federal share of approved projects, which shall be 50 percent of the allowable costs for class 3 or smaller airports and such portion, not exceeding 50 percent, as the Administrator of Civil Aeronautics may deem appropriate for class 4 or larger airports. The remaining 25 percent of the annual sum available for grants constitutes a discretionary fund that may be used to pay the Federal share in approved projects that the Administrator finds appropriate for carrying out the national airport plan, regardless of the States in which they are located. These moneys may also be used to pay the Federal share for projects in national parks and recreation areas, national monuments, and national forests. The Federal share for projects in Alaska shall be not less than

50 percent for class 3 or smaller airports and not more than 75 percent in any case. There is also a public land provision similar to that in the highway program. Specifically, the maximum Federal share may be increased by whichever is smaller: (1) 25 percent, or (2) a percentage equal to one-half the percentage that the area of unappropriated and unreserved public lands and nontaxable Indian lands, where they exceed 5 percent of the area of the State, is of its total area.

The National School Lunch Act, passed toward the end of the second session of the Seventy-ninth Congress, contains an equalization (variable grant) formula in that the distribution of Federal funds varies directly with a State's need for the program and inversely with the ability of a State and its localities to finance the program. Furthermore, in the States that have per capita incomes below the national average, the required rate of non-Federal matching of Federal funds also varies directly with State fiscal ability.

Specifically, the funds available for grants are apportioned among the States in the proportion that each State's index of need is of the total of such indexes. The index of need for each State is determined by multiplying the State's population aged 5 through 17 by the ratio of per capita income in the United States to per capita income in that State. Thus, the smaller the per capita income of the State the greater the weight applied to the school-age population.

The matching requirement in this act is another example of a "ratchet" provision, designed progressively to lessen the relative Federal share in the total program over the years. From 1947 through 1950, every Federal dollar must be matched by \$1 from sources within the State; from 1951 through 1955, by \$1.50; and thereafter, by \$3. The matching required for a State whose per capita income is below that of the United States average is decreased by the percent by which the State per capita income falls below the average.

As a result of the combined operation of the allotment formula and variable matching, the total funds per child from all sources will be progres-

sively greater among successively lower-income States, if all States match in full their Federal allotments. Furthermore, for States below the national average in per capita income, the relative Federal share in the total program is progressively greater among successively lower-income States.

In July 1946 the Public Health Service Act was further amended by the inclusion of a section establishing grants for improvement of mental health through research relating to psychiatric disorders. Incorporated in the grant provision of the basic act is an additional \$10 million, making \$30 million authorized annually to be allocated according to population, the mental health problem and other special health problems in the respective States, and financial need.

The Labor Department-Federal Security Agency Appropriation Act for the fiscal year 1947 provided for the return to State control, on November 15, 1946, of the public employment offices and all their facilities, which the States had transferred to the Federal Government on January 1, 1942, to promote the national war effort. The appropriation act suspended State matching of the Federal grants until July 1, 1948, when the State matching requirements of the Wagner-Peyser Act are to be effective again. The legislation also provided that payments to States may be in amounts necessary for the "proper and efficient administration" of public employment offices. The current basis used for these grants are estimates of work loads, time factors, and personal services.

The Vocational Education Act of 1946 increased considerably the grants and minimum allotments authorized by the George-Deen Act in 1936 for vocational education in agricultural, home economics, trade and industrial, and distributive occupations subjects. The farm, rural, nonfarm, and total population, respectively, were factors as in the previous act, except that for apportionment and matching bases, the fifth category—the preparation of teachers of vocational subjects—was dropped as a separate item, and the grants of funds for the other four categories were liberalized to include this function.

The Social Security Act Amendments of 1946 temporarily changed the basis for reimbursement of State expenditures for old-age assistance, aid to dependent children, and aid to the blind. For the needy aged and the blind, the Federal Government will, from October 1, 1946, through December 31, 1947, reimburse the States for their expenditures (excluding all amounts in excess of \$45 a month to any individual) to the amount of two-thirds of the first \$15 of the average payment in the State, multiplied by the number of recipients in the State, plus one-half the remaining amount, as well as one-half the total sums spent for the proper and efficient administration of the State plan. For aid to dependent children (up to a maximum of \$24 a month for the first child and \$15 for each subsequent child in the same home), Federal aid during those 5 quarters will equal two-thirds of the first \$9 of the average payment multiplied by the number of dependent children, plus one-half the remainder, as well as one-half the administrative expenditures.

