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This report has been issued both as an N.E.A. Research Bulletin entitled "Population Trends and Their Educational Implications" and as a special publication of the Educational Policies Commission under the title "The Effect of Population Changes on American Education."

FOREWORD

FOR THOSE WHO COULD sense imminent social change, the Census of 1930 announced an important event. In that year, for the first time in our history, a federal census recorded fewer children under five years of age than from five to nine years of age. Previous censuses, decade after decade, had recorded without exception a larger number of persons in any specified age group than in the next older age group. That record of population growth was broken in 1930.

The schools are among the very first of the social institutions to feel the effects of population changes. Change in birth-rate is quickly reflected in school enrolments. Immigration affects the need for Americanization classes. The distribution of population is important in deciding upon the location and type of school buildings. If the distribution of children is different from the distribution of wealth, problems of equalizing educational opportunity arise. Educational leadership must therefore make a continuous study of the people which it serves. Changes in the number, location, and characteristics of the people to be served are crucial in the development of educational policies.

For these reasons the Educational Policies Commission has been interested in studies of the changes which are imminent, or already occurring, in the population of the United States. This bulletin, a joint undertaking with the Research Division of the National Education Association, gives the major facts for the country as a whole and suggests some of the lines of educational policy which seem appropriate and necessary.

A review of the educational problems involved in a changing population should be helpful in several ways. Its greatest value should be in providing indications of the factors which may affect any local community to a greater or lesser degree. This bulletin is national and regional in scope and the trends revealed do not apply to every local community. However, these national figures should provoke certain questions for each school, community, and state. Is the total population or the school population decreasing or increasing in our community? What do such trends imply for the preparation and assignment of teachers? How will population changes affect the planning, utilization, and location of school buildings? What effects is a decline in school population likely to have on total school expenditures and on the distribution of expenditures at the different levels? What opportunities for the improvement and expansion of educational services are offered? These and many other questions will require careful study in states and localities. Population movements and the forces activating them should be understood by those who would plan for the schools in the future—even the near future—for momentous and complex changes in the population are even now occurring.

For assistance in the preparation of this bulletin special acknowledgment is made to Dr. Frank Lorimer, Population Association of America, and to Dr. Rudolf Modley, Pictorial Statistics, Inc., New York, N. Y.

A. J. STODDARD, *Chairman,*
Educational Policies Commission.

PART I. TRENDS IN POPULATION CHANGES

Summary of Part I

Part I of this bulletin presents data on trends in such aspects of population as growth, internal movement and composition, and the outlook on problems arising from these trends. Part II deals with the educational implications of these conditions. For the convenience of the reader a brief summary of the principal conclusions of Part I is given here.

From the data briefly presented in the following sections it is evident that the population of the United States has undergone significant basic changes since the turn of the twentieth century. These changes may be summarized in five trends which are peculiarly important to those groups in our country which have as their purpose the formulation and execution of social objectives.

The first of these trends is a definite slowing down of population growth. Restricted immigration has drastically curtailed replenishment of our population from foreign countries. A declining birth-rate has so affected our rate of natural increase that there are actually not enough children to replace the older population. With the blocking of the only two sources of population, the nation faces stabilization or decline of its numbers.

A widening difference between the rates of natural increase for certain groups is a second significant population trend. Rural-farm areas are providing more than their share of new population. The prevalence of voluntary family limitation among many urban groups possessed of relatively high standards of living, general literacy, and conformity to the culture patterns of modern urban life contributes to a low fertility rate in these groups. Thus, to a great extent, it is the natural increase from the rural-farm areas that is replenishing the urban population which is not replacing itself.

A third trend is the steady rise in the average age of the population. Since 1820 the average age of the population has risen from seventeen to twenty-seven years. There is a steady decline in the proportion of persons under twenty years of age with a corresponding increase in the proportion over forty-five. In the most productive age group, twenty to forty-four years, there is little change in proportion

but, with young adults of this age no longer immigrating from outside, the character of this age group is being altered. In spite of the fact that ignorance, indifference, and poverty still keep illness rates and the proportion of the population that is mentally and physically handicapped at unnecessarily high levels, great advances in the nation's health have lowered mortality rates. Thus the expectation of life has been materially increased. The women of the country as a whole are bearing fewer children; but the infants have a better chance of surviving to maturity.

New geographic concentrations of the population, a fourth trend, are coming about thru a redistribution of people in relation to natural resources and social institutions. For many years the metropolitan region around New York, including Connecticut and New Jersey; the Great Lakes states of Michigan, Ohio, and Illinois; and the Pacific Coast states of Washington, Oregon, and California have drawn large numbers of people from most of the states south of the Ohio and Potomac and east of the Mississippi Rivers and between the Rocky Mountains and the Mississippi River. The economic depression forced an internal migration with emphasis on a search for subsistence security rather than greater economic opportunity, restricting the steady migration from farms and producing a counter-movement to farms in some regions. Because of the relatively high birth-rate and the great exodus of adults from the Southeast, that region has an unusually large proportion of persons under twenty years of age.

The fifth significant population trend is the shift in emphasis from the productive and extractive occupations to the mechanical, managerial, professional, and service occupations. Tho the Northwest, Southeast, and Southwest are still largely agrarian, technological changes and unfortunate physical conditions such as soil erosion and drought have reduced the proportion of their populations engaged in the extractive occupations. In the Northeast the process has gone even further. Child labor legislation, meanwhile, has decreased the employment of

young children, but women, both married and single, constitute an increasingly larger proportion of the total population gainfully at work. Women, for the most part, are engaged in the mechanical, distributive, service, or professional occupations. In the productive industries, machines are taking the place of manpower. Such displacement is producing changes in the lives of workers and their families. From work with the soil, natural resources, and raw

materials the nation is turning to work with people, serving their wants, administering their joint efforts, instructing them and helping them to adjust to social change. In the midst of this shift of occupational emphasis, unemployment is high and relief rolls are laden.

These five basic population trends are producing subsequent conditions of profound significance to education and other social institutions.

Growth in Population

Aggregate Growth ¹

For more than one hundred and fifty years the growth of population in the United States has been an outstanding social phenomenon. From about four million persons in 1790 (the date of the first federal census) to a little less than one hundred and twenty-three million in 1930 is an aggregate increase of 3000 percent. This rapid growth was part of a worldwide trend associated with the growth of industrialism and other factors. In this country a scrutiny of the decennial rates of increase reveals a slow transition from an era of rapid growth toward an approaching period of stationary or perhaps even decreasing numbers. Up to 1860 each census showed an increase of about one-third over figures for the preceding decade; from 1860 to 1910 the decennial gain in population was around 20 or 25 percent; for the last two census decades the gains have been only 15 or 16 percent; and for the period from 1930 to 1940 the increase seems likely to be not more than 7 or 8 percent.

As for the constituent parts of the population of the United States—exclusive of outlying territories and possessions—the Census of 1930 showed 88.7 percent white, 9.7 percent Negro, and 1.6 percent Mexican and other races. Each decade since 1790, except the decade including the years of the World War, has shown, for the white population, a numerical increase greater than in the decade immediately preceding; and the percent of increase for the white population has exceeded that for the Negro population in every decade since 1810. Adjusted figures fix

the increase in the Negro population between 1920 and 1930 at a higher rate than during the two preceding decades. For the same period, an increase in the white population of only 15.7 percent is the lowest on record.

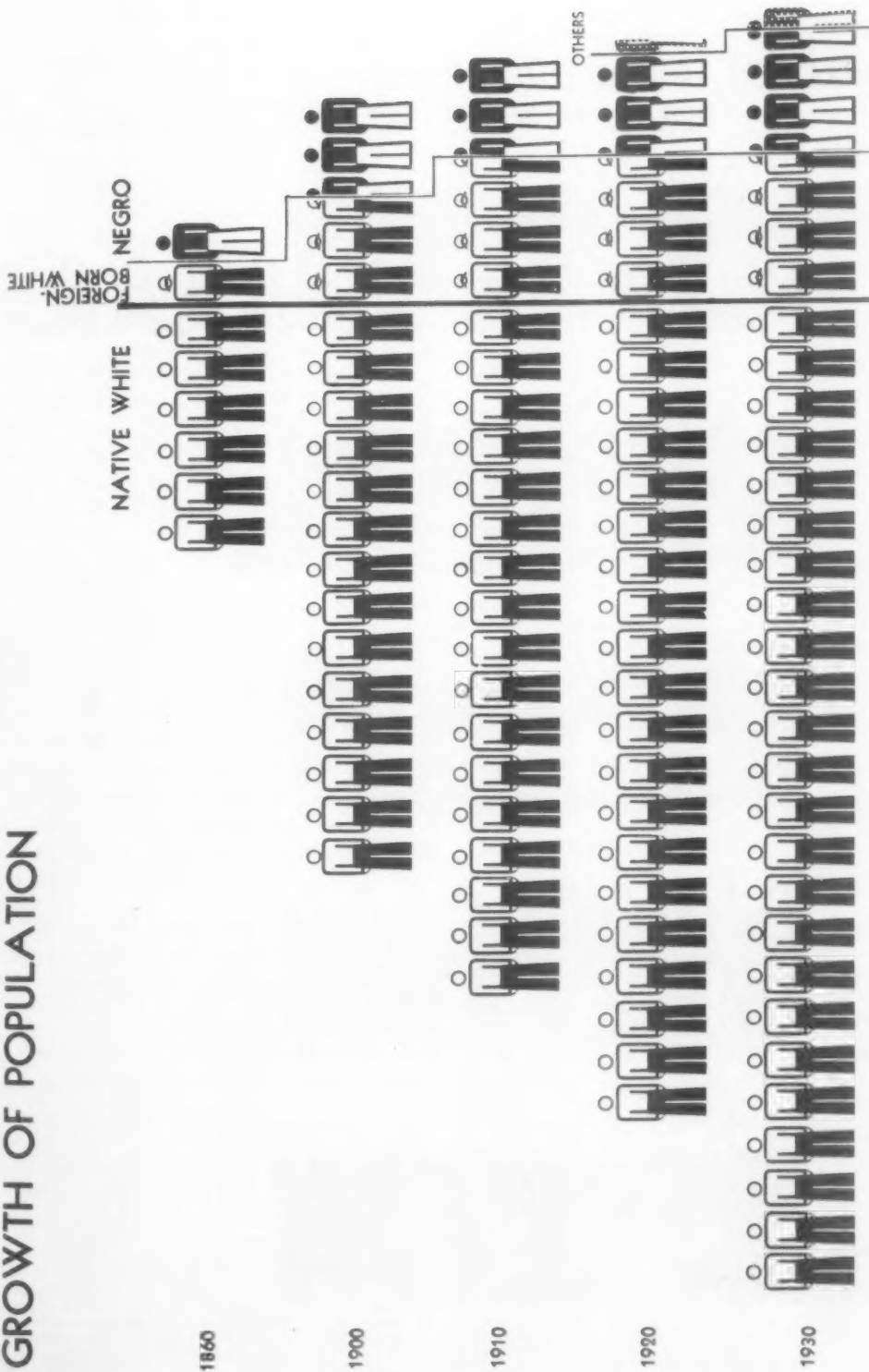
The white people of the United States are classified by census reports as foreign-born or native-born. Foreign-born whites increased from more than ten million in 1900 to thirteen million in 1910, but have since shown almost no gain. Since 1913 there have been only two years, 1920 and 1923, when net immigration was sufficiently large to offset the deaths of foreign-born whites and leave any significant surplus. The proportion of native whites in the population increased from 74.2 percent in 1910 to 77.8 percent in 1930—a little more than balancing the decrease from 14.3 percent to 10.9 percent in the proportion of foreign-born whites.

It appears from a further analysis of the trends that, in spite of the differing trends in rate of growth of the various race or nativity groups during recent decades, the changes in relative importance of each group have been small. It is the slowing down of the aggregate growth of the population that will prove significant. Two factors, both expected to continue, are considered by experts to be responsible for this change—a declining birth-rate and a reverse in the situation with respect to immigration. The result of the working of these two factors has been to reduce the average annual increase of the population to about 900,000, as compared with about 1,700,000 between 1920 and 1930.

¹ Following section based upon: President's Research Committee on Social Trends. *Recent Social Trends in the United States*. New York: McGraw-Hill Book Co., 1933. Chapters 1 and 11. ¶ U. S. Dept. of Commerce, Bureau of the Census. *Fifteenth Census of the United States, 1930: Population*. Vol. II. Washington, D. C.: Government Printing Office, 1933. Chapter 2, "Color or Race, Nativity, and Parentage." ¶ Hill, Joseph A. "Composition of the American Population by Race and Country of Origin." *Annals of the American Academy of Political and Social Science* 188: 177-84; November 1936. ¶ Truesdell, Leon E. "Population Statistics." *American Year Book*. New York: Doubleday, Doran and Co., March 1937. p. 540-45.

GROWTH OF POPULATION

FIGURE I

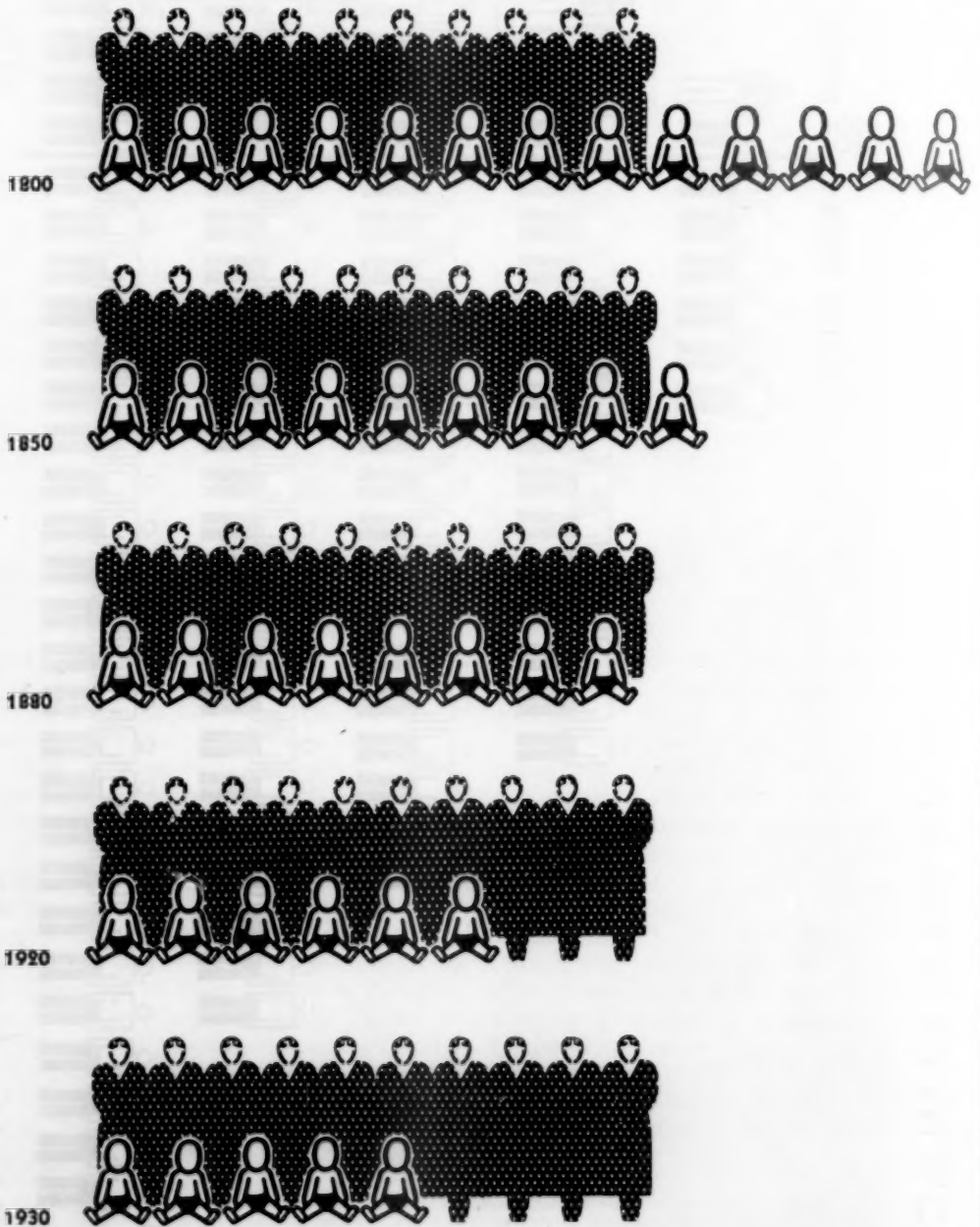


Each symbol represents 4 million people.

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FIGURE II

CHILDREN UNDER FIVE YEARS PER 1000 WHITE WOMEN (20-44 YEARS OLD)



Each child represents approximately 100 children.

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Birth-Rates, Death-Rates, and Rates of Natural Increase²

Tho it is a well-known fact that the national birth-rate has been declining, a rapidly decreasing death-rate occurring at the same time may obscure the full significance of the former. A study of the trends of these two rates will reveal, to some extent, the trend of the natural increase in our population.

Birth-rates—It is estimated that birth-rates in 1800 were about $3\frac{1}{2}$ times as high as in 1930. Even as late as 1880 the American people were twice as prolific as today. Moreover, at no time in the past does the decline in birth-rate seem to have been as rapid as from 1925-29 to 1930-34, when a drop of 16.8 percent took place. The *crude birth-rate* (live births per 1000 estimated population in the birth-registration area of the United States) decreased from 25.1 in 1915 to 22.3 in 1919, rose to 24.2 in 1921 and then fell to an all-time low of 16.5 in 1933. The preliminary estimate for 1936 stands at 16.6.

Crude birth-rates are misleading in considering regional or racial differences in the United States. Children are born, for the most part, to women from twenty to forty-four years of age. Hence, a more accurate picture of the situation can be obtained by comparing fertility rates for women of childbearing ages instead of birth-rates relative to total population. In this bulletin, a *fertility rate* will be understood as the number of children under five years of age per 1000 women aged twenty to forty-four years.

The zone of states with low fertility rates extends from southern New England westward thru the states of the Middlewest and north of the Ohio River, until it reaches Kansas, Nebraska, and Colorado. The Pacific Coast states and Florida complete the group. It is significant that all the highly urban and industrial states

except Michigan are included. On the other hand, the agricultural regions of the Southeast and Southwest (south of the Potomac and Ohio Rivers and westward to the Rocky Mountains) are regions of high fertility. In fact, the highest fertility rate in the United States is found in the Southern Appalachians. There is a clear tendency toward leveling off these rates in areas of greatest concentration of population.

The difference between rural and urban fertility has been pronounced since early in the nineteenth century. For instance, in 1820 the fertility rate for the white race in cities of 100,000 to 250,000 population was 827 compared with a rural rate of 1286. In 1910 the rate for cities of the same size was 409 as against a total rural ratio of 782. By 1930 the rate in this urban group had dropped to 384 while the rate for the rural had become 653. Thus, altho both rates declined markedly, the decrease in the urban fertility rate was the more rapid of the two.

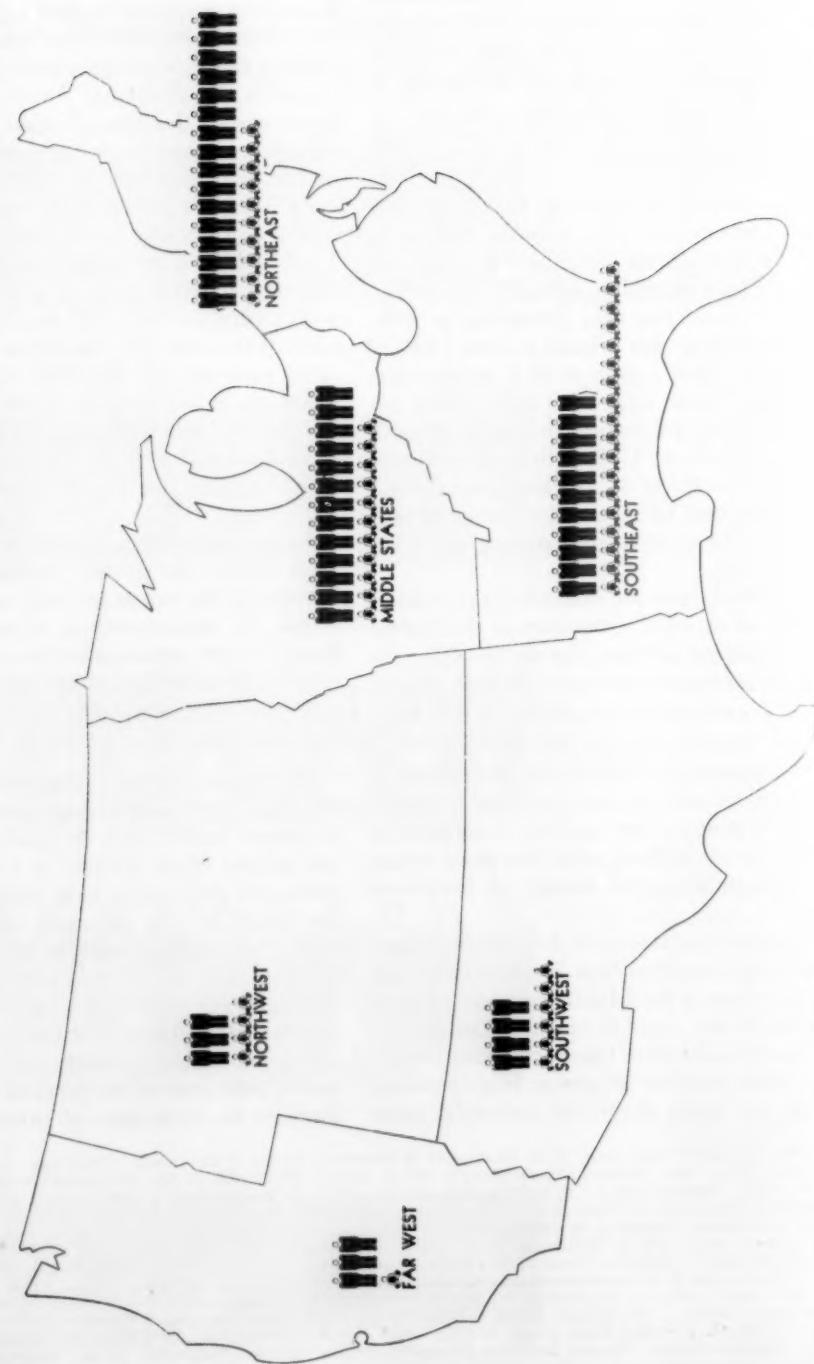
Factors contributing to the decreasing birth-rates and to the greater number of childless families in the nation are held to be later marriages, the employment of women outside the home, greater economic freedom of women, increasing knowledge and practise of birth control, increasing standards and costs of living, and decreasing earning capacity of children.