The House Ways and Means Committee had initially reported out a bill with equalization, or variable, Federal matching percentages but then reversed itself and reported out another bill that merely raised the Federal maximums while retaining 50-50 matching; the House approved this bill. The Senate accepted the report of its Finance Committee and amended the bill to include variable grants as originally reported to the House, but the conference committee compromised the differences by reporting out the fractional formula, in the form just outlined, which both Houses accepted during the closing days of the session.

This act also amended title V of the Social Security Act by increasing substantially the grants authorized for the three maternal and child health and welfare programs administered by the Children's Bureau. Most of the increase was in unmatched funds.

Among the last of the grant-in-aid programs approved by the President for the session was that for hospital surveys and construction. The purpose of the act, which added a new title to the Public Health Service Act, is to enable States to make an inven-

tory of existing hospital facilities, survey the need for hospitals and health centers, develop programs for construction, and finally, to assist the States in financing construction of hospitals based on such programs over a 5-year period, fiscal years 1947 through 1951. State-by-State allotments for the making of surveys and plans are in proportion to population, and within its allotment each State may receive one-third of its expenditures for this purpose.

The formula for the allocation of the construction grants is related to per capita income. Allocations are made on a variable basis, intended to reflect the differences both in State income and in the State's need for new hospital construction. The allotment to which each State is entitled is determined by multiplying its population by the square of its allotment percentage. The allotment percentage for any State, in turn, "shall be 100 per centum less that percentage which bears the same ratio to 50 per centum as the per capita income of such State bears to the per capita income of the continental United States (excluding Alaska), except that (1) the allotment percentage shall in no case be more than 75

per centum or less than 33 1/3 per centum, and (2) the allotment percentage for Alaska and Hawaii shall be 50 per centum each, and the allotment percentage for Puerto Rico shall be 75 per centum."⁶ Each State's allotment is the proportion of the total to be allotted that its weighted population is of the sum of the weighted populations. The effect of this formula is to increase Federal grants, relatively, as State per capita income declines.

As passed originally by the Senate, S. 191 (the Hospital Survey and Construction Act) would have varied the Federal-State matching percentages in exactly the same way as the allotment percentages. In its final form, the matching provision requires \$2 from each State for every \$1 of Federal aid. This ratio results in progressively larger total funds per capita in the States as their relative per capita income declines, but it also requires a far greater effort on the part of the lower-income States to match

⁶ This is the same formula, except for the limits imposed, as that for matching percentages for public health and maternal and child health and welfare grants in the Wagner-Murray-Dingell bills of the 79th Congress.

Table 2.—Estimated amount of grants by major allocation bases and matching requirements, fiscal year 1946-47¹

[Amounts in millions]

Basis of allocation	Total		No matching required	Matching required
	Amount	Percentage distribution		
Total.....	\$1,237	100	\$212	\$1,024
Total, fixed ratio matching ²				951
Total, matching varied according to fiscal ability ³				73
State-local expenditures ⁴	606	49		606
Population.....	186	15	30	156
Total.....	82	7	9	73
General ⁵	95	8	21	74
Special ⁶	8	1	.1	8
Area and mileage ⁷	146	11	7	139
Cost of service.....	130	12	125	5
"Need" and fiscal ability ⁸	88	7	9	79
Discretion.....	41	3	23	18
Special problems ⁹	25	2	6	19
Equal shares.....	15	1	12	4

¹ Based on estimated obligations for 1946-47 shown in the *Budget of the United States Government for the Fiscal Year Ending June 30, 1948*.

² Includes all matching which treats all States on a par with one another.

³ Matching ratio varies with the States' relative fiscal ability.

⁴ Matching of these expenditures within certain maximum limits.

⁵ Urban, rural, farm, nonfarm population, or other census category.

⁶ Population aided; for example, number of blind in public institutions for their education, number of soldiers and sailors in State homes for disabled veterans, etc.

⁷ Mileage includes rural delivery, Federal-aid highway, railroad mileage.

⁸ Allocation varies with a population measure and with State fiscal ability.

⁹ For example, special health problems.

their Federal allotments. The allocation provision will tend to equalize hospital facilities, but the matching provision prevents equalization of State tax effort for the program.

The last Federal aid act approved in 1946 was for agricultural research, especially in marketing and distribution. Title I of the act provides for grants to State agricultural experiment stations. Of the funds authorized, 20 percent is to be divided equally among the States and Territories, 52 percent is to be allocated one-half according to rural population and one-half according to farm population, and 25 percent constitutes a regional research fund from which the Secretary of Agriculture may make discretionary grants when two or more States have embarked on a cooperative program. The remaining 3 percent goes to the Office of Experiment Stations of the U. S. Department of Agriculture to meet the cost of administering the act. The States must match dollar for dollar all grants but those from the regional fund.

Despite the fact that the variable

grants proposed for education, health, and welfare were not enacted (except those for school lunches), the Seventy-ninth Congress gave more consideration and support to the equalization principle than had ever been given before.

The Eightieth Congress in its first session took no grant-in-aid action other than to extend the public assistance financing amendments of 1946 through June 30, 1950. Serious consideration was given, however, to a bill for Federal aid to education, a bill for grants to States for the medically needy, and a bill for school health services.

A summary of the relative dollar importance of the various allocation and matching formulas being used today is shown in table 2. About 50 percent of all grants are distributed among States in relation to State and local expenditures. Another large share is allocated according to measures of need, such as population, area, mileage, and the cost of furnishing the aided services. Only a small part of total grants, about 7 percent, is allo-

cated with some consideration of relative State fiscal ability.

For every \$1 of Federal aid that does not entail State and local matching, roughly \$5 does require such matching. Of the matched grants, only one, that for school lunches, varies the ratio of State to Federal funds with the States' relative ability to raise these funds.

The present allocation among States of many grants has been criticized on the ground of inequity—inequity of service level and inequity of tax burdens called for by matching requirements. Moreover, in many programs the current manner of distribution is uneconomical in that need is often not met where it is found. Total grants for all programs today vary substantially among the States, but not directly with need and not inversely with ability. On these counts and because of the lack of uniformity in financial provisions among related Federal aid programs, serious reconsideration of the entire problem of Federal grants to States would seem to be necessary.

Social Security Legislation in 1947*

NO COMPREHENSIVE CHANGES in the social security program were enacted by the Eightieth Congress in its first session. Several measures affecting the operation of the program, however, were passed in the closing days of the session.

Social Security Act Amendments of 1947

Probably the most far-reaching of these measures was the Social Security Act Amendments of 1947 (Public, No. 379), signed by President Truman on August 6. These amendments freeze for 2 more years the contribution rate under the Federal Insurance Contributions Act at 1 percent each for employers and employees and raise the rate to 1½ percent for 1950 and 1951 and to 2 percent for 1952 and thereafter. In addition, Public Law No. 379 continues until June 30, 1950, the temporary increase in Fed-

eral grants to the States for the needy aged and blind and for dependent children, provided through December 1947 under the 1946 amendments to the Social Security Act.¹ It also extends through December 31, 1949, the authorization—which would otherwise have terminated June 30, 1947—for congressional appropriation to a special Federal unemployment account of the amounts by which the tax receipts from employers subject to the Federal Unemployment Tax Act exceed the costs of administering the State unemployment insurance laws. This account had been set up in 1944 under the War Mobilization and Reconversion Act to provide a fund from which the States could borrow for unemployment insurance payments when a State's own fund for that purpose became dangerously low.²

In reporting the amendments, both the Senate Finance Committee and

the House Committee on Ways and Means stressed the fact that immediate action was necessary both to forestall the scheduled increase in the Federal insurance contributions rate to 2½ percent—an aggregate of 5 percent—on January 1, 1948, and to continue the public assistance and unemployment insurance provisions.

The House of Representatives would have limited the rate under the Federal Insurance Contributions Act to 2 percent from 1957 on; it also proposed to make permanent the provisions respecting the Federal unemployment account, originally devised as an emergency measure to facilitate liberalization of State benefit provisions in preparation for the reconversion period. While the Ways and Means Committee reported (H. Rept. 594) "no immediate danger to the solvency of any State unemployment insurance reserve," it pointed out that "not all States can be sure they will be free of financial difficulties in the future. The 51 separate State reserves vary widely in their adequacy to meet the demands of mass unem-

*Prepared in the Office of the Commissioner, Division of Publications and Review.

¹ See the *Bulletin*, September 1946.

² See the *Bulletin*, October 1944.