Death-rates—The prolongation of human life has always been looked upon as greatly to be desired and has been the goal of much public and private effort. Chiefly as a result of these endeavors death-rates have been lowered and the length of life increased correspondingly. There is no evidence that the maximum span of life (which is seldom more than 100 years) has been increasing, but only that a larger proportion of the population may live to a ripe old age. The rapid increase in expectation of life at birth during past decades has resulted from large reductions in death-rates of infants and young

² Following section based upon: U. S. Department of Commerce, Bureau of the Census. "Provisional Summary of Natality Statistics for 1936." *Vital Statistics—Special Reports*. Vol. 3, No. 24. Washington, D. C.: Government Printing Office, June 16, 1937, p. 123-29. (Advance pages.) ¶ U. S. Department of Labor, Children's Bureau. *Trend of Birth Rates in United States Expanding Birth-Registration Area by States, 1915-35*. Washington, D. C.: Government Printing Office, February 9, 1937. 1 p. ¶ U. S. Department of Commerce, Bureau of the Census. "Summary of Natality and Mortality Data for Each State—1935." *Vital Statistics—Special Reports*. Vol. 3, No. 3. Washington, D. C.: Government Printing Office, February 4, 1937. p. 27-28. (Advance pages.) ¶ U. S. Department of Commerce, Bureau of the Census. "Growth of the Registration Areas." *Vital Statistics—Special Reports*. Vol. 3, No. 1. Washington, D. C.: Government Printing Office, February 26, 1937. 1 p. (Advance.) ¶ Lotka, Alfred J. "Modern Trends in the Birth Rate." *Annals of the American Academy of Political and Social Science* 188: 1-13; November 1936. ¶ Collinson, John. "Death Rates." *Annals of the American Academy of Political and Social Science* 188: 84-93; November 1936. ¶ Odum, Howard W. *Southern Regions of the United States*. Chapel Hill: University of North Carolina Press, 1936. Chapter 9. ¶ National Education Association, Research Division. "Modern Social and Educational Trends." *Research Bulletin* 12: 243-87; November 1934. p. 249-51. ¶ President's Research Committee on Social Trends. *Recent Social Trends in the United States*. New York: McGraw-Hill Book Co., 1933. Chapter 1. ¶ Lorimer, Frank, and Osborn, Frederick. *Dynamics of Population*. New York: Macmillan Co., 1934. Chapters 1, 2, and 3. ¶ Stouffer, Samuel A., and Lazarsfeld, Paul F. *Research Memorandum on the Family in the Depression*. New York: Social Science Research Council (230 Park Ave.), 1937. Chapter 5.

FIGURE III

PROPORTION OF TOTAL POPULATION AND TOTAL NATURAL INCREASE BY REGIONS, 1936



Each man represents about 2 percent of total population.
Each child represents about 2 percent of total natural increase.

children, mortality at ages between ten and sixty having declined only slightly, and little if any improvement having been made at ages over sixty.

The crude death-rate—the number of deaths per 1000 estimated population—shows a fluctuating decrease from an estimated 19.8 in 1880 to 10.9 in 1935 thruout the death registration area. This decline was noticeably broken only once by the influenza epidemic and war deaths of 1918. The provisional rate for 1936, however, stands at 11.5—an increase popularly attributed to a growing number of fatal accidents. During this whole period death rates for Negroes have been consistently higher than those for the white population.

The states of the Far West and of the Eastern Seaboard have mortality rates slightly above the average, while the West Central states are considerably below the average. States with the lowest mortality rates, and consequently the longest expectation of life, are states with a relatively large rural population. The greater average longevity of the rural population is well known; it is usually attributed to the more healthful environment and work in the open country. However, the inequality of health services and the lack of health information for rural areas prevent the differential between rural and urban mortality rates from being as high as it might be.

Rates of natural increase—Altho both the national birth-rate and the national death-rate are constantly declining, the margin between the number of births and the number of deaths each year is growing narrower and a lowering rate of natural increase is resulting. (For the purposes of this bulletin a *rate of natural increase* will be considered as the excess of births over deaths per 1000 estimated population.) Between 1915 and 1936 the death-rate decreased 2.1 points from 13.6 to 11.5. During the same period the birth-rate fell 8.5 points from 25.1 to 16.6. The rate of natural increase therefore declined from 11.5 to 5.1, a drop of more than half for the twenty-one years.

Fifty-five percent of the natural increase for the United States comes from three regions—Southeast, Southwest, and Northwest—that contain altogether only about one-third of the

total population. Conversely, the Northeast, Middle States, and Far West, with two-thirds of the total population in 1930, accounted for only 45 percent of the total excess of births over deaths during the ensuing five years. Accession thru natural increase is now taking place about as rapidly in North Carolina as in the combined areas of Massachusetts, Rhode Island, and Connecticut, altho in 1930 the population of the latter states was more than twice as great as that of North Carolina. Without interstate migration, such differentials in natural increase would change greatly the present distribution of population within one or two generations.

A significant condition is that relating to the relative replacement of certain groups in our population. In order to maintain a stable white population a replacement of about 9 children under five years of age for each 20 white women of ages twenty to forty-four is necessary. The rural non-farm areas (small towns) are just about meeting the replacement requirement, but urban sections are only producing 7 children to 20 women as against 14 children to 20 women for rural-farm areas.

These regional variations in rates of natural increase and group differences in population replacement seem all the more important when it is observed that the groups which are producing the greater proportion of our future population thru excess of births over deaths are, in many cases, the less fortunate groups, economically and culturally.

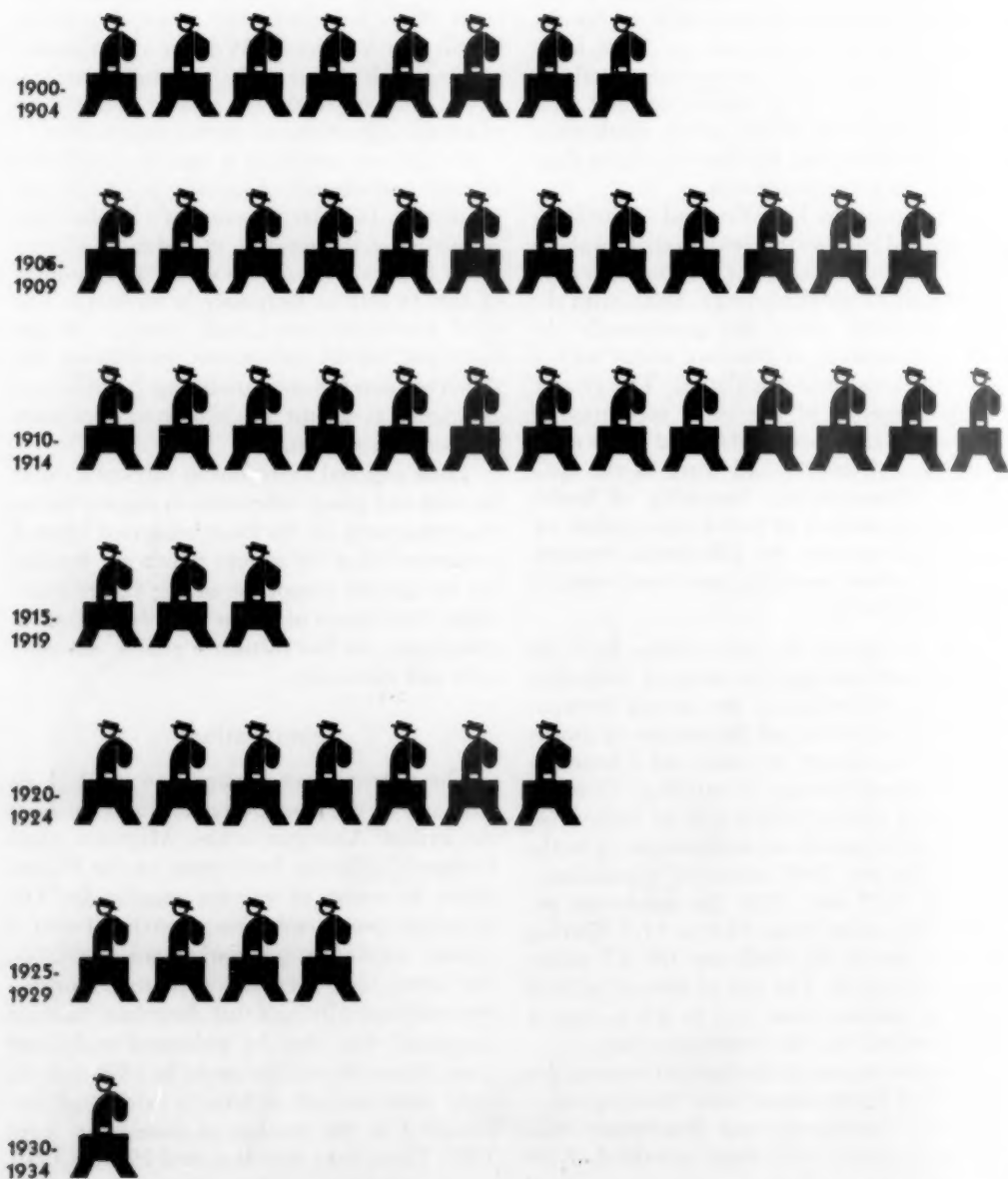
Immigration ³

The restriction of immigration in 1924 altered one of the most characteristic features of the earlier American scene. Migrants from European countries have come to the United States in waves of varying magnitude. The American people were long convinced that a rapidly increasing population was desirable, that immigrants were a contribution to progress and prosperity, and that American tradition demanded that they be welcomed with open arms. After the earliest peaks in 1854 and the early seventies and eighties, a fairly low rate prevailed in the number of immigrants until 1905. Then, from that date until 1907, in 1910,

³ Following section based upon: President's Research Committee on Social Trends, *Recent Social Trends in the United States*. New York: McGraw-Hill Book Co., 1933, Chapter 1. ¶ Hill, Joseph A. "Composition of the American Population by Race and Country of Origin." *Annals of the American Academy of Political and Social Science* 188: 177-84; November 1936. ¶ Young, Donald, *Research Memorandum on Minority Peoples in the Depression*. New York: Social Science Research Council (230 Park Ave.), 1937, Chapter 3.

FIGURE IV

IMMIGRATION, 1900-1934



Each symbol represents 400,000 immigrants.

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and again in 1913-14, the number coming into the country annually exceeded one million (about 1 percent of the population). During the War few people were admitted to the United States; but after the Armistice, immigration probably would have reached or exceeded its old levels had it not been restricted by the quota laws. During the fiscal years 1922-24 the maximum number of quota immigrants admissible was about 360,000 per year, but this was reduced to 160,000 on July 1, 1924, and to 150,000 on July 1, 1929. The only large countries remaining free from such restrictions are Mexico, Canada, and the independent countries of Central and South America.

An Executive Order of September 1930 in-

structed consular officers to take into account depression conditions in application of the clause excluding persons likely to become a public charge. As a result of this policy, the number of immigrants entering this country during the past few years has been less than the number of emigrants leaving it. In the period 1931-35 the departures of immigrant aliens exceeded the arrivals by 103,654.

The present trend in immigration depends on the course of economic recovery, on congressional action, and on other factors. The temper of the nation seems to favor severe restriction of admittances, and even the surmountal of depression conditions may not lead to a marked relaxation of such restrictions.

Internal Movement of Population

Rural and Urban Shiftings¹

At the close of the Revolutionary War the United States had no town with as many as 50,000 inhabitants. In 1790, when the first census was taken, there were only six cities having a population of 8000 or more, containing, in the aggregate, 3.3 percent of the total population of the country. In 1930 there were 1208 incorporated places having a population of 8000 or more, and their aggregate population represented 49.1 percent of the total. Since 1880 "urban" population has been counted as persons living in cities and other incorporated places having 2500 inhabitants or more. This classification thus considers as "rural" all population living in villages of less than 2500 persons or in the open country. Urban population, so defined, increased from 28.6 percent of the total in 1880 to 56.2 percent in 1930, while rural population decreased from 71.4 percent of the total in 1880 to 43.8 percent in 1930.

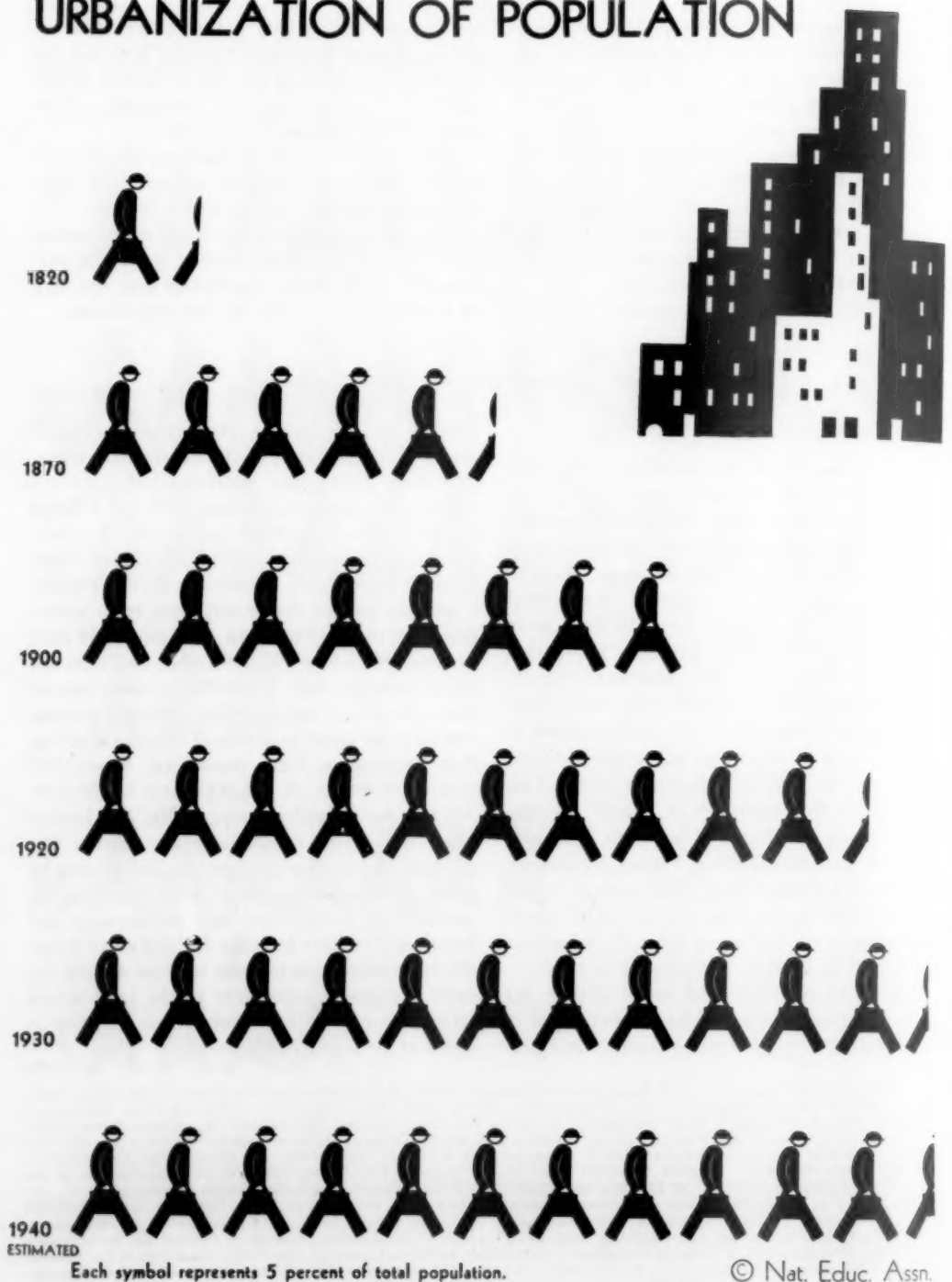
Factors of economic and social change for the past century and a half have contributed to the crowding of an increasing number and pro-

portion of our people into relatively small areas. With the onset of the depression, migration from farms was restricted but, contrary to popular impression, there was not a large general back-to-the-farm movement. In fact, according to estimates of the Bureau of Agricultural Economics, there were on the average a quarter million fewer migrants from towns and cities per year between 1930 and 1934 than between 1925 and 1929. Further estimates for 1936 indicate that 1,166,000 persons moved from farms to cities while 719,000 persons moved from cities to farms. This produced the first decrease in farm population since 1929 despite an excess of 716,000 farm births over 349,000 farm deaths during 1936. The lure of relief and work relief in urban centers, the cultural and recreation opportunities offered by cities, the mechanization of farms lessening the demand for hand labor, and the severity and length of droughts forced a decided away-from-the-farm migration in some sections despite the early depression movement to the land which seemed to offer greater subsistence security in times of urban unemployment.

¹ Following section based upon: U. S. Department of Commerce, Bureau of the Census, *Fifteenth Census of the United States, 1930: Population*. Vol. II. Washington, D. C.: Government Printing Office, 1933. Chapter 1, "Urban and Rural Population," ¶ Truesdell, Leon E. "Trends in Urban Population." *Municipal Year Book*. Chicago: International City Managers' Association, 1937. p. 129-36. ¶ Baker, O. E. "Rural and Urban Distribution of the Population in the United States." *Annals of the American Academy of Political and Social Science* 188: 264-79; November 1936. ¶ Brunner, Edmund deS., and Lorge, Irving. *Rural Trends in Depression Years*. New York: Columbia University Press, 1937. Chapter 3. ¶ U. S. Department of Commerce, Bureau of the Census, *Farm Population* (Summary by Divisions and States). United States Census of Agriculture, 1935. Washington, D. C.: the Bureau, 1936. 2 p. ¶ U. S. Department of Commerce, Bureau of the Census, *Movement to Farms* (Summary by Divisions and States). United States Census of Agriculture, 1935. Washington, D. C.: the Bureau, 1936. 2 p. ¶ Dorn, Harold F., and Lorimer, Frank. "Migration, Reproduction, and Population Adjustment." *Annals of the American Academy of Political and Social Science* 188: 280-89; November 1936. ¶ Urbanism Committee of the National Resources Committee, *Our Cities—Their Role in the National Economy*. Washington, D. C.: Government Printing Office, 1937. p. 1-2. ¶ Thompson, Warren S. *Research Memorandum on Internal Migration in the Depression*. New York: Social Science Research Council (230 Park Ave.), 1937. Chapter 2. ¶ Ogburn, William F. *Social Characteristics of Cities*. Chicago: International City Managers' Association, 1937. 70 p.

FIGURE V

URBANIZATION OF POPULATION



Each symbol represents 5 percent of total population.

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Regional Changes ²

Mobility, which is rapidly increasing in speed and numbers involved, is one of the chief characteristics of the American people. In addition to the striking rural-to-urban shiftings just discussed, there have been significant regional shifts in population thru internal migration since early Colonial days.

Until recently the chief currents of movement were from east to west. First to the Appalachian and Allegheny Mountains, then across the Mississippi, and on to the far western coast trekked bands of hardy pioneers. The census reports of 1890 announced the disappearance of the frontier. The settling of Oklahoma between 1890 and 1910 populated the last large vacant space in the interior. Then, except for the temporary resurgence of migration during the World War, sending thousands to plant wheat on the range land of the Great Plains, the major phases of the westward movement drew to a close. This event, according to James Truslow Adams, marked "the most important change in direction in our history."

Meanwhile the new industrial economy drew large numbers of migrants to sections that had previously been areas of emigration. By 1900 New England and the Middle Atlantic states were attracting more people than they were losing. People in the cotton states of the South were going north rather than west. By 1930 the northeast states contained more than 3,000,000 persons who were born south of the Mason-Dixon Line and nearly 1,650,000 persons who were born west of the Mississippi River.

Three areas attracted most of the migrants between 1920 and 1930, according to the 1930 Census. These were the New York metropolitan region, including Connecticut and New Jersey; three Great Lakes states—Michigan, Ohio, and Illinois; and the Pacific Coast states of Washington, Oregon, and California. The population which poured into these sections was recruited largely from two main areas which showed net losses thru migration between 1920 and 1930. One of these areas includes the states south of the Ohio and Potomac and east

of the Mississippi Rivers, except Florida. The other includes the states between the Rocky Mountains and the Mississippi River, except Arizona and Texas.

The Northeast and Middle States regions, tho including areas of great gain, showed net losses for this decade because of large emigrations from New England and Pennsylvania and the cut-over areas near the Great Lakes.

The movement to farms of about two million persons since 1930, and the checking of migration from farms since 1930, as discussed in the aggregate in the section above, brings up the question of the regional distribution of farm population. Decreases in the number of persons living on farms appear in the drought area extending from Montana eastward to western Iowa, the cotton-tobacco area in northeastern North Carolina, the plantation section of Georgia, the Yazoo-Mississippi Delta, the black belt of Texas, and southwestern Oklahoma. Large increases in the farm population occurred in New England, eastern Ohio and western Pennsylvania, the southern Appalachians, the Ozarks, eastern Oklahoma, the vicinity of Birmingham, Alabama, northern Wisconsin and Minnesota, the Puget Sound region in Washington, and the Willamette Valley of Oregon. The greatest increase in number of persons living on farms was around industrial centers, in mining counties, and in "subsistence farming" areas.

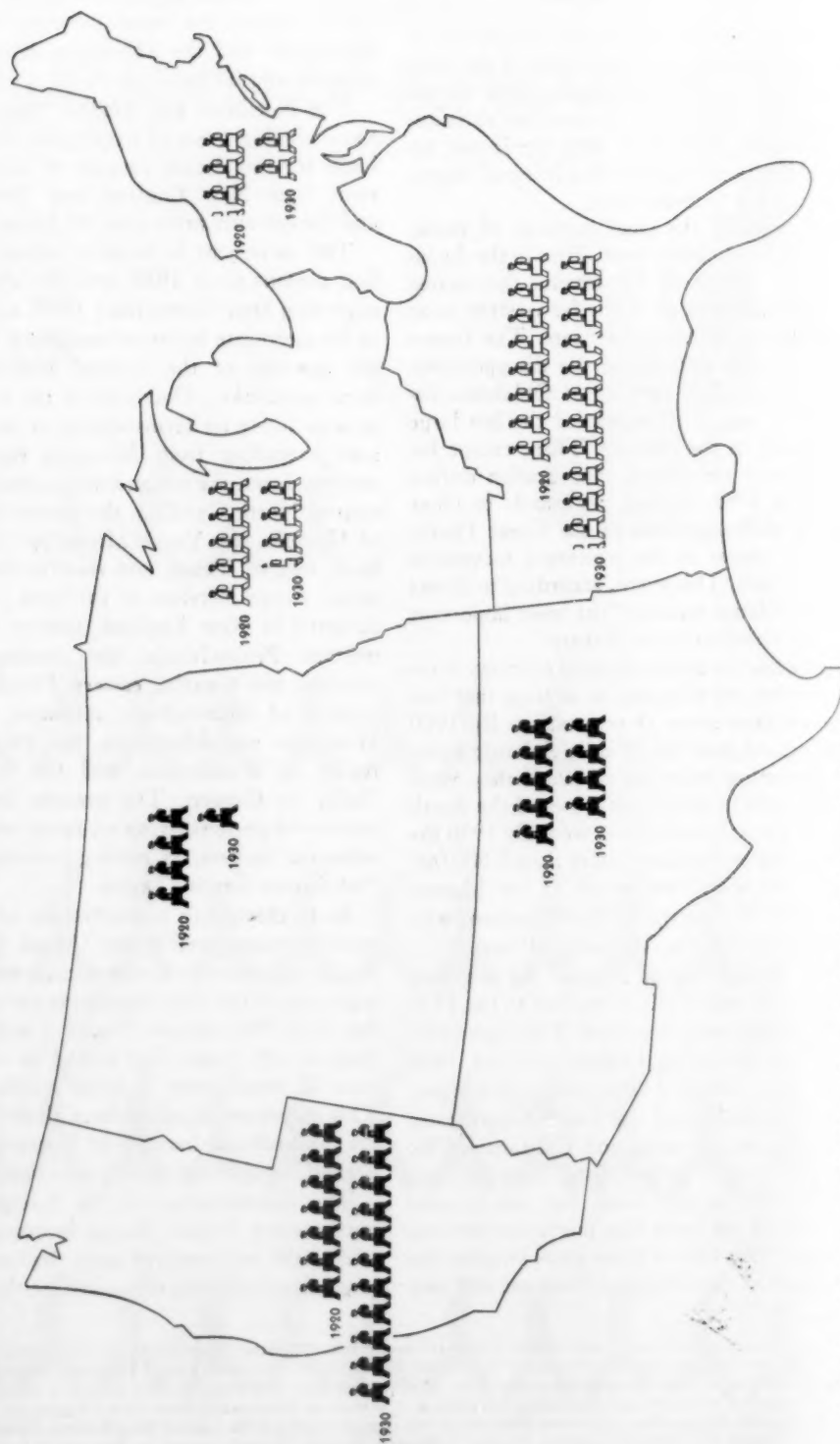
As to changes in concentration of race and nativity groups within the United States, the Negro migration to northern cities was in some ways one of the most significant movements of the 1920-1930 decade. Nearly a million more Negroes left farms than moved to farms, and most of them went to large northern cities. This movement equaled about three-fourths of the total natural increase of Negro population in the United States during the same period.

The concentration of the foreign-born in northeastern United States increased during 1920-1930 and centered more than ever in the large manufacturing cities, despite the fact that

² Following section based upon: Dorn, Harold F., and Lorimer, Frank. "Migration, Reproduction, and Population Adjustment." *Annals of the American Academy of Political and Social Science* 188: 280-89; November 1936. ¶ President's Research Committee on Social Trends. *Recent Social Trends in the United States*. New York: McGraw-Hill Book Co., 1933. Chapter 1. ¶ Goodrich, Carter, and others. *Migration and Economic Opportunity*. Philadelphia: University of Pennsylvania Press, 1936. Chapters 1-6. ¶ Thompson, Warren S. *Research Memorandum on Internal Migration in the Depression*. New York: Social Science Research Council (230 Park Ave.), 1937. Chapter 2. ¶ National Education Association, Research Division. "Federal Support for Education." *Research Bulletin* 15: 180-81; September 1937.

FIGURE VI

INTERREGIONAL MIGRATION



Each dark symbol represents 300,000 population gain thru migration in preceding decade.
Each light symbol represents 300,000 population loss thru migration in preceding decade.

the group, because of curtailed immigration, constituted a smaller proportion of the total population in 1930 than in 1920. Only in New York, New Jersey, Michigan, and California were there numerical increases of any importance; and even in these states the increases were much less than for other groups. In the remainder of the country the foreign-born whites are passing into the older age groups where the death-rate is high and the losses in numbers are large.

During the twenties, migrants for the most

part were finding their way to places of greater economic opportunity. With some exceptions the less favorable lands lost population to the more favorable; the least prosperous communities, chiefly agricultural, lost to the most prosperous communities, largely urban and industrial. The depression migration was not so much a search for greater economic opportunity as it was a search for subsistence security. This was undoubtedly found by many of the migrants from cities to farms, even tho it was at a low economic level.

Changes in Composition of the Population

Age Distribution and Trends¹

The net results of the changes in population discussed in preceding sections are striking. In the population as a whole there has been a steady decline in the proportion of persons under twenty years of age and a corresponding increase in the proportion of those over forty-five years of age. Because of counterbalancing factors there has been little change in the proportion in the most productive group, twenty to forty-four years. The group over sixty-five years of age shows a more than tenfold increase in numbers between 1850 and 1930 as compared with a fivefold increase in the whole population. The median age of the population has risen from 16.7 years in 1820 to 26.4 years in 1930. The first decrease in the number of persons in an important age group occurred during the decade 1920-1930. According to the census enumeration, there were 11,573,230 children under five years of age in 1920 but only 11,444,390 in 1930. The decline of 128,840 almost equals the number of children under five in Los Angeles, San Francisco, and Seattle. Those under five years had always comprised the largest five-year age group, but in 1930 this group was actually smaller by one million than the five- to nine-year group.

It is generally true that cities have relatively fewer children and older people but more per-

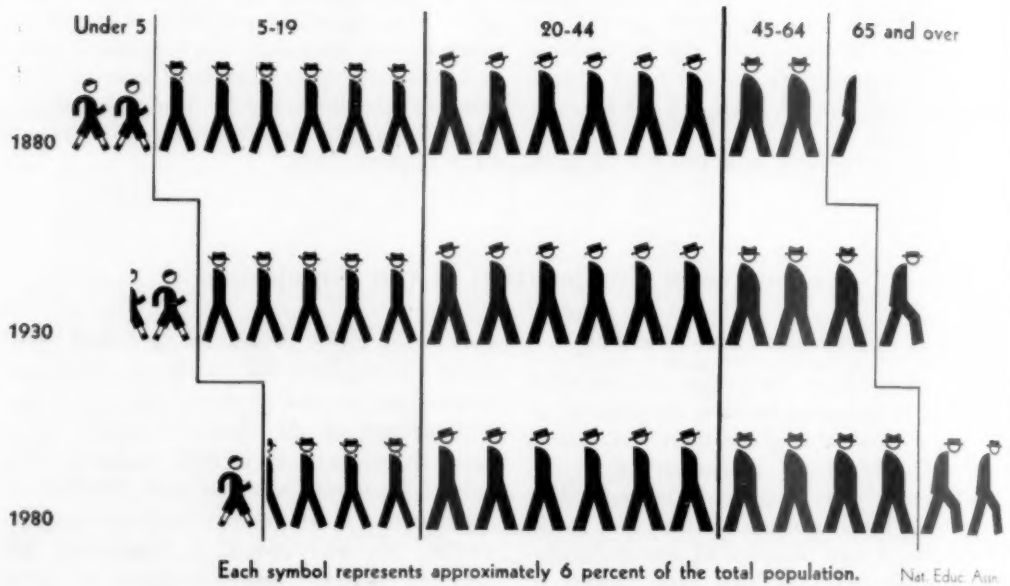
sons in the highly productive ages than rural communities. These differences are more pronounced as the size of cities increases. Thus, 10.8 percent of the rural inhabitants were under five years of age in 1930 compared with only 7.7 percent in cities over 500,000 in population. For all persons under twenty the percents are 44.2 and 32.7, respectively. At the other extreme, people sixty-five and over comprise 5.8 percent of the population in rural communities, but only 4.3 percent in the large cities. The central group, aged twenty to sixty-four, amounted to only 50 percent of the rural population against 63.0 percent in the large cities.

The South has a much larger proportion of its people under twenty years of age than any other region of the United States; 44.6 percent in 1930, contrasted with the lowest percent in the West, 34.4 percent. In the most productive age group, twenty to forty-four years, the South has a relatively low proportion, 36.4 percent, compared with the highest percent in the West, 39.8 percent. In the South, in other words, for every 100 persons in the age group twenty to forty-four there are about 122 persons under twenty years, compared with only 87 in the West. This condition places a much heavier burden for child care and for education upon the South.

¹ Following section based upon: Chaddock, Robert E. "Age and Sex in Population Analysis." *Annals of the American Academy of Political and Social Science* 188: 185-93; November 1936. ¶ President's Research Committee on Social Trends. *Recent Social Trends in the United States*. New York: McGraw-Hill Book Co., 1933. Chapter I. ¶ Lorimer, Frank, and Osborn, Frederick. *Dynamics of Population*. New York: Macmillan Co., 1934. Chapter I. ¶ National Resources Committee. *Population Statistics; National Data*. Washington, D. C.: Government Printing Office, 1937. p. 2-13.

FIGURE VII

AGE GROUPS

Sex Ratios and Marital Conditions ²

The relation between the number of men and of women in any population is usually described by a *sex ratio*, i.e., the number of men per 100 women. When the ratio is over 100 the men outnumber the women, and when the ratio is less than 100, women outnumber men. This sex ratio varies at any one time by regions of the country and by classes of the population, urban and rural, native- and foreign-born, white and Negro. Disparities in the numbers of men and women in a given group affect the proportions married and, in turn, the birth-rate.

For the United States as a whole the ratio was 104.4 in 1900, rose to 106.0 in 1910, and fell to 102.5 in 1930. Correspondingly, when the sexes were less evenly proportioned in 1900, 54.5 percent of the men were married and 57.0 percent of the women. In 1930, with

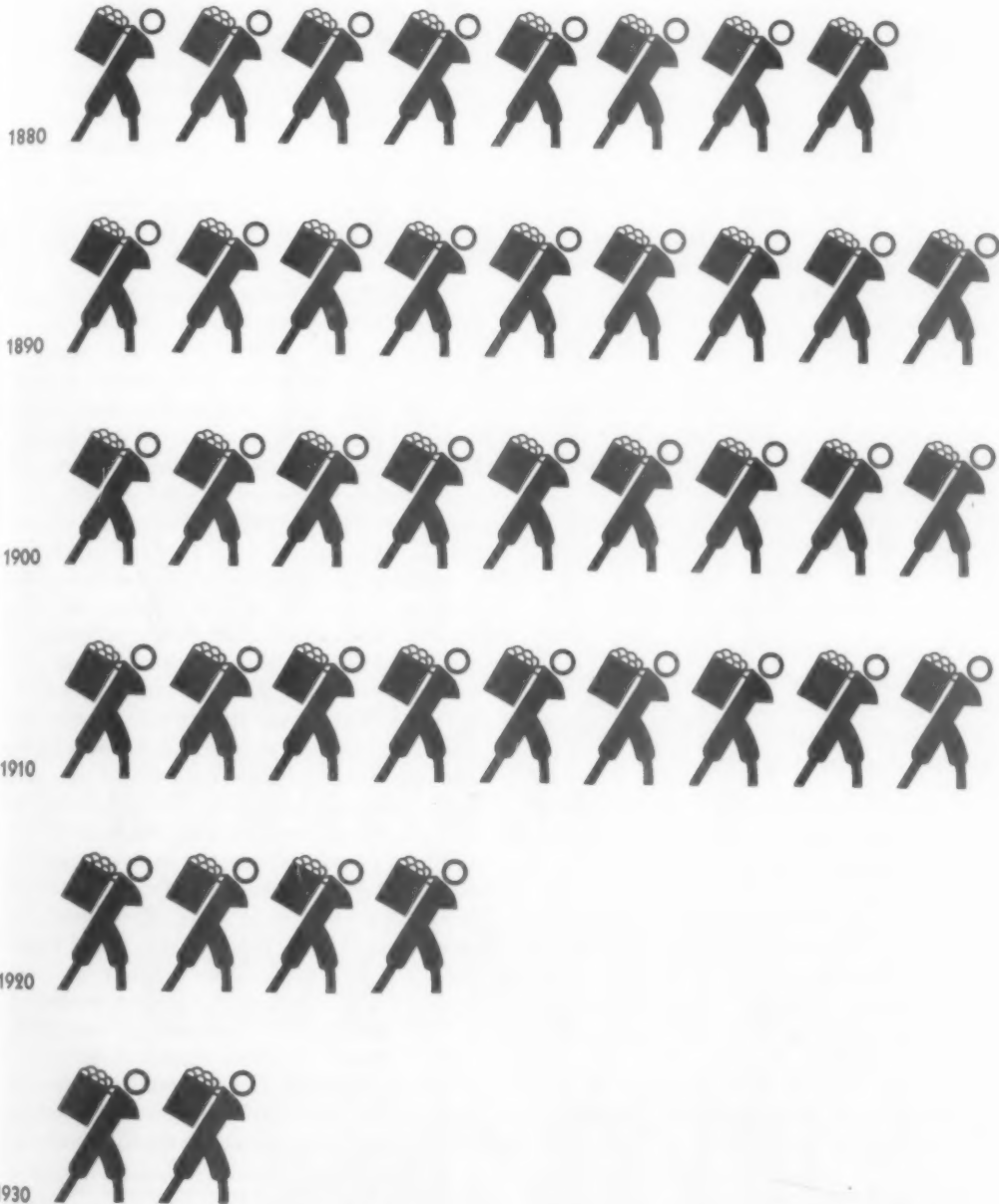
a more even balance between the sexes, 60.0 percent of the men were married and 61.0 percent of the women. In 1900 the sex ratio for Washington state was 142.2, influenced strongly by the predominance of men in the westward movement to the lumbering areas around Puget Sound. At that time 43.0 percent of the men were married and 65.5 percent of the women. In 1930, when the sex ratio had fallen to 112.1, 56.9 percent of the men were married and the percent for women had fallen but slightly to 64.6.

The deficit of males among Negroes apparently increased between 1910 and 1930 (98.9 in 1910; 97.0 in 1930). In the case of native whites the ratio has decreased very little—from 102.7 in 1910 to 101.1 in 1930—but the foreign-born white ratio dropped from 129.2 in 1910 to 115.1 in 1930 as a result of the restriction of the immigration which always brought young male adults.

² Following section based upon: President's Research Committee on Social Trends. *Recent Social Trends in the United States*. New York: McGraw-Hill Book Co., 1933. Chapter 1. ¶ Chaddock, Robert E. "Age and Sex in Population Analysis." *Annals of the American Academy of Political and Social Science* 188: 185-93; November 1936. ¶ Stouffer, Samuel A., and Spencer, Lyle M. "Marriage and Divorce in Recent Years." *Annals of the American Academy of Political and Social Science* 188: 56-69; November 1936.

FIGURE VIII

PROPORTION OF CHILDREN 10-15 YEARS OF AGE GAINFULLY EMPLOYED



Each symbol represents about 2 percent of children.

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In general, cities have an excess of women, while rural districts have an excess of men. There are some exceptions to this rule in the metropolitan areas having heavy industries, but it holds for most cities, even for those having large numbers of foreign-born. For instance, the ratio for Boston in 1930 was 96.4 and that for Richmond, Virginia, for the same year was 88.2. Agriculture is typically a man's job, while occupations suited to women abound in urban centers. Furthermore, death-rates for men relative to death-rates for women are higher in cities than in rural districts.

When business conditions are good, marriage and divorce rates go up. When depression conditions exist they go down. In 1932, the number of marriages per 1000 estimated population was only three-fourths as large as the annual average from 1920 to 1929, and divorces fell off in about the same proportion. In 1933 the marriage rate began a rapid climb upward, in 1934 the divorce rate began a similar climb, and by the end of 1935 both rates were above the predepression level. In all groups the depression increased an already existing tendency toward later marriages, thereby reducing the period of fertility for married women and contributing to a declining birth-rate.

Occupational Shifts³

The shifting occupational patterns of a people bring about the decline of old habits and institutions and the rise of new ones. Such adjustments inevitably create problems for general and vocational education.

The gainfully occupied—Does increased output per capita lead to a decreased proportion of the population at work? Statistics do not indicate such a trend. In 1870 only about 32 percent of the total population was gainfully occupied. This proportion increased to 40 percent by 1930. For those of the best working age, sixteen to forty-four years, about 60 percent were occupied in 1930, compared with 57 percent in 1890. This general increase partly reflected an increase from 22 percent to nearly 30 percent in the proportion of women sixteen to forty-four years gainfully occupied. Between

1920 and 1930 there was a decline in the proportion of employed men of this productive age group from 92 percent to 89 percent, largely reflecting the increased numbers of young men continuing their secondary and higher education.

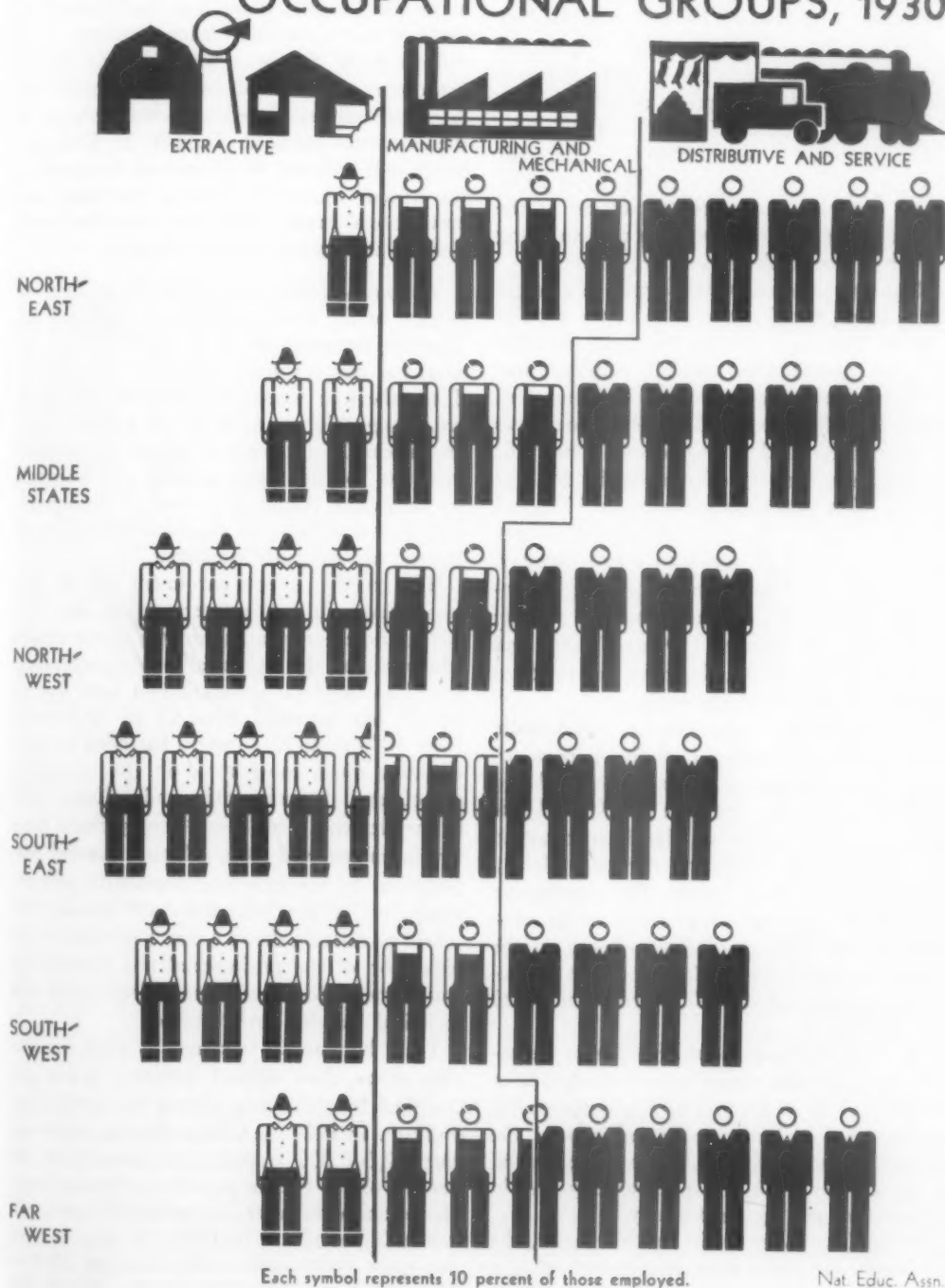
There has been a marked decline in the proportion of children at work, principally due to child labor legislation. For boys ten to fifteen years old, the percent employed fell from 26 percent in 1890 to a little more than 6 percent in 1930; for girls of the same ages, from 10 percent to 3 percent in the same period. At the opposite end of the occupational age scale, however, the percent of employed persons between the ages of forty-five and sixty-four has increased 2 percent, largely because of the number of married women working outside the home.

Occupational distribution—Significant changes have occurred in the distribution of gainful workers in the three broad classes of industry: (1) extractive (agriculture, mining, and forestry); (2) mechanical and manufacturing; and (3) distributive and service. For the United States the proportion engaged in extractive industries declined steadily from over 45 percent in 1880 to just under 25 percent in 1930. At the same time the proportion engaged in the distributive and service trades increased from 34 to over 47 percent. The number employed in the latter occupational group in 1930 was almost a third greater than the number of all gainfully employed persons in 1880. There was less change in the proportion of persons engaged in manufacturing and mechanical industries during the same period, from 20 percent in 1880 to 29 percent in 1930. Furthermore, during the decade 1920-1930 the proportion engaged in manufacturing and mechanical industries actually declined, while the proportion in trade, professional, and service occupations rose sharply. These figures reflect the transformation of our economic system from one organized almost exclusively around the direct exploitation of natural resources to one in which considerable stress is placed on mechanical, managerial, professional, and service functions. Employment opportunities seem to be, to an increasing extent, in

³ Following section based upon: Weintraub, David. "Unemployment and Increasing Productivity." *Technological Trends and National Policy*. National Resources Subcommittee on Technology. Washington, D. C.: Government Printing Office, 1937. Part I. Section 5, p. 67-87. ¶ National Education Association, Research Division. "Modern Social and Educational Trends." *Research Bulletin* 12: 262-63; November 1934. ¶ Goodrich, Carter, and others. *Migration and Economic Opportunity*. Philadelphia: University of Pennsylvania Press, 1936. Chapter 8. ¶ President's Research Committee on Social Trends. *Recent Social Trends in the United States*. New York: McGraw-Hill Book Co., 1933. Chapter 6. ¶ Ezekiel, Mordecai. "Population and Unemployment." *Annals of the American Academy of Political and Social Science* 188: 230-42; November 1936.

FIGURE IX

REGIONAL DISTRIBUTION OF OCCUPATIONAL GROUPS, 1930



the factory, store, school, hospital, and office.

More specifically, because of increased application of technical and scientific knowledge, fully one-fourth of the nation's active labor power has been released from the processes of physical production. The clerical and selling occupations have expanded rapidly with the elaboration of the processes of commerce and trade. The professional group as a whole was ten times as large in 1930 as in 1870. The absolute increase in the number of teachers, for example, was 230,000 between 1920 and 1930. There has also been a multiplication of the functions of government with an accompanying growth in the public service occupations.

Regional contrasts with respect to changes in the occupational composition of the population are important. In the Northeast in 1880 about one-fourth of the gainfully employed was in the extractive industries, just over one-third was in manufacturing, and over 40 percent was in distributive and service occupations. The proportion in the extractive industries declined steadily after that time and between 1920 and 1930 there was a decline in the actual number of those engaged in agriculture and forestry. The distributive and service occupations increased steadily in relative importance (except for a slight drop between 1900 and 1920), and by 1930 this group included over half the total gainfully employed in the region.

The extractive industries of the Middle States declined steadily in relative importance from almost one-half of the gainfully employed in 1880 to less than one-fifth in 1930. Manufacturing increased in relative importance in each state up to 1920, but declined slightly during the following decade. The distributive and service occupations included about one-third of the total gainfully employed in the region in 1880. In 1930 this group of occupations included over 40 percent of the total in every state.

In the Northwest and the Southwest the extractive industries remain more important than manufacturing as a source of employment; but in both regions the number engaged in the distributive and service industries is now equal to or greater than the number engaged in agriculture, mining, or forestry.

In the Far West, as in the Northeast, the extractive industries were less important as a source of employment than the distributive and

service occupations even in 1880. The former group has declined from 36 percent of the total in 1880 to 18 percent in 1930, while the latter has increased from 45 to 56 percent. Manufacturing increased up to 1920 and then, as in the Middle States and the Northwest, declined slightly in relative importance.

It is in the Southeast that the least change has occurred. From 52 to 83 percent of the total gainfully employed in each state were in the extractive industries in 1880. In 1930 this group still included 46 percent of the total for the region. The shifts between the other two occupational groups, also, have been less rapid than in other geographical regions.

The non-gainfully occupied—With only 40 percent of the entire population employed for financial remuneration it is significant to see what the rest are doing. Some are chronically ill or otherwise physically incapacitated; many are young children or very old people; some are in school; others are in prisons or confined to homes for the feeble-minded and hospitals for the insane. About 20 percent of the population are housewives, not classified by the Census Bureau as "gainfully employed."

The trend in school enrolment will be discussed more fully in a later section. But it is well to note here that, according to the census enumerations, the ratio of all persons attending school to the total population of ages five to twenty has increased from 45 to 73 percent from 1870 to 1930. Growth has been proportionately much more rapid in the secondary schools and the universities and colleges than in the elementary schools. Many persons have thus been removed from full-time gainful employment by the increased popularity of non-compulsory higher education. Of course, this school population shows a direct relation to the expansion of the professional and managerial employments for which general education and technical training are required.

Only housewives who report some occupation other than unpaid domestic work are included by the census among the productive workers. In 1920 the Census Bureau estimated that 22,500,000 women who constituted 66 percent of the female population sixteen years of age and over were "home-housekeepers not gainfully occupied." In 1930, the figures were not quite comparable with those of 1920—86 percent or 24,500,000 of the 28,400,000

homemakers were not working for any monetary compensation, but the remaining 14 percent ran their homes and were also gainfully occupied. Since 1930 it is estimated that the proportion of married women working or seeking work for pay has increased because of unfavorable economic conditions.

The increase in institutional populations is the result of many factors, including growth in the absolute number of dependents, an increase in the collective responsibility assumed by society, and possibly the breakdown of the family as a protective institution. The absolute number of persons sixteen years of age and over in institutions for the feeble-minded and epileptic and institutions for juvenile delinquents, mental hospitals, prisons, benevolent institutions and almshouses grew from about 245,000 to 717,000 between 1890 and 1930. In 1890 the number represented 0.62 percent of the population and in 1930 it was 0.84 percent. Those confined to institutions of the above type, however, represent a very small part of the total dependent population.

There is a growing sentiment among persons engaged in child welfare activities in favor of foster homes for dependent children in preference to institutions. Statistics of child welfare in New York State give evidence of this trend. The percent of children who were removed from or kept out of institutions and cared for in family homes instead rose from 12.8 percent in 1915 to 74.2 percent in 1934. Even so, the estimated number of children directly under institutional care was 306,655 in 1933.

The unemployed—Altho the phrase "gainfully occupied," in Census Bureau usage, refers to all persons ten years old and over who usually follow a gainful occupation, even tho they may not have been employed when the census was taken, separate tabulation was made of information collected on those unemployed in 1930. Obviously no picture of occupations is complete without some attention to those who are unemployed, tho employable.

The Census of 1930 reported 3,187,647 persons as unemployed who were able and willing to work.⁴ This number constituted 2.6 percent of the total population and 6.6 percent of all classified as "gainful workers over ten years of age." At the date of the census certain groups had a relatively high percent unemployed. Among men 24.1 percent of the building laborers, 21.5 percent of the coal mine operatives, 16.4 percent of the manufacturing laborers, 14.6 percent of the semi-skilled manufacturing operatives, 13.4 percent of the road and street laborers, and 11.2 percent of the cooks were unemployed. Among women 10.7 percent of the semiskilled manufacturing operatives, 10.6 percent of the manufacturing laborers, 7.0 percent of the waitresses, and 6.4 of the wage-workers on farms were without employment.

Up until 1937 recovery in industry and business has been manifesting itself in increased production and sales, increased employment, and increased profits and dividends. But the country is faced with the disturbing realization that estimates of the number of unemployed show little proportionate decrease and that the relief burden remains at a high level. Numerous startling developments in production technics and their resultant displacement of workers, lack of technical skill on the part of many of the unemployed, a reticence of some to accept jobs in lieu of relief, and the growing tendency of employers to force retirement of older workers at an earlier age, are factors contributing to the continuance of large-scale unemployment following the depression of the early 1930's.

Health Conditions and Physical and Mental Disabilities⁵

Health conditions—If the remarkable improvement in health conditions among the American people during the last 25 years were to be measured by the single factor of prolongation of life, it may be safely said that the remodeling of our national existence in the light of modern understanding of the principles of

⁴ Under federal supervision a voluntary registration of unemployed is being tabulated as this report goes to press. Preliminary estimates for the total unemployed as of November 1937 fix the number between 7.8 and 10.9 million persons.

⁵ Following section based upon: U. S. Department of Commerce, Bureau of the Census, "Death Rates per 100,000 Estimated Population for Principal Causes in the Registration Area in Continental United States: 1900-1935," *Vital Statistics—Special Reports*, Vol. 3, No. 17, Washington, D. C.: Government Printing Office, 1937, p. 89-93. ¶ Dublin, Louis I., and Lotka, Alfred J., *Twenty-Five Years of Health Progress*, New York: Metropolitan Life Insurance Company, 1937, Chapter 1, ¶ Perrott, G. St. J., "The State of the Nation's Health," *Annals of the American Academy of Political and Social Science* 188: 131-43; November 1936. ¶ National Education Association, Research Division, "Modern Social and Educational Trends," *Research Bulletin* 12: 252-53; November 1934. ¶ Metropolitan Life Insurance Company, *Statistical Bulletin* 18: 1-12; March 1937 and 16: 1-12; March 1935, New York: Metropolitan Life Insurance Company Press. ¶ U. S. Treasury Department, Bureau of Public Health Service, Division of Public Health Methods, National Institute of Health, *The National Health Survey: 1935-36. Sickness and Medical Care Series*, Bulletin No. 1, Washington, D. C.: the Bureau, 1938, 8 p. (Mimeo.) ¶ War Department estimates of frequency of mental defect from Lorimer, Frank, and Osborn, Frederick, *Dynamics of Population*, New York: Macmillan Co., 1934, p. 149.

sanitation and prevention or cure of disease has extended the duration of human life by nearly 14 years.

At the beginning of the second decade of the twentieth century the modern public health movement was just getting under way. Legislation regarding sanitation was being passed and enforced. The benefits of milk Pasteurization had been proved, and a rapid reduction in the typhoid fever death-rate was revealing an increasing safety in both the milk and the water supply.

During the next twenty-five years advances in medicine and surgery kept pace with improvements in the standards of living and in the conditions under which men and women work. Medical science has learned to control one of the most devastating diseases of childhood—diphtheria. The annual death-rate from that disease has dropped from 43.3 per 100,000 population in 1900 to 3.1 in 1935. Great epidemics of cholera and yellow fever such as visited this country periodically during the nineteenth century no longer exist. Smallpox is now comparatively rare. Tuberculosis, tho still the major cause of death in the age group fifteen to twenty-five years, is now largely controllable, and its annual death toll has been reduced from 201 deaths per 100,000 population in 1900 to 55 deaths in 1935.

Despite such outstanding progress in the control of certain diseases, especially in the field of child health, other diseases still remain major national problems. Whooping cough and measles each still afflicts more than a million children and causes from 4000 to 8000 deaths in the United States each year. Malaria, confined largely to certain areas in the southern states, was more prevalent in 1934 than it had been for years, with about 2,700,000 cases during that year. Disease of the heart, the principal cause of death in the United States, took a death toll of 213.1 per 100,000 population in 1935 compared with 132.1 in 1900. Cancer and other malignant tumors caused 63.0 deaths per 100,000 population in 1900 and 107.9 in 1935. Pneumonia and influenza, ranking third among the causes of death, were responsible for a death-rate of 104.0 per 100,000 population in 1935 despite the fact that the rate had fallen from 203.4 in 1900. Syphilis, tho not reported frequently as a cause of death, is now being recognized as a major national problem and a contributing factor in many deaths attributed to other causes.

A deplorable aspect of the mortality record of the United States is the destruction of human life by injuries sustained in preventable home, industrial, and public accidents. Our people probably suffer more fatal accidents in relation to the size of the population than does any other nation. The estimated annual cumulative rate for accidental deaths per 100,000 lives has increased from 50.1 in February 1936 to 56.0 in February 1937, automobile accidents alone increasing in fatality from 15.7 in 1936 to 22.8 in 1937. The automobile accident death-rate for children, however, is declining. This one bright spot in the dismal picture of the motor car massacre, as well as the substantial decline in mortality rates for all accidents to both boys and girls since 1925, may be largely attributed to safety education programs in the schools and elsewhere.

Comprehensive national records are not available for illness as for births and deaths. Statistics must be gleaned from reports of limited illness surveys and records of sick benefit associations. It is estimated that on a given average day approximately 8 percent of the population is suffering from illness, including 2 percent disabled by illness, 1 percent confined in bed, and one-quarter of 1 percent hospitalized. The highest illness rates occur among persons under ten and those over sixty-five years of age. The rates decline sharply from a maximum in infancy to a minimum in the adolescent period. Beginning at twenty years of age the rates for both sexes increase moderately thru the young adult years, decreasing again gradually between the ages of thirty-five and forty-five. With middle age a gradual upward trend is resumed. The illness rate for women shows an excess over the rate for men in every age group from fifteen years upward.

Preliminary reports of a National Health Survey: 1935-36, just released by the United States Public Health Service, estimate that on an average winter day some 6,000,000 men, women, and children (about 5 percent of the population) are disabled by illness. Also, during a year, for every death reported there is an average of 16 cases of illness disabling for one week or longer. Further, on a per capita basis, every member of the population suffers at least ten days incapacity annually from illness.

Physical and mental disabilities—In addition to diseases and conditions that are important causes of death it is well to consider the handi-

caps and impairments which lower efficiency.

According to the Census of 1930, there were 65,000 blind persons (including nearly 2,000 blind deaf-mutes) in a total population of 123,000,000, a ratio of 52.8 per 100,000. Only about 9 percent of this number were under twenty years of age, for total blindness is in the main an affliction of the aged. Defective vision, however, is prevalent among children.

A total of 59,000 deaf-mutes was reported by the 1930 Census. An estimate by the Committee on Handicapped Children of the White House Conference places at two million the number of children under twenty years of age with impaired hearing. This figure includes, of course, all degrees of impaired hearing; of the total, 17,000 are described as entirely deaf.

The number of crippled children under eighteen is estimated to be 300,000, one-third of whom need special education. The estimated total number of crippled persons of all ages is 700,000. Adult cripples who were crippled during childhood are in large part survivors of industrial accidents and war injuries.

It is difficult to estimate, according to any simple criterion, the extent of mental defect in this country at the present time. The most comprehensive data on mental defects are those for

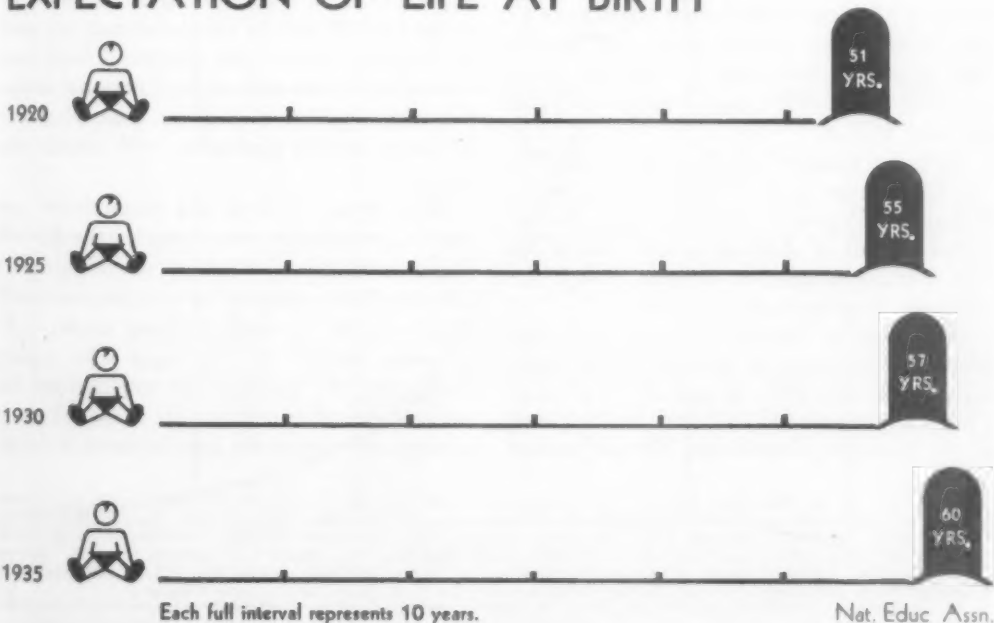
drafted men, supplemented by subsequent mental examinations by army psychiatrists. According to the War Department figures the relative frequency of mental defect was estimated at 1,200 per 100,000 for males aged eighteen to thirty. Because of the high death-rates characteristic of the mentally deficient, the proportion of children who are so handicapped has been estimated as about 2 percent.

At the close of the year covered by the 1933 report on patients in hospitals for mental diseases, there were 435,571 such persons in state institutions, institutions of the Veterans' Administration, and in county, city, and private hospitals. This gives a rate for insanity of 350 per 100,000 persons of all ages. This rate, of course, reveals the prevalence of mental illness only so far as provision is made for the care of mental disease and only so far as such provision is accepted.

Despite the premium placed on good health by the increased emphasis on efficiency in this machine age, and despite the progress that has been made thru science to make that health possible, ignorance, indifference, and low economic status keep the illness rates and the proportion of the population that is mentally and physically handicapped still at unnecessarily high levels.

FIGURE X

EXPECTATION OF LIFE AT BIRTH



Problems Arising from Population Changes

Age and Stability of Population¹

If the present trend in population growth continues it is predicted by Thompson and Whelpton,² on the assumption of medium fertility and mortality rates, that our population will increase for about 45 years more, but at a constantly lowering rate. By 1980 the United States should have about 153,600,000 people. Assuming a net immigration of 100,000 persons per year from 1940 on, the figure for 1980 is raised to 159,000,000. Even with the highest fertility rates and lowest mortality rates that can reasonably be assumed, there would be a natural increase of less than 50,000,000 from 1935 to 1980. A minimum estimate, according to these two authorities, assumes a decline of about one-third in the fertility of native white women from the 1930-34 level to 1980, with no gain thru immigration. This estimate gives a peak population of 138,000,000 in 1955, with a decrease of 10,000,000 during the following quarter century.

In like manner, Thompson and Whelpton predict further change in the age distribution. In 1900 there were 90 persons under twenty years for each 100 persons aged twenty to sixty years, whereas the corresponding ratio in 1935 was only 68 and by 1975 is predicted to be about 48. Conversely, where there were 13 persons over sixty years of age per 100 persons aged twenty to sixty years in 1900, the corresponding ratio in 1935 was 17 and in 1975 will be about 34.

Estimates prepared for the Educational Policies Commission by the Scripps Foundation for Research in Population Problems show the estimated number of children at each year of age from five to nineteen thru the year 1950. These estimates are given in the Appendix.

According to Table 1, for every 10 young people nineteen years of age in 1900 there were 13 children five years of age. By 1930 there were 11 five-year-old children to 10 young people nineteen years of age. On the basis of

the estimates set forth in Appendix Table 2, by 1940 the ratio will be 8 to 10. From that date to 1950, with medium fertility estimates, the ratio should increase to 9 to 10, not because of a marked increase in five-year-olds but because the early deficiencies in births will finally be felt in the nineteen-year group, decreasing that total. If the present trend in birth-rates continues, and low fertility estimates can be assumed, by 1950 the ratio of five-year-old children to nineteen-year-old young people will stand at 8 to 10.

The transition from a young, rapidly increasing population to one that is older and numerically stable will bring important changes. In the past there has been the widespread belief that a rapidly growing population was one of the essential conditions of general advancement. Rapid growth in population has undoubtedly contributed to past progress. The slowing up of growth threatens to bring stagnation unless we as a people can learn to appreciate values expressed in terms of the quality of living as well as in terms of size.

At present each citizen of this country has, on the average, a larger amount of arable land, minerals, and other natural resources at his disposal than the citizen of any of the countries of the Old World. If these resources are used in the public interest and if cultural conditions can be made favorable to both personal initiative and cooperative endeavor, numerical stabilization of the population will benefit the nation.

With fewer children and more elders, not only proportionately but actually, the United States faces the problem of providing: (1) jobs for older workers in an occupational world which prefers to employ young adults, (2) economic security for the aged who cannot work, and (3) an increased emphasis on the personal aspects of cultural life as the reflection of maturity replaces the impulsiveness of youth.

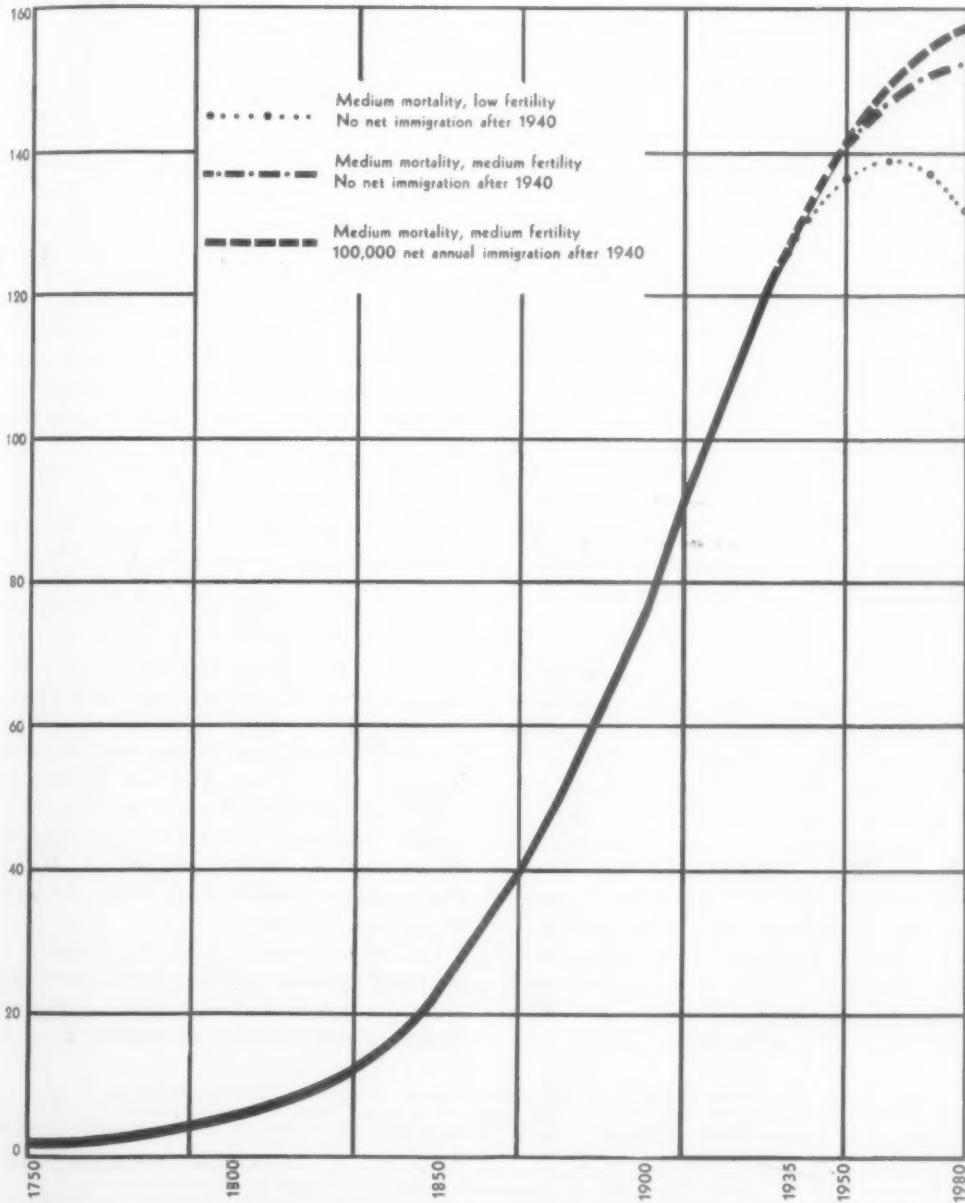
¹ Following section based upon: Edwards, Newton. Statement before the Committee on Education and Labor, U. S. Senate Hearings on S. 419, February 9, 1937. Washington, D. C.: Government Printing Office, 1937. p. 44-56. (Detailed study by Dr. Edwards to be published by American Youth Commission early in 1938.) ² President's Research Committee on Social Trends. *Recent Social Trends in the United States*. New York: McGraw-Hill Book Co., 1933. Chapter 1. ³ Chaddock, Robert E. "Age and Sex in Population Analysis." *Annals of the American Academy of Political and Social Science* 188: 185-93; November 1936. ⁴ Lorimer, Frank, and Osborn, Frederick. *Dynamics of Population*. New York: Macmillan Co., 1934. Chapter 1.

⁵ From estimates of future population prepared for the report of the Committee on Population Problems to the National Resources Committee by Warren S. Thompson and P. K. Whelpton, of the Scripps Foundation for Research in Population Problems.

FIGURE XI

TREND OF POPULATION, *1750-1980

IN MILLIONS



*Actual 1750-1930 as corrected from census figures by National Resources Committee's Committee on Population Problems.
Estimated 1935-1980 by Scripps Foundation for Research in Population Dynamics.

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Social-Economic Status of Population ³

Within this population, gradually approaching equilibrium, it is important to note that families of inferior economic status have the higher fertility rates.

In the towns and cities the lower occupational groups, especially those in straitened circumstances and on relief, have on the average more children than neighboring groups with superior economic, social, and cultural advantages. At the same time there is hardly a single urban group in which the majority of the young people enjoy the advantages of high-school education, and in which many continue their education thru college, that is now replacing itself from one generation to another. The net reproductive loss in these urban groups ranges from 10 to 35 percent per generation.

The groups in the United States which are at present reproducing at rates far above actual replacement needs are located in certain rural areas, and predominantly in communities that are at the lowest economic levels and most remote from those educational and cultural influences which are held typical of social progress. For the United States as a whole, fertility in the poorest areas is 77 percent in excess of that necessary to replace the population in those areas. This stands in contrast to a deficit of 17 percent in the areas with the highest level of living.

To go a bit further in the contrast, some large rural groups are reproducing so rapidly and other large urban groups are so diminishing that the surviving children of a million women of childbearing age now living in the former groups will be twice as numerous as the surviving children of a million women in the latter groups. Such an extreme situation, if continued for three generations, would cause the descendants of the first group to be sixteen times as numerous as the descendants of the second group. Thus, each new generation of Americans is tending to be disproportionately recruited from areas with low standards of living and inferior educational resources.

The constant stream of migrants to urban areas or favored rural areas from marginal mountain and coastal sections in the North, from the Southern Appalachian area, and from marginal cotton lands, enforced by prevailing reproduction trends, is steadily working to counteract the educational efforts now being made in American cities. Unless further effort is made to raise the social-economic level of the groups producing our future population, in two generations, in addition to being older and numerically stable, that population is likely to have a decidedly different social-economic status than that of the present day.

Population Distribution ⁴

In spite of the tendency for internal migration to produce a balance between the distribution of population and the distribution of economic resources, there remain in this country large areas of overpopulation relative to developed resources, resulting in chronic poverty and cultural stagnation for millions of people. Some reference has already been made to conditions that exist in the southeastern states.

Bad management, excessive use for private gain, or pressure of population often leads to the exhaustion of natural resources. The situation is exemplified by the forest lands that formerly yielded great wealth and gave employment to many, but now are stripped of the best stands, in the cut-over region of northern Michigan, Wisconsin, and Minnesota. Tremendous waste of soil resources thru erosion has occurred in many parts of the United States, but the Great Plains area, extending from the Dakotas and Montana to northern Texas, has been most seriously affected. Severe droughts followed by dust storms carried away the surface soil and drove thousands of families from their homesteads or forced them into the depths of poverty.

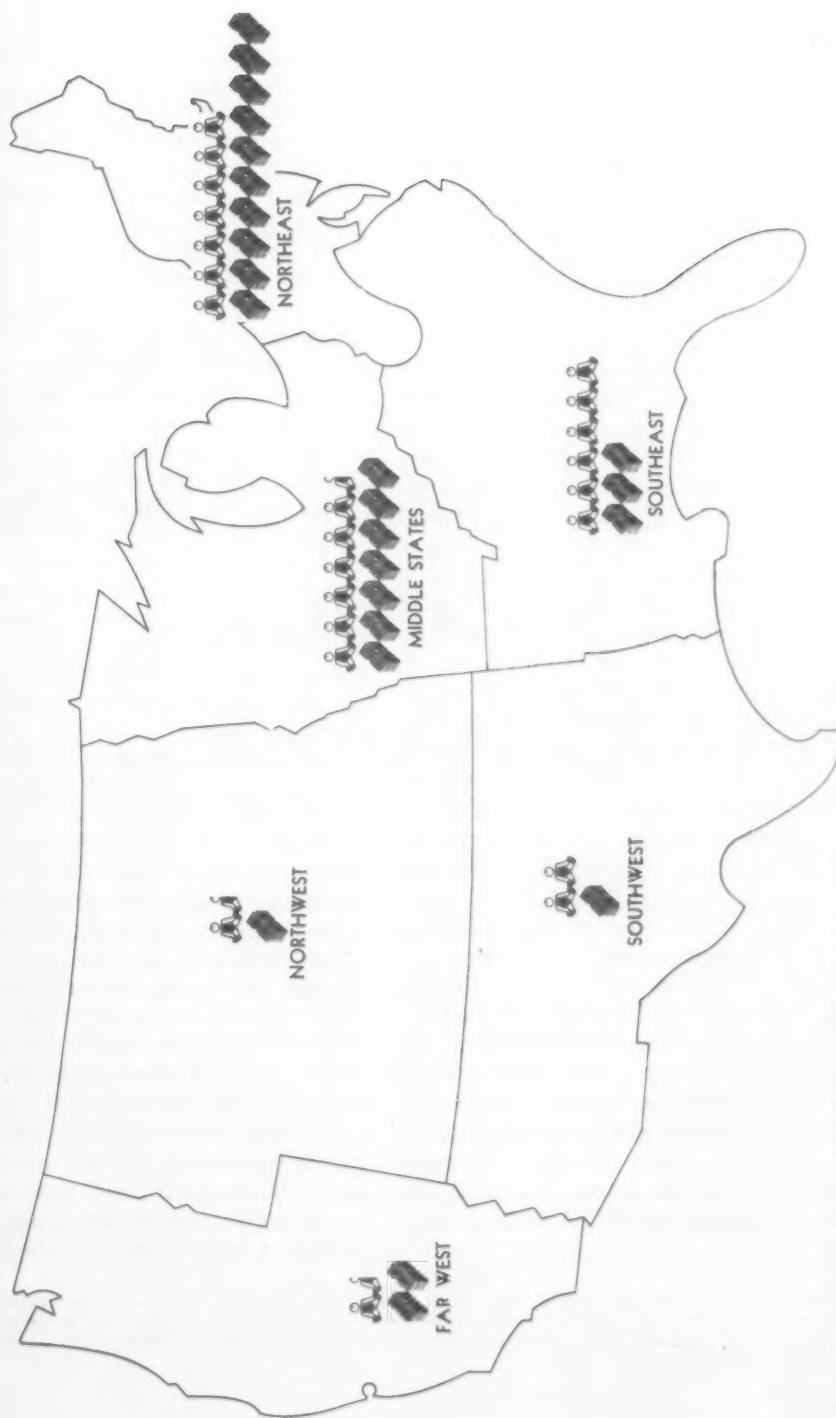
Conversely, maladjustment due primarily to the rapid depletion of natural resources brings about overpopulation. In a region dominated by agriculture, forestry, or mining, a vicious

³ Following section based upon: Lorimer, Frank, and Osborn, Frederick. *Dynamics of Population*. New York: Macmillan Co., 1934. Chapters 9 and 14. ¶ Tugwell, Rexford G. "National Significance of Recent Trends in Farm Population." *Social Forces* 14: 1-7; October 1935. ¶ Odum, Howard W. *Southern Regions of the United States*. Chapel Hill: University of North Carolina Press, 1936. p. 93-95.

⁴ Following section based upon: Goodrich, Carter, and others. *Migration and Economic Opportunity*. Philadelphia: University of Pennsylvania Press, 1936. Part I. ¶ Black, John D. "Agricultural Population in Relation to Agricultural Resources." *Annals of the American Academy of Political and Social Science* 188: 205-17; November 1936. ¶ Thompson, Warren S. "The Distribution of Population." *Annals of the American Academy of Political and Social Science* 188: 250-59; November 1936. ¶ Woofter, T. J., Jr. "Southern Population and Social Planning." *Social Forces* 14: 16-22; October 1935. ¶ Odum, Howard W. *Southern Regions of the United States*. Chapel Hill: University of North Carolina Press, 1936. Chapter 8.

PERCENT OF NATION'S CHILDREN AND PERCENT OF NATION'S INCOME IN SIX GEOGRAPHIC REGIONS, 1935-1936

FIGURE XII



Each child represents 4 percent of child population 5-17 years of age.
Each stack of bills represents 4 percent of accountable income.

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circle may be set up if demand for the region's characteristic products is static or declining and if it is a region of high reproduction rates. The Southern Appalachian Coal Plateaus and the Old Cotton Belt are two such areas. Low average income, lack of contact with outside developments, and meager and ineffective education retard the introduction of new industries or methods of production, and hamper movement to other places where opportunity is greater. Thus areas of inadequate opportunity eventually develop a surplus of population.

The report on *Migration and Economic Opportunity* points definitely to certain areas which should give up population thru emigration. The cut-over region of the Great Lakes, by migration within its region, can probably take care of all but a few thousand of its present population, but in the case of the Great Plains it is argued that the minimum exodus consistent with the safe use of the land would be a quarter of a million people. Authorities on the population and resources in the Coal Plateaus of the Southern Appalachians suggest that some three hundred and fifty thousand people should leave their crowded region. Staggering numbers ranging on various hypotheses from one and one-half to six or seven million are suggested as necessary migrants from the Old Cotton Belt to alleviate the population pressure on economic resources.

If these great numbers of people do migrate from the less-favored regions, their influx into new communities immediately creates problems. The cumulative effect of years of fighting a losing battle against economic inequalities has not equipped them to fit into new situations which frequently require occupational adjustment and drastic changes in living habits. All too frequently migrants from these areas to great urban centers are faced with mass unemployment, widespread underemployment, severe need, and social conflict that they have never known before. In this matter of a poorly distributed population the nation faces an acute situation.

Occupational Adjustment ⁵

Material progress and increased output per worker have created dislocations in our economic system. Mere technical advancement may lead to a state of chronic inability to use all our labor power.

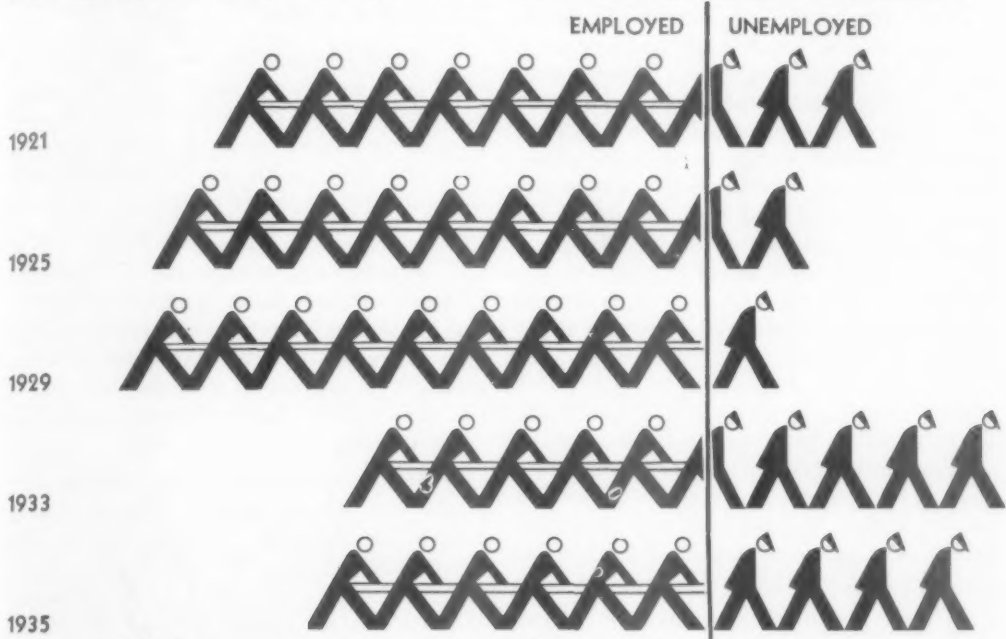
A small part of the problem is automatically cared for by the fact that some declining industries show very large proportions of workers over forty-five years of age—for example, harness factories (68.9 percent), livery stables (52.6 percent). The industry tends to die with the worker. On the other hand, where technical improvements supplant an old established craft with machinery, the newly employed semiskilled machine operatives will tend to be recruited from the younger ages. Rapidly expanding industries show low proportions of workers past the forty-five-year line—for example, automobile factories (19.6 percent), rubber products (21.1 percent), petroleum refineries (19.9 percent), and radio broadcasting (5.5 percent). New industries, established usually in urban communities, draw upon the young persons who have not become attached to an established industry. These conditions force old employees out of their former jobs but present little incentive for them to change their occupation.

As mentioned previously, the labor supply is growing older, but industry wants the young worker. This may result in a clash between employers and employees. Union organization tends to protect the man already in an industry against pressure for displacement by machinery or youth. But unemployed young people ordinarily have no union affiliations. They have difficulty in entering the industries where the older workers are "sitting tight." Obviously the situation calls for cooperation between education, labor, and industry whereby work experience thru apprenticeship will be available to youth under conditions which will not endanger the employment of the mature worker. If present occupational trends continue the problem of employment for the young and the old workers is apt to grow increasingly serious.

⁵ Following section based upon: Ezekiel, Mordecai. "Population and Unemployment." *Annals of the American Academy of Political and Social Science* 188: 290-42; November 1936. † Weintraub, David. "Unemployment and Increasing Productivity." *Technological Trends and National Policy*. National Resources Subcommittee on Technology, Washington, D. C.: Government Printing Office, 1937. Part I, Section 5, p. 67-87.

FIGURE XIII

LABOR SUPPLY AND EMPLOYMENT



Each figure represents 10 percent of available labor supply.

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PART II. EDUCATIONAL IMPLICATIONS OF POPULATION TRENDS

Summary of Part II

At the time the public schools were founded there were no effective methods by which predictions could be made with regard to the size of the task which would soon confront public education: the amount of money which would be required, the number of teachers to be trained, the number of schools that must be built in order to house the children of a nation that within a few years would reach from coast to coast. The need and desire for public education, rather than knowledge that the undertaking could be carried thru, motivated the launching of public schools. Today, if education is to realize the hopes of its founders, it is essential to give thought to its quantitative aspects. Information must be anticipated on the number of children to be educated in each locality and state, the amount of funds which will be needed, the number of teachers who must be trained, the amount of physical equipment which will be required. Such information needs to be interpreted so as to reveal the educational implications for each state and community. Ten of the more general implications suggested by Part II are summarized below.

1. *Improvement and extension*—Decreasing numbers of children to be educated should be used as an opportunity to enrich and improve the educational program. Every effort should be made to bring into the schools those children who are now growing up without adequate schooling. The schools should play a crucial part in developing a universal civic intelligence required to meet the problems of an industrial democracy.

2. *School plant*—The location and design of new school buildings should be determined after careful studies of existing and probable future trends in the school population at the various educational levels. The growth of cities due to migration, rural resettlement projects, the movement of urban residences to the outlying sections, and the development of road systems facilitating transportation of rural pupils, as well as natural rates of increase or decrease in population, are among the factors to be considered.

3. *Guidance and adjustment*—Guidance services and other appropriate means should be

used by the schools to adjust educational programs, not only to the great number of children who remain in one locality, but to those in a mobile population who change frequently from one school to another.

4. *Rural schools*—The probability that the rural areas will be the reservoirs of the future population makes the improvement of rural education a national necessity. Rural education must offer opportunities suitable both for youth who will stay on the farm and for those who will migrate to the cities.

5. *Population facts in the curriculum*—The facts with regard to the trends in the population of the United States should be presented at appropriate levels in the educational program, especially in connection with subjects such as the social studies, home economics, and vocational training.

6. *Wholesome attitudes on population questions*—The schools should encourage among both youth and adults the formation of attitudes toward family life and family responsibilities which are socially and individually acceptable, to the general end that the physical and intellectual quality of the future population may be lifted.

7. *Teacher personnel*—The education of teachers and the administration of teacher personnel should be planned and carried out in the light of current population trends. In the regular elementary and secondary schools, decreasing numbers of children may make it possible to bring about desirable reductions in size of classes and perhaps to lift the level of teacher preparation, selection, and compensation. Extension of school services in such relatively new fields as vocational, adult, and special education will call for a larger personnel in these fields.

8. *Better education for more adults*—The increasing proportion of adults in the total population combines with other important social changes to suggest the advisability of increased provision for adult education as an integral part of public education.

9. *State and federal support*—The movements of population from one area to another

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within the same state and from one state or region to another suggest the importance of increased state and federal participation in financial support for basic educational services.

10. *Public relations*—Since many adult citizens are childless or have no children of school age, the interpretation of the schools to the public should emphasize not only the specialized service to the child, but also the general benefits and the civic, social, and economic values of universally effective schooling.

To adjust its policies and practises to meet the demands of a population of more adults and fewer children, to look to the quality of a population which is rapidly becoming numerically stable, to create among those enjoying the greatest economic and educational advantages social attitudes which place more favorable

emphasis on the values of family life, to extend educational opportunity to the children in the regions which are prolific but marked by a low economic level, to give guidance and direction to an increasingly mobile population which is poorly distributed, to aid in the rehabilitation of the older, displaced worker and the training of the young, inexperienced worker—these are some of the problems which face education as a result of population changes. Schools constitute only a part of the educational whole, but they represent fundamental instruments for bringing about the realization of social goals.

The headings under which the implications of population trends are discussed below are in no sense mutually exclusive, but are treated separately only for convenience. Changes in the curriculum, for example, will involve changes in school building programs, in the education of teachers, and in school finance.

Trends in School Population

Many of public education's greatest triumphs and most perplexing problems have had a common origin in a rapidly increasing school population. We have been proud to stand first among nations in proportion of child population enrolled in school. This, in itself, has been at once the most valid evidence of the existence of a democratic government in this country and the most reliable assurance of its perpetuation. But we have been forced to our utmost endeavor to provide education for an ever growing army of children. Perhaps none but a young, idealistic, and wealthy nation would have tried it at all—would have attempted to break the hold of tradition against education for the masses, would have undertaken the task of convincing the masses of people themselves of the necessity for their own education, would have kept a pioneer school within reach of the restless wagon train moving westward, would have placed modern buildings in congested areas of cities in order to stimulate hope in the midst of squalor.

But America, literally in her "teen age"—the average age of the people of this country when public schools were founded was but seventeen years—set her hand to this task with confidence that some means would be found to continue the work of public education thruout future generations. History shows that this faith has not been unfounded. Thru periods of economic emergency that have arisen, the American people have always fallen upon some plan for maintaining and even improving the public schools.

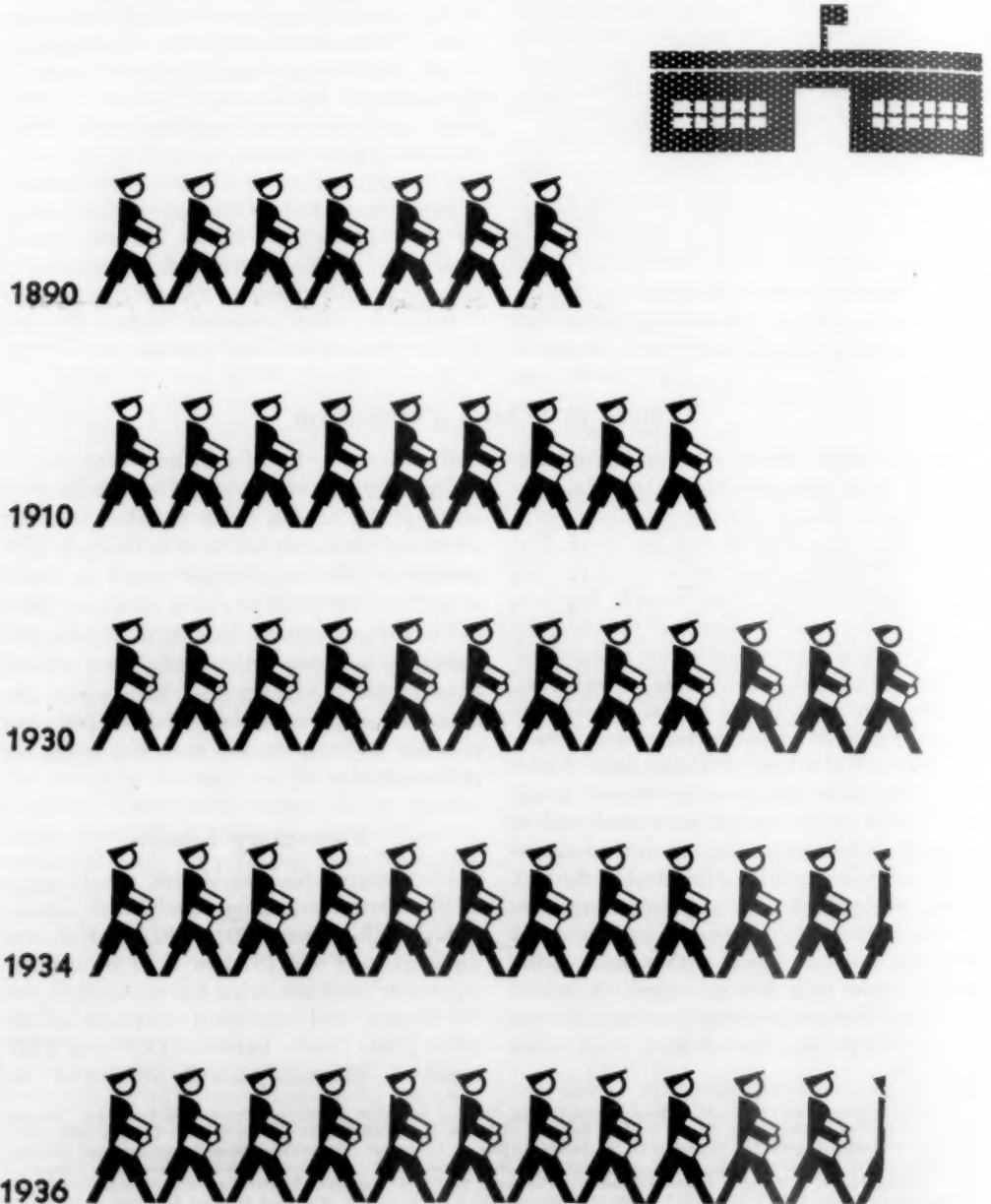
Elementary Schools¹

Elementary-school enrolment trends up to 1930 corresponded quite closely with population growth. From 1870 to 1922 both showed rapid gains. From 1922 to 1930 increases in enrolment were somewhat less pronounced, but there were still important increases at the upper-grade levels. Between 1930 and 1932, however, elementary-school enrolment de-

¹ Following section based upon: U. S. Dept. of the Interior, Office of Education, "Statistical Summary of Education," *Biennial Survey of Education in the United States: 1932-34*, Bulletin, 1935, No. 2. Washington, D. C.: Government Printing Office, 1937. Chapter I. (Advance pages). ¶ U. S. Dept. of the Interior, Office of Education, "Statistics of State School Systems, 1933-34," *Biennial Survey of Education in the United States: 1932-34*, Washington, D. C.: Government Printing Office, 1936. Chapters 1 and 2. (Advance pages). ¶ President's Research Committee on Social Trends, *Recent Social Trends in the United States*, New York: McGraw-Hill Book Co., 1933. Chapter 7. ¶ American Association for Adult Education, *Handbook of Adult Education in the United States*, New York: the Association (60 E. 42d St.), 1936. 389 p. ¶ "Higher Education Again on the Upgrade," (Educational News), *School Review* 45: 82; February 1937. ¶ Smith, Rufus D., "Population and Schools—A Reversal in Trends," *Journal of the American Association of University Women* 30: 11-15; October 1936. ¶ Walters, Raymond, "Statistics of Registration in American Universities and Colleges, 1936," *School and Society* 44: 793-811; December 19, 1936. ¶ Edwards, Newton, Statement made before Committee on Education and Labor, U. S. Senate Hearings on S. 419, February 9, 1937. Washington, D. C.: Government Printing Office, 1937. (Detailed study by Dr. Edwards to be published early in 1938 by the American Youth Commission.)

FIGURE XIV

ELEMENTARY EDUCATION ENROLMENT



Each symbol represents 2 million pupils in public and private elementary schools.

creased while the total population growth continued, altho with less rapidity. In this two-year period the total elementary-school enrolment declined by 143,173 children. By 1934 there were 370,383 fewer than in 1932, and by 1936 there were 372,476 fewer than in 1934. The decrease from 1930 to 1932 was 0.7 percent; from 1932 to 1934, 1.8 percent; from 1934 to 1936, 1.8 percent; and from 1930 to 1936, 4.2 percent.

Up to 1934 the decreases occurred in the first five elementary grades while the sixth and each succeeding grade made annual gains. These decreases, however, will creep on up thru the grades as the years pass. It has been stated that in the year 1935 more pupils were graduated from the elementary schools than ever had been before or ever will be again. There was a smaller number of children to enter first grade from 1930 to 1935 than from 1920 to 1925. It is predicted that 5 percent fewer children between the ages of six and nine will be found in 1940 than there were in 1930. Thus, the accumulated effect of steady decreases in child population will be found in all grades soon. Indeed, by 1936 the *total* elementary and secondary enrolment showed a decrease of 67,000 below the 1935 peak.

Secondary Schools

During the past four decades the expansion of secondary education in this country has been spectacular. The declining employment of young people is reflected here. Urbanization and the specialization and standardization of industrial processes have, for the most part, forced youth to choose among gainful employment in a routine occupation, continued attendance at school, or idleness. As recent trends have been toward the elimination of the first of these possibilities, the choice now lies between schools and idleness for many young people of high-school age.

In 1870, one in five hundred of the population was in high school; by 1930 the secondary schools were enrolling one in twenty-two of the population. In 1900, 3.3 percent of the public school enrolment was in secondary schools; thirty years later that percent had increased to 17.1, and, by 1934, to 21.4 percent. The federal Office of Education estimates that in 1936 secondary schools enrolled 65 percent or nearly two-thirds of all children fourteen to seventeen years of age.

The Far West ranks highest in the school attendance of children from fourteen to seventeen years of age, having 75 percent enrolled. In the Southwest only one-half of this age group is in school; in the Southeast, only 34 percent. Other sections fall between these percents: the Northwest with 65 percent, the Middle States with 59 percent, and the Northeast with 52 percent. Thus, high-school enrolment is relatively lowest in the poorer sections of the United States.

Further growth in high-school enrolment is expected as the employable age and vocational training requirements are raised. By about 1938 recent losses in the elementary enrolment should begin to affect enrolments at the ninth-grade level, but total high-school enrolments will not become stationary or begin to decline for some time.

Colleges and Universities

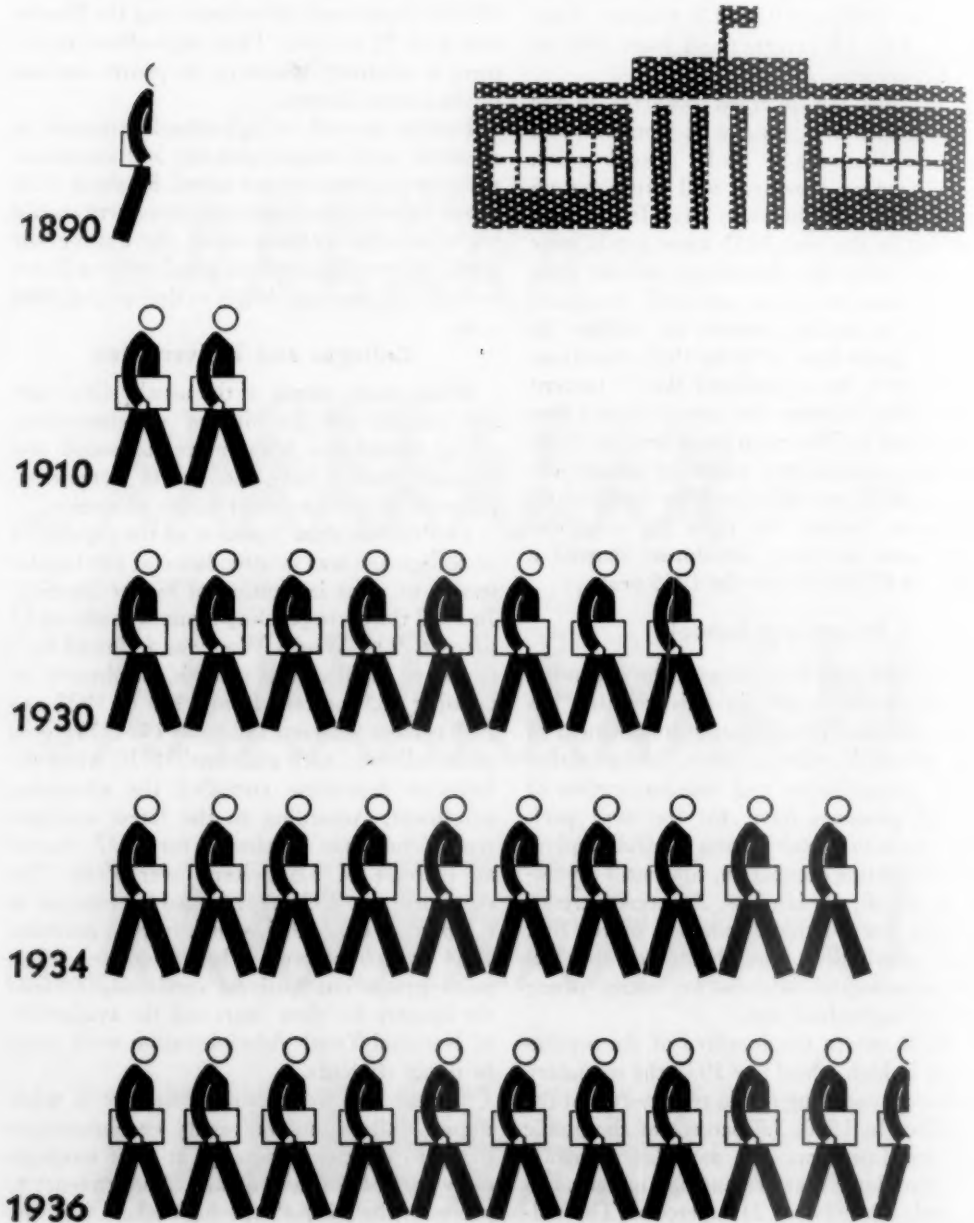
Altho young people of the usual college ages are outside the jurisdiction of compulsory school attendance laws, powerful social and economic factors have operated to increase enrolments in institutions of higher education.

In 1910 less than 5 percent of the population of college age was in attendance at the regular session of some institution of higher learning. In 1932 the corresponding figure was almost 13 percent. The World War was followed by a period of rapid college growth, enrolments increasing 13.9 percent from 1920 to 1922 and 20.8 percent between 1922 and 1924. Material gains followed each year until 1930 when the financial depression curtailed the advancing enrolment. According to the latest available report, full-time enrolment for 1937 showed an increase of 3.6 percent over 1936. The enrolment for 1936 represented an increase of 6.5 percent over 1935, which in turn exceeded 1934 by 6.6 percent. These increases reflect more prosperous business conditions thruout the country for these years and the availability of National Youth Administration work relief to needy students.

Unless this work relief assistance is withdrawn, college and university enrolments are likely to increase generally, at least until the early part of the next decade. The tendency to prolong education at the high-school and college level will for some years more than offset the influence of a declining birth-rate and any increase in work opportunities that now seems likely to occur.

FIGURE XV

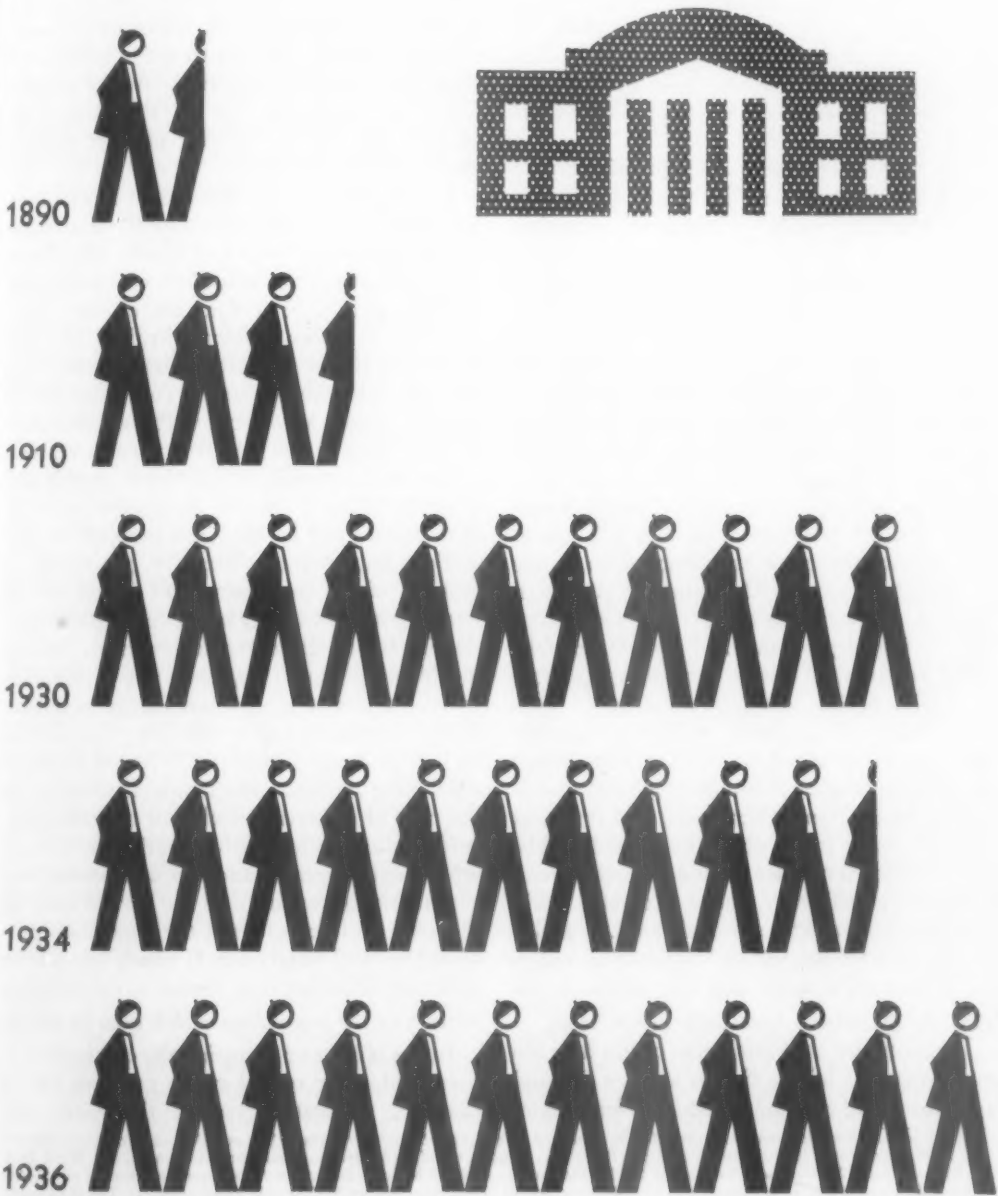
SECONDARY EDUCATION ENROLMENT



Each symbol represents 600,000 students in public and private schools.

FIGURE XVI

HIGHER EDUCATION ENROLMENT



Each symbol represents 100,000 students in public and private colleges.

Methods and Curriculum¹

In forward-looking American schools a definite responsibility is accepted for developing good citizenship to meet the growing requirements and opportunities of American democracy. This fundamental educational purpose makes it necessary that the processes of curriculum planning and reconstruction go forward continuously. The content and methods of teaching are being modified constantly on the basis of new findings of scholarship, improved methods of teaching, and a more complete understanding of the imperatives of the social situation.

For such a curriculum the population trends which are reviewed in this report suggest several important points of emphasis, including especially the foundations for vocational education, the enrichment of life thru the wise use of leisure time, and training for happy and effective family life.

The school's contribution to preparation for vocation is, for most of the population, brought to a focus in the secondary schools. It is natural that young people, whether spurred on by ambition or dogged by fear of economic insecurity, should seek to establish their own economic welfare thru education. Yet it is just in this respect that school experience often proves the least satisfactory. The nature of American life and industrial enterprise and the limitations of school programs and equipment make school training for a large number and variety of highly specific occupations extremely difficult. Vocational programs, at least in the ordinary secondary school, should lay foundations for training on the job and develop understanding of the basic machines, tools, and processes common to a large occupational field. The school is also concerned with developing sound health, social efficiency, habits of careful work, and other important vocational assets. It is also concerned with helping each student to understand his own abilities and limitations in the light of the various vocational possibilities.

Preparing for the enrichment of life thru the employment of leisure time is another demand upon the school curriculum which is made more

emphatic by population changes. Vocational education is essential, but every adult owes more to himself and to his fellow citizens than merely keeping himself well fed and busy. Educators must face the problem of assisting the unemployed young adult to make a worthy use of his leisure time. The schools should also make a concerted effort to train young people in the skills and habits of self-entertainment, self-improvement, and constructive hobbies for present and future enjoyment. As the population grows older and as the life span is increased, the leisure years of old age will be increasingly significant.

Fundamental to the population situation of the future are the educational procedures which touch upon effective family life. From the kindergarten up thru adult education such training should be a function of the entire educational process. Biology, hygiene, physical education, literature, history, home economics, and the social studies can all contribute to the pursuit of such an objective. If the population of the United States is to progress as it replaces itself it must reproduce from the more able and healthful level. From the standpoints of both environment and heredity, the problem of population improvement becomes practically a problem of the improvement of family life. A startling statement may be quoted: "Reproduction is basic to all human achievement. Indeed, the biologist would say that any civilization which produces a general unwillingness to bear and rear children has by that very fact proved its lack of fitness to survive."² Social attitudes supporting unreasonable family limitation, on the part of persons best able to rear children, tend to promote ineffective family life. On the other hand, ignorance and lack of economic and educational opportunity on the part of some of the more prolific groups in the population promote low-level family life. If family life is to be enriched, education must reveal its value to that portion of the population which goes to school.

In the process of adjusting the curriculum to these and other special needs growing out of changing population trends, the great con-

¹ For further discussion consult: Rugg, Harold. *American Life and the School Curriculum*. Boston: Ginn and Co., 1936. Chapter 2, p. 17-29. ¶ Schorling, Raleigh, and McClusky, Howard Y. *Education and Social Trends*. Yonkers-on-Hudson, N. Y.: World Book Co., 1936. Chapter 6, "Shifting Character of the Population," p. 88-89. ¶ National Education Association, Department of Superintendence. *The Improvement of Education: Its Interpretation for Democracy*. Fifteenth Yearbook. Washington, D. C.: the Department, 1937. Chapter 10, "A Long-Time Program for Educational Improvement," p. 141-47. ¶ National Education Association, American Association of School Administrators. *Youth Education Today*. Sixteenth Yearbook. Washington, D. C.: the Association, 1938. Chapters 3, 5, and 6.

² National Education Association, Committee on Social-Economic Goals of America. *Implications of Social-Economic Goals for Education*. Washington, D. C.: the Association, 1937. p. 21.

trolling aim and purpose of American education must be kept at the center of attention. To our schools is committed the maintenance and improvement of American society. This society is democratic in ideal; it repudiates government by sheer force, nourishes the in-

quiring spirit of science, and rests on the moral imperative that human life has an intrinsic value. Out of this philosophy, the purposes of the American school are to be defined; to this philosophy all the learning activities of the American school must be attuned.

Guidance¹

Population changes, especially those involving internal migration and maladjustment in the occupational world, complicate the problems of the schools, and students of all kinds of ability will find "rough going" on the path toward social adjustment. There is a need for comprehensive guidance service at all levels of the educational program.

The expanded and differentiated curriculum, especially from the secondary-school level up, calls for guidance in making choices of far-reaching importance. Because selection of many subjects of specialization has become equivalent to temporarily designating one's occupational plans, this is the point at which guidance may be considered vocational. In a time when life was simple, occupations few, and educational opportunities relatively brief and meager, a choice of life work was usually less difficult. But now, with the multiplication of occupations and increased specialization, with rapid shifts as technological improvements change demands for workers in certain fields, with the influx of both married and single women into the occupational world, with unemployment threatening on certain fronts, and with the securing of "that first job" becoming increasingly difficult, a comprehensive program for the guidance for boys and girls is a necessity.

On the adult level no one is in greater need of guidance than the man or woman who seems hopelessly caught in the web of occupational displacement and economic depression. The burden of relief for such situations has long rested solely upon social agencies, but the burden of the education and guidance of these adults so they can relieve their own situations should be, at least in considerable part, a responsibility of the schools. If the migration of large groups of families out of areas of barren economic advantage is to be effected, should not the schools help to educate those families to the necessity of moving and assist

in guiding them toward areas of greater opportunity?

There is a growing necessity for guidance of young and old in our rapidly shifting population as they are constantly called upon to make personal adjustments to new regions, new associates, new occupations, and new social environments. The rural boy is confused in a large city; a migrating family from the Great Plains finds the western mountains or the eastern industrial areas strange and forbidding. Schools have long represented a stabilizing force in America. It seems, therefore, a new task of the schools, along with other social agencies, to provide well-informed men and women to guide and counsel the maladjusted individuals in our population.

Many of the groups migrating from the city to the farm were families with children of school age. There were 43,666 fewer children enrolled in city schools in 1934 than in 1932 and 202,418 more children enrolled in rural schools. While part of this difference was due to differences in birth-rate which always favor rural areas, some of it must have been due to migration. At the present time no doubt the difference is decreasing due to the continued migration of more families to the city and fewer families to the country. What does this rapid interchange mean to the thousands of children involved? Change in schools, teachers, textbooks, courses of study, and schoolmates. Many children during the past seven or eight years have had to make three or more adjustments to different schools. This presents a difficult problem for education: How to make the course of study, the teaching methods, and especially the guidance methods flexible enough to enable the migrating child to find his correct place in whatever school he may chance to be placed for the time being. Increasing mobility is steadily bringing this problem into the foreground.

¹ For further discussion consult: Koos, Leonard V., and Kefauver, Grayson N. *Guidance in Secondary Schools*. New York: Macmillan Co., 1932. Chapters 1 and 14, p. 1-27, 445-507. § Bentley, J. H. "The Vocational Guidance of Youth." *Annals of the American Academy of Political and Social Science* 194: 34-41; November 1937. § National Education Association, American Association of School Administrators. *Youth Education Today*. Sixteenth Yearbook. Washington, D. C.: the Association, 1938. Chapters 4, 7, and 8.

School Building Programs¹

Expansion in enrolments during the past decade has put great pressure upon physical facilities. Many school districts will be faced for years to come with the necessity of modernizing buildings and equipment. Increased emphasis upon natural learning activities has necessitated adjustments in the physical plant toward functional, diversified, and group activity uses. New visual and auditory aids to instruction, socialized classroom procedures, increased emphasis upon health and physical development, more attention to pupils with physical disabilities or defects, more regard for pupil safety—all involve school building change or expansion or both. With occupational trends laying greater stress on training for service occupations there will likely be not only a modification of the program of vocational education, but also the provision for more specialized physical facilities for those parts of education designed to give esthetic and recreational experiences.

For at least a few years school enrolment in many communities should be made to hold its own by the enforcement of better attendance laws and by the provision of necessary facilities. There is now a tendency in this direction, especially among the southern states where large numbers of future school children are and will be located. Thompson and Whelpton point out that "if the highest attendance standards prevailing in 1930 in any geographic section had been universal, there would have been about 2,300,000 more children 7-16 years of age in school." This number is about double the decline in school population that is expected during the next decade.

With assurance of increasing legal and administrative support, teachers and other school officials face the first problem growing out of a decline in population: to fill the rapidly accumulating blank spaces in the school register with the names of boys and girls of the middle and upper grades who ordinarily drop out of school early. This problem should receive first consideration in any democratic system of education. While it is one which has always been present, a rapid decline in school population

throws it into high relief. It is essential to bring those without educational benefits into school, while laying plans for an enriched program for those already in school.

Figures compiled for this study by the Scripps Foundation for Research in Population Problems show trends in population from five to nineteen years of age inclusive, from 1900 to 1950 (see Appendix). Estimates are made of the total population by single years of age according to certain assumptions regarding future fertility and mortality trends. Predictions are made separately for the white and Negro population.

Changes in the number of five-year-old children may be studied as an illustration of the kind of information which these tables hold. The tables show that in 1900 there were 1.8 million five-year-old children. The number of these children at that time was steadily increasing. In 1910 there were 2.0 million such children. In 1920 there were more than 2.3 million. An increase of 0.2 million in the first decade of the twentieth century, and an increase of over 0.3 million in the second decade indicate that even up to comparatively recent years the rate of increase was an accelerating one. By 1930 there were 2.5 million five-year-olds, and at that point the number of these children in the population began to decline. A sharp break in the trend appears in 1931. It is estimated that by 1940 there will be less than 2.1 million five-year-old children. Running back thru the table it will be seen that there will be in 1940 only as many five-year-olds as there were in 1912. By 1950, according to entirely reasonable assumptions, the number of five-year-old children will have declined to less than 1.9 million, approximately the number that there were in 1903. These tables give for the United States as a whole, a picture of the future school population in the next decade and a half.

What will the trends in population do to the demands to expand physical facilities? While some districts continue to modernize buildings and to reorganize equipment, other districts will find it financially wise to abandon build-

¹ For further discussion consult: Smith, Rufus D. "Population and Schools." *Journal of Educational Sociology* 9: 449-68; April 1936. † Reeves, F. W. "Rural Educational Problems in Relation to New Trends in Population Distribution." *Social Forces* 14: 7-16; October 1935. ‡ Smith, Henry Lester. "Planning School Buildings To Satisfy Recent and Anticipated Changes in the School Program." *Proceedings of the Fourteenth Annual Meeting, 1936*. National Council on Schoolhouse Construction, Nashville, Tenn.: the Council (Sec.-Treas.: Ray F. Hamon, George Peabody College for Teachers), 1936. p. 16-23.

ings. Tho, in the aggregate, elementary-school enrolments are decreasing, many areas which continue to be Meccas for migrants find their facilities taxed to capacity while vacant schools mutely tell the story of movement away from other once populated sections. The consolidation of the rural school attendance and administrative units, the improvement of transportation facilities to consolidated schools, traveling libraries and teachers, and the introduction of dormitories in towns and villages for children from isolated sections are illustrative of the tendency toward centralized educational opportunity.

In urban areas, especially where migrants both from farms and from city centers concentrate in suburban sections, school building programs will continue to undergo constant readjustment. New construction will tend more and more to center on secondary schools. A decrease in the demand for additional facilities should make possible some of the functional improvements heretofore postponed. But another population situation must here be taken into consideration. As has been pointed out earlier, cities have a preponderance of adults. What can be done for the middle-aged and older persons, many of whom do not have children or are parents of grown children? One way of insuring for the schools the interest and financial support of childless adults is for school systems to sponsor the use and, if necessary, the

remodeling of school plant facilities to accommodate adult education activities.

Overexpansion in any type of building activity will need to be avoided. Continued expansion on the basis of old population trends and "booster" psychology would likely prevent the development of a modern instructional program and fail to provide properly for the less spectacular educational expenditures such as teachers' salaries. School districts in the past have financed large developments in public works thru the issuance of long-term bonds. Interest and amortization on these bonds were readily absorbed by a rapidly growing population which constantly built ever higher assessment values. With a very slowly growing population, or a stationary population, long-term financing may lay a heavy burden of debt on the children now moving on into adult life.

Community planning for a school building program in any locality must now be based upon a thoro study of local and national population trends, using all available statistics such as those on residential developments, birth-rates and death-rates, the extension of public services such as telephones and electricity and other indications of population changes. The problem involves both design and placement—design to accommodate changes in curriculum and program emphasis, placement to accommodate a mobile population which is providing fewer children for replenishment in some areas and more in others.

The Education of Teachers ¹

If schools are to meet the problems imposed by population forces, teachers and administrators in those schools must become aware of the implications of these changes. The new types of educational services foreshadowed by these changes will call for new types of personnel. At the same time, smaller classes, greater attention to individual differences, and a higher level of teacher preparation are needed.

Data from the National Survey of the Education of Teachers indicate clearly that many

teachers are not adequately prepared for their jobs. This is true of the teachers in the open country to a much greater extent than of those in villages and urban communities. The proportions of teachers in different sized communities with less than two years of college education were as follows: Open country, one- and two-teacher schools, 62 percent; open country, three- or more-teacher schools, 28 percent; villages of less than 2500 population, 21 percent; cities of 2500 to 9999 population, 12.6

¹ For further discussion consult: Evenden, Edward S.; Gamble, Guy C.; and Blue, Harold G. *Teacher Personnel in the United States*. U. S. Dept. of the Interior, Office of Education, Bulletin, 1933, No. 10. National Survey of the Education of Teachers, Vol. II. Washington, D. C.: Government Printing Office, 1935. p. 42. § Reeves, F. W. "Rural Educational Problems in Relation to New Trends in Population Distribution." *Social Forces* 14: 7-16; October 1935. § Theisen, W. W. "The Problem of Teachers for the New Education." *Social Change and Education*. Thirteenth Yearbook, Washington, D. C.: Department of Superintendence, National Education Association, 1935. Chapter 11, p. 164-87. § National Education Association, Department of Superintendence. *The Improvement of Education: Its Interpretation for Democracy*. Fifteenth Yearbook. Washington, D. C.: the Department, 1937. Chapter 10, "A Long-Time Program of Educational Improvement," p. 147-51.

percent; cities of 10,000 to 99,999 population, 10.5 percent; and the cities of more than 100,000 population, 9 percent. Yet the present population trends indicate that our future population is coming from the very communities served by the most poorly paid and poorly qualified teachers. In the improvement of rural education a most significant factor must be the training and compensation of career teachers in the rural service rather than teachers who use rural position as a stepping stone to the urban schools. Despite decreases in the child population, emphasis will continue to be placed on the preparation of elementary- and secondary-school teachers, especially in urban areas. It is important to provide superior teachers where the demand for such teachers is great. It is an equal obligation of teacher-training institutions and other agencies to cooperate in placing such teachers where the *need* is great, even tho communities have yet to be educated to the necessity of making the demand.

If the needs of an older population are to be met, teacher-training institutions must also

prepare instructors of adults. Teachers in the field of adult education, particularly in its civic aspects, should have a unique combination of qualifications, not least among them being some first-hand knowledge of other occupations. To provide this type of experience, teachers colleges might well develop and offer programs involving practical community service.

Lastly, if schools are to create attitudes among those enjoying the greatest economic and educational advantages toward the values of family life and parenthood, teachers themselves must first possess such attitudes. The professional class, of which the teaching profession is no small part, has the lowest rate of natural increase of all occupational groups. Such a condition must be attributed primarily to social attitudes. The fact that large numbers of young women are employed as teachers makes it desirable to consider many policies of teacher personnel administration in the light of population aspects, along with other considerations.

Adult Education ¹

In many instances adult education trends cannot be measured statistically because of the scope and informality of such programs, but the unprecedented growth of both public and private efforts along this line since about 1924 is well known.

In the two great crises of the twentieth century—the World War and the depression—the public schools have been called upon to help adults, foreign-born and native-born alike, to adjust themselves to changing conditions. During the War, Americanization classes were the center of much emphasis; during the depression the schools, with the assistance of federal relief funds, have offered classes in a wide range of subjects, from the crafts to social and economic problems.

The American Association for Adult Education has estimated that during the ten years from 1924 to 1934 there was an increase of 4½ million in the number of persons giving attention to radio educational programs—partially balanced by a decrease of some 2 million

in the number attending chautauquas and lyceums—and that at the later date over 2 million were attending special classes arranged as part of the unemployment relief program. Even apart from these items, during this ten-year period the number of adults enrolled or participating in some sort of organized educational activity increased from about 11 to about 14 million. Further, evidences seem to point toward a marked decline in the enrolment in private correspondence schools (from 2,000,000 to 1,000,000), and in the number of those receiving training by corporations (from 100,000 to 50,000). Increases have occurred in enrolment in university extension courses (from 200,000 to 300,000), in vocational education courses of various sorts (from 300,000 to 400,000), in miscellaneous public school courses for adults (from 1,000,000 to 1,500,000), and in agricultural extension courses (from 5,000,000 to 6,000,000).

A substantial percent of the whole adult population is being served by the above men-

¹ For further discussion consult: Reeves, F. W. "Rural Educational Problems in Relation to New Trends in Population Distribution." *Social Forces* 14: 7-16; October 1935. ¶ American Association for Adult Education. "The Philosophy and Social Significance of Adult Education in a Democracy." Summary Proceedings of Twelfth Annual Meeting. *Journal of Adult Education* 9: 265-301; June 1937. ¶ Studebaker, John W. "Education of Adults." *Social Change and Education*. Thirteenth Yearbook. Washington, D. C.: Department of Superintendence, National Education Association, 1935. Chapter 13, p. 254-68. ¶ Lorimer, Frank, and Osborn, Frederick. *Dynamics of Population*. New York: Macmillan Co., 1934. Chapter 13.

tioned agencies in addition to organized recreation and health associations, public forums, libraries, museums, men's and women's clubs for social, civic, and political education, parent-education groups, religious and character-building agencies, and numerous other organizations for adult education. The trend toward voluntary self-improvement on the part of our rapidly aging population is causing public agencies to join forces with the pioneering private organizations in an effort to meet the demands.

Further expansion of adult education programs and policies is inevitable as our maturing population is forced to face the conditions created by itself. Responsibility for maintaining economic, political, and cultural advancements rests largely upon adults. If these adults do not intelligently assume that responsibility it will be because education, after the arrest of its formal aspects at the compulsory attendance age limit, has been left to chance, to the pressure of interested groups, and to agencies managed by commercial and other special interests reflecting the confusion of the times.

As the span of life is lengthened and the retirement age is lowered, older persons who are unemployed but not necessarily dependent must be afforded the opportunity to continue living enriched, self-respecting, and profitable lives. If the maldistribution of population in relation to economic resources is to be corrected, the adult population must be educated to the demands of soil conservation programs, to the necessity of migration from certain areas, and to an economic adjustment in new localities. In sections of the country where the rate of natural increase is high and economic status is low, there is need for parent education in matters of child welfare, health and home sanitation, and other family problems. In other sections where educated adults have drifted toward patterns of life incompatible with permanent population replacement, adult education can play the major role in developing interests that are not likely to be disrupted by marriage and parenthood and that are wholly compatible with effective family life.

In the occupational world where maladjustment is now current, adults are seeking assistance in vocational guidance and rehabilitation. Certain jobs become extinct because of social or technological changes; workers become physically unable to perform their regular duties;

industries close down or machine processes replace human labor; older workers are forced to retire to make way for younger employees. Whatever be the reason for the displacement, many of these workers become not only unemployed but, without further training, unemployable. Such situations challenge adult education.

Educators must be concerned with all the influences which are brought to bear upon the thinking and behavior of post-adolescents. These are not part-time influences, but are continuous, flowing one into the other throughout the waking life of every individual; influences of family and friends, the daily and periodical press, the movies, the public library, advertising, the radio, the pulpit, the lodge, the luncheon club, the fraternal organization, the university, the forums and debating societies, the grange and the lyceum, the museum and the correspondence school, the night school, the woman's club, the government and courts of law, the alumni association and the parent-education group, the playground and recreation association, the theater—all or some of these influences bear upon greater or smaller numbers of our citizens from time to time in greater or lesser degree. Add to this list the influences from the workaday world of the job or the profession and we have some idea of the field in which adult education may work.

In former years large numbers of immigrants increased the demand for Americanization or naturalization classes. Already the decrease in immigration has resulted in smaller enrolments in such classes. Neither does the existence of complete illiteracy bring to the school the number of adult students that it once did. And, with the broadening and lengthening of the school curriculum, adult education is no longer limited to the reparative function. While all of these earlier services will need to be continued, the larger number of adults today seek civic, social, vocational, and general cultural education. Already adaptations to these needs thru the content of instruction and thru new methods of teaching, such as forums, radio and correspondence instruction, and the like, are evident. Adult education, then, is beginning to feel the effects of the impact of a large number of students and of change in the predominant type of student.

Urban Education¹

Most of the implications developed in this part of the report apply with equal or nearly equal force to both urban and rural conditions. We are one nation; the trends and welfare of urban and rural conditions are closely related. Nevertheless, there are certain population trends which have special implications for the typical urban school system. These same population trends or other trends have special and sometimes different meanings for rural schools. In this section and in the one which immediately follows it, therefore, certain implications of population changes for urban and rural education, respectively, are discussed.

As the rural population of America has moved cityward and immigrants from foreign countries have also concentrated in cities, new problems have arisen both for society and the individual, for the adult and the child. The sudden change of environment for millions of people would, in itself, have constituted a fruitful source of difficulties, even had the new environment been no more difficult and complex than the old. But increase in numbers and density of population vastly increase the complexity of social relationships. Often, the result has been unfavorable to the individual as such and conflicts and maladjustments have developed.

Personal problems often seem overwhelming to the new city dweller who has migrated from less congested areas. His sense of values, his long established habits and attitudes, even his moral code no longer seem to serve him in his new environment.

The city exhibits, no doubt, many of the advantages as well as the disadvantages of collective living; nevertheless the city today is the source of some of the most serious antisocial forces which plague the people. Great disparities of income among city dwellers; the heterogeneity of the people living within a small area; poor housing conditions, resulting in slums; a low birth-rate, coupled with a high death-rate among children; the dependence of thousands

of families upon a single industrial organization for work and self-respect; the necessity which forces the child to leave school to help support the family; a tendency toward regimentation in political and economic matters—these and numerous other factors give rise to an undue proportion of child labor, ignorance, crime, degeneracy, illness, poverty, and other ills.

To the children of school age this rapid congestion of the people in cities has meant overcrowded classrooms and insufficient play space. A sudden increase in the school enrolment has often resulted in neglect of a fundamental principle of American democracy—the recognition of individual differences. Regimentation, instead of methods that respect individuality, has too often been the resulting process by which future citizens of a democracy have been educated. Outside of school the situation in the child's world is even less promising. The factory, the streets, the dance-hall, and the movie enter into competition with a home in which space may be restricted and occupations lacking. Under such conditions many young men and boys create a social world for themselves in the form of a gang. Such a group may enable them to combat more successfully the heavy restrictions laid upon them by city life; it may also, unless given some guidance, endanger the community.

Such developments place a heavy burden upon schools. Young delinquents, and truants, children to whom childhood is already a thing of the past, youth deprived of its share of active play, complicate enormously the work of education. There is now a growing tendency for all the constructive agencies of a community to combine their efforts in various forms of social-planning councils in order to improve the social situation, and thus prevent delinquency, rather than to allow young people to become delinquents and then heap the burden of correction on the schools.

¹ Baker, O. E. "Rural and Urban Distribution in the United States." *Annals of the American Academy of Political and Social Science* 188: 264-79; November 1936. § Burgess, E. W. *The Urban Community*. Chicago: University of Chicago Press, 1926. 268 p. § Harley, D. L. *Surveys of Youth*. American Council on Education Studies, Vol. 1, No. 1. Washington, D. C.: American Youth Commission, 1937. 106 p. § Jessen, Carl A., and Hutchins, H. Clifton. *Youth: Community Surveys*. U. S. Dept. of the Interior, Office of Education Bulletin, 1936, No. 18-VI. Washington, D. C.: Government Printing Office, 1936. 97 p. § National Resources Committee. *Our Cities: Their Role in the National Economy*. Report of the Urbanism Committee. Washington, D. C.: Government Printing Office, 1937. 88 p. A summary of this report consisting of 35 pages has been published by the Government Printing Office. § Ogburn, W. F. *Social Characteristics of Cities*. Chicago: International City Managers' Association (850 East 58th Street), 1937. 70 p. § Walsh, J. H. "Rural-Urban Differences and Their Amelioration." *Social Studies* 28: 174-76; April 1937.

Rural Education¹

Students of population maintain that the families on the farm will supply the people of the future in increasing proportions. Millions of people are moving away from the congested sections of the city, many only to the suburbs or neighboring villages, others beyond suburban areas to the open country. Families with young children want to live in a neighborhood in which there is more space for play, and perhaps a possibility of adding to the family income by growing a part of the food supply. The 1935 Cincinnati school survey reports that of the total population living within the metropolitan region, the proportion living within the corporate limits dropped from 67.3 percent to 63.6 percent between 1920 and 1930; while of the total increase within the same decade, 44.1 percent was within the city proper as against 55.9 percent in the suburbs. Most cities are experiencing this same movement away from the center. A report from Cleveland states: "In several sections of the city, schools crowded to the roofs and with classes on half-time only ten years ago now have an increasing number of empty rooms each year. Cleveland's residential population has shrunk away in the center while increasing on the periphery." So, however excellent may be the school buildings and equipment now available, there is a strong possibility that many school children of the future will be located too far away from existing buildings. While the present school plants in cities may be numerically adequate, and more than adequate, for the fewer school children of the future, it is likely to be necessary to provide new buildings and equipment in many suburban and rural areas.

There is no way to predict accurately future migratory movements. During the past ten years migration away from the farm has been retarded. Some three million people who, formerly, would have found work in the industrial and commercial centers have remained on the farm. At present there is a drift back to the city. The momentum which this movement will gain is unpredictable. However, not all of the gain in rural and village population can be attributed to emergency conditions. Many of the factors contributing to the trend toward

rural areas will remain after the depression is over. The automobile, which furnishes ready transportation from the city to the less congested areas and makes it possible for the family to live in the suburbs or the country while working in the city, was already having its effect before the depression. The recent tendency toward the decentralization of industry is another contributing factor which probably will increase in potency rather than disappear with the appearance of "better times." Other factors may be involved such as rural electrification making the country a more attractive place to live.

There is need not only for an extension of educational opportunity to a larger part of the rural youth of the nation, but also for a re-orientation of rural education to meet the needs both of those who will take up their residence in towns and cities and of those who will remain in the open country. How to tap the available economic resources and to finance the rural phases of state educational programs are problems of fundamental importance. The problem of the relation of education to migratory trends, centering very largely in this country in the situation of rural youth, calls for extensive experimental efforts.

The relative increase in the number of rural youth and the relative restrictions in their economic opportunities in recent years project the problems of rural education into bold relief. Not all children of farmers go to the cities. Rural education should direct itself, in part, to the needs of country children with a view to making them happy and useful citizens of country life. But, when population trends and economic conditions make it impossible for farm youth to find a future on the land, they will most naturally seek the villages and urban centers. Then it is well that these young people learn of vocational opportunities in industrial and commercial centers, especially in the growing field of clerical service and professional occupations. Migrants from rural areas further complicate the problems of congested urban sections when they are ill-equipped to take their places there. Rural education has the twofold responsibility of preparing both those who stay and those who leave to adjust to existing conditions.

¹ For further discussion consult: Reeves, F. W. "Rural Educational Problems in Relation to New Trends in Population Distribution." *Social Forces* 14: 7-16; October 1935. ¶ Brunner, Edmund deS., and Lorge, Irving. *Rural Trends in Depression Years*. New York: Columbia University Press, 1937. Chapter 14, p. 354-76. ¶ Melvin, Bruce L. "The Special Problems of Rural Youth." *Annals of the American Academy of Political and Social Science* 194: 25-33; November 1937.

Tax Resources and School Finance¹

The provision for and support of schools in the United States have commonly been regarded as solely matters of local or state concern. Current population trends call this traditional viewpoint sharply into question. That there are gross inequalities in the educational opportunities open to young people in different parts of the United States is well known. Conditions are worse in the areas where natural increase is greatest. These regions send forth poorly-educated migrants to other parts of the country. The resultant strain on the fabric of American social life requires serious attention.

Analysis shows that inadequacy of financial resources available for education in rural areas, and especially in rural areas of restricted economic opportunity, is a major factor in this unfortunate situation. The farm population, with only about 9 percent of the nation's income, has been responsible, except as aided from other sources such as state school funds, for financing the education of 31 percent of the nation's children.

Estimates of "tax resources" constitute one measure of the relative ability of different states to support education. Two studies, one by Newcomer and the other by Chism, based upon principles developed by a committee of the National Tax Association, bring out the differences in taxpaying ability of the states. Both studies reveal significant differences in the per capita tax resources of the states. By dividing the total expected tax revenue in any state, under either the Newcomer or Chism plan, by the number of children of school age in that state, the revenues per child from these taxes are shown. The results for individual states on the Newcomer basis range from \$50 or less in North and South Carolina, Georgia, Alabama, Mississippi, and Arkansas (\$51 in Louisiana) to \$200 or over in Massachusetts, Connecticut, New York, New Jersey, Delaware, Illinois, Nevada, and California. The Chism formula gives similar differences for these and other states. Obviously the states are unequally situated with reference to their ability to support education.

Further evidence indicates clearly that some states provide relatively adequate support for education with relatively little financial effort; in others education is supported only meagerly, in spite of the fact that a comparatively large percent of total tax resources is expended for that purpose. In those states providing the least adequate support for education the fundamental difficulty lies in lack of financial resources rather than in lack of effort. Even tho a model tax plan were put into effect, the poorer states would still be unable to support their schools adequately. In some of these states it would require all, or more than all, the taxes that could be raised under a model tax plan to provide an amount per child equal to the national average expenditure per child of school age, allowing nothing whatever for the costs of all other government agencies.

The above facts are by no means the only ones which indicate that the financial aspects of educational policies are assuming nationwide significance. State lines and even distinctions between regions are rapidly disappearing as migration becomes accelerated. More than ever before, the citizen of a state is a citizen of the nation and with this tendency toward national citizenship goes increased national responsibility for the welfare and education of every individual citizen, wherever he may be located. Rapid transportation and communication have caused educational as well as other social problems to overflow state boundaries and become national problems. The present policy of local and state school support can mean only great injustices to the poorer regions and states which will have the responsibility for educating children, who upon reaching maturity will migrate to the more prosperous centers and make their contribution to states which had no part in educating them. This disparity between gain and investment will become greater in the future if present population trends persist. State and local resources in many areas will be totally inadequate to provide even the poorest type of education to what will be the largest proportion of our future

¹ For further discussion consult: Newcomer, Mabel. *An Index of the Taxpaying Ability of State and Local Governments*. New York: Teachers College, Columbia University, 1935. 85 p. ¶ Chism, Leslie L. *The Economic Ability of the States to Finance Public Schools*. Contributions to Education, No. 669. New York: Teachers College, Columbia University, 1936. 169 p. ¶ National Education Association, Research Division. "Financing Public Education." *Research Bulletin* 15: 1-54; January 1937. ¶ National Education Association, Research Division. "Federal Support for Education." *Research Bulletin* 15: 161-65; September 1937. ¶ Edwards, Newton. Statement made before Committee on Education and Labor, U. S. Senate Hearings on S. 419. Washington, D. C.: Government Printing Office, 1937. p. 44-56. (Detailed study by Dr. Edwards to be published early in 1938 by the American Youth Commission.)

school children. Continuance of the present policy threatens to result in class education in which the best schooling will go to the few who are located in the more prosperous situations.

It has been shown above that an increasingly large number of America's future school children will be located in the Southern Appalachians, the cut-over area of the Great Lakes region, and the Great Plains. All of these regions feel keenly the pressure of population against economic resources. Large numbers of persons migrate to these areas where relatively cheap land can be obtained; the birth-rate is high. In 1930, for every ten adults living on southern farms there were about fifteen immature children. It is probable that the number was even larger in the poorer farm areas. Surplus population in any of these areas readily becomes the source of serious economic and social problems. Yet the larger proportion of future school children will be born and live thru their elementary- and high-school years in regions where educational provisions are poorest, where at present, for the most part, schools are far apart, teachers poorly paid and

poorly trained, and school buildings unsafe and inadequately equipped. There is every reason to believe that it is toward these regions that the center of gravity of public education is shifting.

In summary, regional and community differentials in fertility cause children and youth to be distributed very unequally in relation to the supporting adult population and in relation to the taxpaying ability of those regions. The greatest differences in educational opportunity arise chiefly from a lack of financial resources in the very states where the educational load is heaviest. With present population trends these differences are likely to increase with the passing years. Any reasons which are advanced to argue that the federal government should not participate in the support of education in the states should be weighed against the certainty that, if the states are left to their own resources, the existing inequalities of educational opportunity and the utterly unsatisfactory schools in the areas which need them most will be perpetuated for a generation, if not longer. School finance has become a national problem.

Public Relations of the Schools

Of great significance to education is the change in the age distribution of the total population. If present trends continue the total proportion of middle-aged and elderly persons will become progressively larger. What will be the attitude of these older adults toward maintaining the budgets for elementary schools and high schools, especially if such expenditures tend to limit provisions for adult education? Many of these older people will not be parents and others will have lived beyond the years when they would have children in the elementary or secondary schools. A considerable and growing proportion of our adult population will have no direct interest in our public elementary schools as institutions for the education of their own children. In 1930 over a third of the families of the United States had no children under twenty-one years of age and over a half had no children under ten years of age. These percents have certainly not become any less in recent years.

Can non-parents and those with grown children be expected to have a vital interest in providing education for other people's chil-

dren? They will be paying a large proportion of taxes and sitting on schoolboards and councils to decide educational policies. Can they be guided to an appreciation of the importance of public education not merely to parents and children but to the community as a whole? Clearly the public relations program of the school cannot safely stop with the organization of parent-teacher associations, important as such groups are. Ways must be found to engage the interest and support of all citizens, not merely those who happen to be parents. To the plea for adequate finance in the interest of the child must be added the plea in the interest of the stability and welfare of the entire social organization.

Educational interpretation is a proper and important part of a modern educational program. Instruction is obviously the primary function of education and administration and supervision are generally recognized as major supporting activities. The fact remains, however, that changes in these fields which arise from population problems will be brought about only as the public generally understands

why change is necessary. It follows therefore that systematic effort to promote understanding must accompany the planning and preparation in the fields of instruction, administration, and supervision.

It must be clearly recognized also that many of the publicity methods of the past can no longer be considered effective and constructive. Too frequently public relations programs have been characterized by the methods of high-pressure salesmanship. Overstatements are nearly always dangerous and particularly so when applied to social institutions which reflect the imperfections of their human and physical environment. Adult laymen should be able to face squarely the population trends and their educational implications. The public has a right to know about the impediments to educational progress and has an obligation to participate in the solution of such difficulties.

Any educational program of the future must be democratic both in spirit and in operation. It must be assumed that the public generally has an interest in the development of a sound educational program which is potentially as constructive as any interest held by educators. The need is not to tell laymen what they should believe but to create opportunities wherein constructive and intelligent public opinions may be formed. Plans must be made whereby laymen may help to interpret to other laymen the facts which will lead to an understanding of social and educational problems.

If the foregoing principles are incorporated into public relations programs there should be greater willingness to face the educational implications suggested by population trends. Laymen who have a chance to view the facts of population change and to discuss with educators the policies and practises which must of necessity follow on those changes will be ready to approve and support a program of constructive action. They will see clearly that it does not logically follow that a given decline in elementary-school enrolment inevitably calls

for a corresponding reduction in the school budget. They will realize that changes in the occupational pattern call for appraisal of past practises. They will continue to provide funds needed for the improvement and enrichment of education in addition to amounts needed for other necessary governmental functions. Reductions in school enrolments will be eagerly utilized as an occasion to bring the educational program up to necessary and long-deserved standards of effectiveness and to extend the services of good schools to many who are now denied these opportunities.

The success of a democracy is gauged perhaps most completely by the effectiveness and universality of the education of its citizens. The raw material of American democracy in 1938 is the 130 millions of men, women, and children who make up the nation's population. Some 75 million of these are adults. Of these adults, it is estimated that only 2 million are college graduates, 9 million are high-school graduates, 32 million are elementary-school graduates, and another 32 million have not even completed the work of the elementary school.¹ At the last census 4 million of the latter group of adults were totally illiterate—unable to read or write in any language. With this equipment, the American population is required to grapple with complex and vital problems—issues of economic adjustment and equity; delicate issues of foreign policy, peace, or war; problems of amending constitutions, and other problems of an evolving industrial society. In spite of our high ideals, therefore, the American people have never really given a fair trial to a complete education for the entire population as a preventive of social ills and as a method of solving the urgent dilemmas of social adjustment, stability, and progress. The importance of securing public understanding concerning the necessity to demand and support such an educational program can scarcely be overemphasized.

¹ Studebaker, John W. *The American Way*. New York: McGraw-Hill Book Co., 1935. p. 30-31.

APPENDIX

A. TABLES PREPARED FOR THE EDUCATIONAL POLICIES COMMISSION BY THE SCRIPPS FOUNDATION FOR RESEARCH IN POPULATION PROBLEMS.

The six tables which follow show the population of the United States, by single years of age, from five to nineteen years, inclusive, for each year from 1900 to 1950. Two different predictions for each year after 1940 are given. Each prediction is based on a different assumption regarding future fertility and mortality rates. The tables also show trends separately for white and Negro races. Users of these tables should not fail to note the explanatory footnotes which accompany them.

B. SOURCES OF DATA FOR THE PICTORIAL FIGURES IN THIS BULLETIN.

C. LIST OF PICTORIAL FIGURES.

FOOTNOTES TO APPENDIX TABLES

1. The population in 1920 is increased to allow for the underenumeration of Negroes (see Note 4). For intercensal years prior to 1920 the population for each year of age is estimated by straight line interpolation between the population of that age in the nearest censuses (adjusted to April 1st). For 1920 and 1930 ratios are calculated between the census population at each age and the estimated number of births from which they survived. A straight line trend is assumed for these ratios between 1920 and 1930 and the population for intervening years is calculated by applying the interpolated ratios to estimated births in years from 1901 to 1923. This method should show for each year the irregularities of age distribution that appear in the census, namely, the concentration on even ages (particularly age ten), and improve the comparability of each age period from year to year.

2. After 1930, the population is based on estimated births, 1930 to 1935 and the number that will occur from 1936 to 1944 according to "medium" and "low" trends of birth-rates. The ratio of the 1930 census population at each age to births from which they survived is applied to the above births and the results adjusted to allow for declining death-rates and to agree with the future population by five-year-age periods previously calculated according to these births and "medium" mortality trends. This method should show for each year the irregularities of age distribution that appear in the census years, namely, the concentration on even ages (particularly age ten), and increase the comparability of each age period from year to year. The "medium" mortality trends assume that the expectation of life at birth of native whites will increase from 62.4 years in 1930 to 1934 to 70.0 in 1980, with relatively larger increases for foreign-born whites, Negroes, and other colored persons. The "medium" fertility trends assume that native white specific birth-rates will decline about 12.7 percent from 1930 to 1934 to 1980 and that the differential between the native white and foreign-born white, Negro, and other colored specific birth-rates will be reduced 50 percent. The "low" fertility trends assume that native white specific birth-rates will decline about 31 percent in the same time and the differential between the native white and the foreign-born white, Negro, and other colored specific rates will be reduced 25 percent. It is assumed that no immigration will occur. See Whelpton, P. K.: "An Empirical Method of Calculating Future Population," *The Journal of the American Statistical Association*, Vol. 31; September 1936, p. 457-73.

3. For intercensal years prior to 1920 the method described for the total population is used. Estimates for 1921 to 1929 are obtained from Table I by assuming a straight line trend at each age in the percent distribution by color of the total population in the 1920 and 1930 censuses, Mexicans being classified as whites in 1930 since they were so classified in the 1920 Census.

4. The total Negro population of 1920 is increased by 150,000 to allow for underenumeration, the same percent increase being made in each age period. See *Fifteenth Census of the United States, 1930, Population, Volume II*, p. 26.

TABLE 1.—TOTAL POPULATION OF THE UNITED STATES BY SINGLE YEARS OF AGE, APRIL 1, 1900 TO 1930¹

Year	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1900	1,805	1,829	1,780	1,778	1,667	1,738	1,581	1,633	1,547	1,564	1,530	1,556	1,484	1,527	1,433
1901	1,828	1,850	1,797	1,792	1,682	1,751	1,593	1,661	1,569	1,592	1,549	1,587	1,514	1,567	1,466
1902	1,851	1,870	1,815	1,806	1,697	1,764	1,606	1,688	1,592	1,620	1,568	1,618	1,544	1,607	1,499
1903	1,874	1,890	1,832	1,820	1,712	1,777	1,618	1,716	1,614	1,649	1,587	1,648	1,574	1,647	1,532
1904	1,897	1,911	1,849	1,834	1,727	1,790	1,630	1,744	1,637	1,677	1,606	1,679	1,604	1,687	1,564
1905	1,920	1,931	1,867	1,848	1,742	1,803	1,643	1,770	1,660	1,705	1,625	1,710	1,635	1,727	1,597
1906	1,943	1,951	1,884	1,862	1,757	1,816	1,655	1,800	1,682	1,734	1,644	1,741	1,665	1,767	1,630
1907	1,966	1,972	1,901	1,877	1,772	1,829	1,668	1,827	1,705	1,762	1,663	1,771	1,695	1,807	1,663
1908	1,988	1,992	1,919	1,891	1,787	1,842	1,680	1,855	1,727	1,790	1,682	1,802	1,725	1,847	1,696
1909	2,011	2,013	1,936	1,905	1,802	1,855	1,692	1,883	1,750	1,819	1,701	1,833	1,755	1,887	1,729
1910	2,034	2,033	1,954	1,919	1,817	1,868	1,705	1,911	1,772	1,847	1,720	1,863	1,785	1,927	1,762
1911	2,067	2,066	1,988	1,956	1,852	1,905	1,745	1,944	1,799	1,868	1,734	1,876	1,793	1,927	1,770
1912	2,099	2,100	2,023	1,992	1,887	1,943	1,786	1,977	1,827	1,890	1,748	1,888	1,801	1,927	1,777
1913	2,131	2,133	2,058	2,029	1,922	1,980	1,826	2,011	1,853	1,911	1,764	1,900	1,808	1,926	1,785
1914	2,163	2,166	2,093	2,066	1,957	2,017	1,866	2,044	1,879	1,931	1,779	1,912	1,816	1,925	1,792
1915	2,196	2,200	2,127	2,103	1,992	2,056	1,906	2,078	1,906	1,952	1,794	1,925	1,824	1,924	1,801
1916	2,228	2,233	2,162	2,140	2,027	2,094	1,947	2,111	1,932	1,972	1,809	1,937	1,833	1,924	1,809
1917	2,260	2,266	2,197	2,177	2,062	2,133	1,987	2,145	1,958	1,993	1,825	1,948	1,841	1,923	1,817
1918	2,292	2,300	2,232	2,214	2,097	2,171	2,027	2,178	1,985	2,013	1,840	1,960	1,849	1,923	1,826
1919	2,325	2,333	2,267	2,251	2,132	2,208	2,067	2,211	2,011	2,033	1,855	1,971	1,858	1,922	1,834
1920	2,357	2,366	2,302	2,288	2,166	2,247	2,107	2,244	2,037	2,054	1,871	1,982	1,866	1,922	1,842
1921	2,379	2,442	2,357	2,328	2,213	2,285	2,130	2,263	2,059	2,072	1,896	2,009	1,900	1,958	1,876
1922	2,404	2,460	2,435	2,383	2,259	2,333	2,158	2,282	2,080	2,097	1,923	2,035	1,933	1,994	1,910
1923	2,435	2,481	2,455	2,460	2,317	2,379	2,194	2,306	2,100	2,121	1,957	2,063	1,966	2,029	1,944
1924	2,369	2,476	2,479	2,478	2,399	2,439	2,229	2,339	2,125	2,146	1,991	2,093	2,003	2,065	1,979
1925	2,335	2,434	2,477	2,501	2,423	2,523	2,275	2,369	2,159	2,175	2,024	2,133	2,046	2,105	2,014
1926	2,356	2,395	2,438	2,497	2,431	2,546	2,244	2,412	2,190	2,213	2,064	2,168	2,088	2,150	2,051
1927	2,524	2,514	2,401	2,456	2,454	2,574	2,356	2,479	2,234	2,249	2,111	2,209	2,132	2,197	2,095
1928	2,409	2,578	2,523	2,417	2,419	2,574	2,373	2,486	2,299	2,298	2,157	2,258	2,181	2,244	2,140
1929	2,472	2,456	2,590	2,539	2,386	2,536	2,364	2,496	2,309	2,369	2,215	2,306	2,239	2,296	2,185
1930	2,505	2,515	2,470	2,604	2,513	2,501	2,319	2,480	2,322	2,382	2,296	2,367	2,296	2,358	2,235

(Thousands)

TABLE 2.—TOTAL POPULATION OF THE UNITED STATES BY SINGLE YEARS OF AGE, APRIL 1, 1930 TO 1950,
ACCORDING TO SPECIFIED ASSUMPTION OF FUTURE FERTILITY AND MORTALITY TRENDS¹

Year	(Thousands)																	
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
1930.....	2,505	2,515	2,470	2,604	2,513	2,501	2,319	2,480	2,322	2,382	2,296	2,367	2,296	2,358	2,236			
1931.....	2,441	2,546	2,533	2,485	2,583	2,632	2,288	2,447	2,326	2,410	2,303	2,424	2,329	2,374	2,246			
1932.....	2,411	2,481	2,565	2,550	2,466	2,705	2,410	2,416	2,294	2,409	2,319	2,430	2,389	2,414	2,269			
1933.....	2,360	2,452	2,501	2,584	2,531	2,582	2,478	2,545	2,264	2,371	2,310	2,443	2,395	2,479	2,309			
1934.....	2,250	2,401	2,472	2,520	2,566	2,651	2,368	2,619	2,383	2,334	2,268	2,434	2,406	2,487	2,375			
1935.....	2,226	2,291	2,422	2,493	2,504	2,688	2,432	2,504	2,345	2,449	2,451	2,230	2,389	2,504	2,389			
1936.....	2,221	2,266	2,310	2,440	2,474	2,626	2,469	2,570	2,335	2,514	2,340	2,350	2,361	2,503	2,419			
1937.....	2,146	2,261	2,285	2,327	2,422	2,601	2,413	2,602	2,393	2,394	2,400	2,471	2,332	2,472	2,434			
1938.....	2,071	2,185	2,280	2,301	2,311	2,553	2,392	2,535	2,421	2,452	2,288	2,542	2,458	2,444	2,403			
1939.....	2,018	2,109	2,204	2,296	2,286	2,442	2,349	2,503	2,358	2,480	2,345	2,431	2,528	2,575	2,371			
1940.....	2,078	2,055	2,128	2,221	2,282	2,423	2,248	2,449	2,327	2,415	2,375	2,496	2,413	2,647	2,493			

TABLE 3.—WHITE POPULATION (INCLUDING MEXICANS) OF THE UNITED STATES BY SINGLE YEARS OF AGE,
APRIL 1, 1900 TO 1930²

Year	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1900.....	1,554	1,575	1,531	1,530	1,434	1,496	1,360	1,406	1,332	1,349	1,323	1,347	1,286	1,323	1,240
1901.....	1,576	1,593	1,547	1,543	1,449	1,508	1,375	1,429	1,354	1,375	1,341	1,376	1,315	1,359	1,272
1902.....	1,598	1,612	1,564	1,556	1,465	1,520	1,389	1,453	1,375	1,400	1,360	1,404	1,344	1,396	1,304
1903.....	1,619	1,631	1,580	1,568	1,480	1,533	1,403	1,477	1,396	1,426	1,378	1,433	1,373	1,432	1,336
1904.....	1,641	1,650	1,596	1,581	1,495	1,545	1,418	1,500	1,417	1,452	1,396	1,461	1,402	1,469	1,368
1905.....	1,662	1,668	1,613	1,594	1,510	1,557	1,432	1,524	1,438	1,477	1,415	1,490	1,431	1,505	1,400
1906.....	1,684	1,687	1,629	1,607	1,526	1,569	1,446	1,548	1,460	1,503	1,433	1,518	1,459	1,542	1,433
1907.....	1,706	1,706	1,645	1,620	1,541	1,581	1,461	1,571	1,481	1,529	1,451	1,547	1,488	1,578	1,465
1908.....	1,727	1,724	1,661	1,633	1,556	1,594	1,475	1,595	1,502	1,554	1,470	1,575	1,517	1,615	1,497
1909.....	1,749	1,743	1,678	1,646	1,571	1,606	1,489	1,619	1,523	1,580	1,488	1,604	1,546	1,651	1,529
1910.....	1,771	1,762	1,694	1,659	1,587	1,618	1,504	1,643	1,544	1,606	1,507	1,632	1,575	1,688	1,561
1911.....	1,802	1,794	1,728	1,694	1,620	1,654	1,541	1,674	1,569	1,625	1,521	1,644	1,583	1,687	1,567
1912.....	1,834	1,827	1,762	1,730	1,654	1,689	1,579	1,706	1,594	1,644	1,535	1,655	1,590	1,686	1,574
1913.....	1,866	1,859	1,795	1,765	1,687	1,725	1,616	1,737	1,619	1,663	1,549	1,667	1,598	1,686	1,580
1914.....	1,898	1,892	1,829	1,801	1,720	1,760	1,654	1,769	1,644	1,682	1,563	1,678	1,605	1,685	1,586
1915.....	1,930	1,924	1,863	1,837	1,754	1,795	1,691	1,800	1,669	1,701	1,577	1,690	1,613	1,685	1,592
1916.....	1,962	1,956	1,897	1,872	1,787	1,830	1,729	1,832	1,694	1,720	1,591	1,701	1,620	1,684	1,599
1917.....	1,994	1,989	1,930	1,908	1,821	1,866	1,766	1,863	1,719	1,739	1,605	1,713	1,628	1,684	1,605
1918.....	2,026	2,021	1,964	1,943	1,854	1,901	1,804	1,895	1,744	1,758	1,619	1,724	1,635	1,683	1,611
1919.....	2,058	2,054	1,998	1,979	1,888	1,936	1,842	1,926	1,769	1,777	1,633	1,736	1,643	1,682	1,617
1920.....	2,090	2,086	2,032	2,014	1,921	1,971	1,880	1,958	1,794	1,796	1,647	1,747	1,650	1,681	1,623
1921.....	2,108	2,153	2,080	2,052	1,964	2,006	1,901	1,979	1,816	1,815	1,671	1,772	1,681	1,714	1,654
1922.....	2,131	2,168	2,150	2,101	2,005	2,050	1,928	1,999	1,837	1,840	1,698	1,795	1,712	1,746	1,686
1923.....	2,130	2,188	2,168	2,170	2,058	2,092	1,962	2,024	1,858	1,864	1,729	1,822	1,742	1,779	1,717
1924.....	2,098	2,183	2,190	2,188	2,131	2,146	1,995	2,056	1,883	1,889	1,761	1,854	1,775	1,812	1,749
1925.....	2,067	2,146	2,154	2,210	2,154	2,221	2,038	2,087	1,915	1,918	1,793	1,885	1,814	1,848	1,782
1926.....	2,174	2,111	2,158	2,207	2,180	2,244	2,102	2,129	1,946	1,955	1,830	1,918	1,853	1,889	1,816
1927.....	2,233	2,217	2,221	2,172	2,183	2,270	2,114	2,191	1,988	1,990	1,874	1,955	1,892	1,932	1,857
1928.....	2,231	2,273	2,230	2,139	2,153	2,272	2,131	2,209	2,049	2,036	1,917	2,000	1,937	1,974	1,898
1929.....	2,186	2,165	2,290	2,248	2,125	2,240	2,124	2,215	2,060	2,102	1,971	2,044	1,989	2,021	1,940
1930.....	2,215	2,217	2,184	2,307	2,238	2,210	2,086	2,204	2,076	2,118	2,045	2,099	2,041	2,077	1,986

TABLE 4.—WHITE POPULATION (EXCLUDING MEXICANS) OF THE UNITED STATES BY SINGLE YEARS OF AGE,
APRIL 1, 1930 TO 1950, ACCORDING TO SPECIFIED ASSUMPTION OF FUTURE FERTILITY AND MORTALITY²

(Thousands)

Year	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1930	2,171	2,174	2,143	2,267	2,201	2,174	2,058	2,173	2,049	2,091	2,019	2,071	2,015	2,048	1,959
1931	2,109	2,197	2,193	2,159	2,256	2,286	2,022	2,141	2,048	2,113	2,024	2,133	2,045	2,068	1,970
1932	2,077	2,138	2,218	2,211	2,148	2,347	2,119	2,110	2,015	2,111	2,037	2,130	2,100	2,108	1,992
1933	2,028	2,108	2,158	2,236	2,199	2,239	2,170	2,220	1,983	2,075	2,028	2,144	2,107	2,172	2,030
1934	1,928	2,061	2,130	2,177	2,223	2,297	2,063	2,281	2,083	2,041	1,991	2,137	2,119	2,185	2,090
1935	1,901	1,964	2,083	2,149	2,164	2,327	2,110	2,177	2,135	2,141	1,956	2,100	2,113	2,206	2,104
1936	1,893	1,936	1,979	2,096	2,130	2,267	2,137	2,230	2,031	2,191	2,047	2,061	2,075	2,201	2,128
1937	1,825	1,926	1,950	1,992	2,079	2,240	2,084	2,253	2,077	2,083	2,095	2,162	2,045	2,170	2,138
1938	1,757	1,856	1,939	1,963	1,977	2,194	2,060	2,190	2,097	2,128	1,991	2,217	2,149	2,140	2,108
1939	1,707	1,786	1,868	1,952	1,949	2,093	2,019	2,158	2,037	2,148	2,036	2,115	2,205	2,251	2,076
1940	1,754	1,735	1,796	1,882	1,940	2,071	1,928	2,107	2,007	2,088	2,057	2,167	2,100	2,310	2,180
Medium Fertility															
1941	1,748	1,789	1,755	1,870	1,879	2,063	1,901	2,001	1,956	2,055	2,002	2,191	2,150	2,198	2,233
1942	1,775	1,785	1,812	1,778	1,818	1,990	1,891	1,972	1,858	2,005	1,976	2,133	2,173	2,249	2,125
1943	1,794	1,814	1,810	1,837	1,776	1,916	1,822	1,959	1,830	1,907	1,933	2,104	2,115	2,272	2,173
1944	1,806	1,835	1,841	1,836	1,834	1,864	1,754	1,887	1,819	1,881	1,843	2,057	2,086	2,210	2,196
1945	1,811	1,848	1,865	1,868	1,832	1,916	1,704	1,814	1,752	1,871	1,822	1,956	2,039	2,179	2,136
1946	1,810	1,852	1,876	1,890	1,861	1,920	1,758	1,769	1,690	1,807	1,814	1,932	1,939	2,126	2,103
1947	1,808	1,852	1,880	1,902	1,883	1,960	1,754	1,824	1,647	1,743	1,748	1,922	1,912	2,022	2,053
1948	1,805	1,850	1,881	1,906	1,896	1,992	1,784	1,819	1,696	1,697	1,683	1,853	1,901	1,994	1,952
1949	1,802	1,848	1,879	1,905	1,902	2,016	1,806	1,849	1,690	1,746	1,635	1,783	1,831	1,984	1,926
1950	1,799	1,846	1,877	1,903	1,904	2,032	1,822	1,871	1,714	1,738	1,679	1,732	1,761	1,912	1,916
Low Fertility															
1941	1,748	1,789	1,755	1,820	1,879	2,063	1,901	2,001	1,956	2,055	2,002	2,191	2,150	2,198	2,233
1942	1,673	1,785	1,812	1,778	1,818	1,990	1,891	1,972	1,858	2,005	1,976	2,133	2,173	2,249	2,125
1943	1,650	1,710	1,810	1,837	1,776	1,916	1,822	1,959	1,830	1,907	1,933	2,104	2,115	2,272	2,173
1944	1,641	1,687	1,736	1,836	1,834	1,864	1,754	1,887	1,819	1,881	1,843	2,057	2,086	2,210	2,196
1945	1,635	1,679	1,715	1,762	1,832	1,916	1,704	1,814	1,752	1,871	1,822	1,958	2,039	2,179	2,136
1946	1,628	1,673	1,705	1,740	1,755	1,920	1,758	1,769	1,690	1,807	1,814	1,932	1,939	2,126	2,103
1947	1,620	1,666	1,699	1,730	1,733	1,850	1,754	1,824	1,647	1,743	1,748	1,922	1,912	2,022	2,053
1948	1,611	1,659	1,693	1,724	1,725	1,835	1,682	1,819	1,696	1,697	1,683	1,853	1,901	1,994	1,952
1949	1,601	1,651	1,686	1,717	1,720	1,836	1,663	1,743	1,690	1,746	1,635	1,783	1,831	1,984	1,926
1950	1,589	1,642	1,678	1,709	1,716	1,841	1,660	1,723	1,618	1,738	1,679	1,732	1,761	1,912	1,916

TABLE 5.—NEGRO POPULATION OF THE UNITED STATES BY SINGLE YEARS OF AGE, APRIL 1, 1900 TO 1930¹⁻⁴

(Thousands)

Year	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1900.	244	248	242	242	227	236	215	222	209	209	201	203	192	198	187
1901.	245	249	243	243	226	237	213	226	210	212	202	205	193	201	187
1902.	246	251	244	244	226	238	211	230	211	214	202	207	194	205	188
1903.	247	252	245	245	226	238	209	233	213	217	203	209	196	208	189
1904.	248	254	246	246	226	239	207	237	214	219	204	211	197	211	189
1905.	250	255	247	247	225	239	205	241	215	222	204	214	198	215	190
1906.	251	257	248	248	225	240	203	245	216	224	205	216	199	218	191
1907.	252	258	249	249	225	241	201	249	217	227	206	218	200	221	191
1908.	253	260	250	250	224	241	199	253	219	229	206	220	201	225	192
1909.	254	261	251	251	224	242	197	257	220	232	207	222	203	228	193
1910.	256	263	252	252	224	242	195	261	222	234	208	224	204	231	193
1911.	256	264	253	254	225	245	198	263	223	236	208	225	204	231	195
1912.	256	264	254	255	227	248	201	265	225	238	209	225	205	232	197
1913.	256	265	255	256	228	251	203	267	226	239	210	226	205	232	199
1914.	256	266	256	257	229	253	206	268	227	241	211	226	206	232	201
1915.	256	266	256	258	231	256	208	270	229	243	212	227	206	232	203
1916.	256	267	257	260	232	258	211	272	230	244	213	227	207	232	205
1917.	257	268	258	261	234	261	213	274	232	246	214	227	207	232	207
1918.	257	268	258	262	235	263	215	275	234	248	215	228	208	233	209
1919.	257	269	260	263	236	265	218	276	235	249	216	228	209	233	211
1920.	257	270	261	264	238	268	221	278	236	251	217	229	209	233	212
1921.	260	278	266	267	242	270	222	276	236	250	218	230	212	236	215
1922.	262	280	274	272	245	274	222	275	236	250	219	232	215	239	217
1923.	262	282	276	279	250	277	224	274	235	249	221	234	217	242	219
1924.	258	280	278	279	257	282	226	273	234	249	222	236	220	245	221
1925.	255	275	276	280	258	290	228	273	235	248	224	239	224	248	223
1926.	268	270	271	277	260	290	233	273	235	249	226	242	227	252	226
1927.	276	283	266	271	259	291	232	276	237	250	228	245	231	256	229
1928.	263	290	279	265	249	289	231	273	230	252	234	249	235	259	232
1929.	270	276	285	276	249	282	228	270	238	256	234	253	240	264	235
1930.	274	282	271	282	260	276	222	264	236	254	240	258	245	269	238

TABLE 6.—NEGRO POPULATION OF THE UNITED STATES BY SINGLE YEARS OF AGE, APRIL 1, 1930 TO 1950,
ACCORDING TO SPECIFIED ASSUMPTION OF FUTURE FERTILITY AND MORTALITY TRENDS²

Year	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1930.	274	282	271	282	260	276	222	264	236	254	240	258	245	269	238
1931.	271	287	280	270	271	291	225	261	239	256	241	261	246	266	238
1932.	273	282	285	279	262	299	244	259	238	256	243	259	251	265	239
1933.	272	280	279	285	273	285	257	273	238	252	242	258	250	266	242
1934.	264	277	278	280	280	293	252	282	253	248	237	254	249	262	247
1935.	265	266	274	279	277	297	266	271	262	260	233	247	246	258	247
1936.	269	269	269	281	281	294	273	280	252	269	247	246	244	260	251
1937.	265	275	274	275	282	296	270	286	261	258	256	261	244	258	254
1938.	260	272	282	279	275	295	271	281	266	266	247	271	260	257	251
1939.	258	269	281	286	279	286	269	280	261	272	256	262	270	272	249
1940.	270	268	278	284	285	288	260	276	260	266	262	272	260	282	262
Medium Fertility															
1941.	267	274	270	274	277	292	264	272	261	270	259	279	269	271	272
1942.	270	271	276	267	269	288	270	277	256	271	260	275	275	280	261
1943.	271	274	273	275	264	283	267	284	260	265	259	276	270	286	270
1944.	271	275	276	274	274	281	264	283	266	268	251	273	270	281	276
1945.	270	275	277	279	274	294	263	281	264	274	252	264	266	280	271
1946.	270	276	279	282	279	293	269	282	254	266	267	267	262	282	274
1947.	270	276	280	284	282	298	266	278	247	257	252	273	268	277	275
1948.	270	276	280	284	283	300	269	274	254	252	248	271	275	282	269
1949.	270	276	280	284	284	302	271	277	252	252	246	274	269	289	273
1950.	270	276	280	284	284	302	271	278	256	260	258	266	272	286	279
Low Fertility															
1941.	267	274	270	274	277	292	264	272	261	270	259	279	269	271	272
1942.	254	271	276	267	269	288	270	277	256	271	260	275	275	280	261
1943.	248	258	273	275	264	283	267	284	260	265	259	276	270	286	276
1944.	245	252	260	274	274	281	264	283	266	268	251	273	270	281	276
1945.	242	249	254	262	274	294	263	281	264	274	252	264	266	280	271
1946.	241	248	252	259	262	293	269	272	254	266	267	267	262	282	274
1947.	240	247	251	257	258	280	266	278	247	257	252	273	268	277	275
1948.	239	246	250	256	256	276	253	274	254	252	248	271	275	282	269
1949.	238	245	249	254	255	274	253	260	252	260	246	267	274	289	273
1950.	236	243	248	253	254	272	246	255	240	260	258	266	272	286	279

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WE are rapidly approaching a decrease in population because of a deficiency of births. There is no use blinking these facts. It is not the mere decline in numbers that is most serious, at least not until this decline has gone a great way, but rather the evidence that such a decline furnishes of the unwillingness of a growing part of the people to face the realities of racial existence. Reproduction is basic to all human achievement. Indeed, the biologist would say that any civilization which produces a general unwillingness to bear and rear children has by that very fact proved its lack of fitness to survive.—*Implications of Social-Economic Goals for Education, 1937, p. 21, National Education Association.*
