

WARTIME POPULATION CHANGES IN THE UNITED STATES

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WHILE fighting the costliest war in history, the United States increased its population more rapidly than in prewar years. There was no active program for promoting this population growth, and no basis in past experience for expecting it to occur.

The total population of the United States, including Armed Forces at home and abroad, increased at an average rate of nearly 1.2 per cent per year from 1940 to 1946, reaching more than 140 million. During that time the United States had increased its Armed Forces to a maximum of 12.3 million; five million of whom were overseas in the last year of the war. Some 300,000 members of the Armed Forces were killed as a result of enemy action. Nevertheless the rate of population growth in 1940-1946 was actually above that of the prewar years 1935-1939. Civilian health was essentially unimpaired and medical advances continued. Crude death rates for civilians had dropped 5.5 per cent below the prewar level by 1942, but had returned to nearly the prewar level by 1943. The maternal death rate had been cut in half by 1943, the infant mortality rate had dropped one-fourth, and the stillbirth rate one-fifth. Even though the numerical contributions of these improved mortality conditions were relatively slight, the declines of maternal and infant death rates in 1943 "saved" 37,000 babies and 7,000 mothers who would have died if 1935-1939 death rates had prevailed.

Declining civilian mortality and a net immigration of about 600,000 contributed to the population increases of the war period, but the fundamental factor responsible for the increase was in-

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creasing fertility. The crude birth rate had increased 26 per cent above its 1935-1939 level by 1943. In 1945 it still remained nearly one-fifth above the prewar level. The number of births increased from an annual average of 2,434,000 during the five prewar years, to 3,127,000 in 1943, and in 1945 was still 2,905,000. The gross reproduction rate for native white women increased from 104.8 in 1935-1939 to 131 in 1943. In 1945 it was 120.²

If the extraordinary spurt in population increase in the war years reflects no fundamental shifts in the economy, the pattern of population distribution or the family values of the American people, the major demographic effect of the War will be the creation of a bulge rather than a gash in the age pyramid. It is not intended here to predict the future of the American economy as a basis for the prediction of the demographic future of the American population, which is essentially the future of the birth rate. But it is possible to assess the developments of the future on the basis of the fairly detailed statistics of the war period and the fragmentary data of the early postwar period.

The traditionally mobile American people were even more mobile during the war years. A sample enumeration in March 1945 indicated that some 15,000,000 civilians were living in a different county from the one in which they had resided at the time of Pearl Harbor.³ Adding the number of persons in the Armed Forces brings the total to 27,000,000, or about one-fifth of the total population of the country.⁴ People moved into and out of each of the major regions of the country, but there were net

² Whelpton, P. K.: *The Effect of World War II on Fertility in the United States*. Paper presented at the American Sociological Society, March, 1946.

³ *Civilian Migration in the United States, December 1941 to March 1945*. Series P-S, No. 5. Bureau of the Census, United States Department of Commerce.

⁴ It should be noted that the migration figure used does not represent the total number of people who moved at least once during that period, since it does not count the number of persons who had moved away from the county of residence at the time of Pearl Harbor and had returned by the time the Census enumeration was made, nor does it include those migrants who died, or those children who were born after Pearl Harbor and subsequently moved.

losses in the North and South and a net gain in the West. If the net results of the changes in residence for civilians are expressed as annual averages, the West gained about twice as many migrants as during the prewar period, and the South lost about five times as many. The annual losses in the North were about three-fourths as great as during the prewar period.

The regional figures give only minimum estimates of the further concentration of population as a result of the war migrations, for there was also a further concentration of population in metropolitan areas. Population estimates prepared on the basis of Ration Book Registrations in November 1943 indicated that the civilian population of 137 metropolitan areas, including about half the total population of the country, had increased by 2.2 per cent since 1940, whereas the civilian population of the remainder of the country had declined by 3.1 per cent.⁵

There were striking shifts in the farm population during the War. The disparate developments of the 'thirties, with rapid technological development reducing the labor needs in agriculture while the adult population on farms was increasing, resulted by 1940 in a farm population larger than that needed for agricultural production under efficient utilization. The rapid increase in the demand for workers outside agriculture first reached the more prosperous areas from which workers could most readily make the desired adjustments to urban industrial life, but these areas had insufficient population reserves to continue to meet the demands for workers. The less accessible areas were gradually tapped until at the end of 1943 the "population pressure" areas of the 'thirties had yielded large numbers of migrants. In some of these problem areas the losses were sufficient not only to cancel the gains of the 1930-1940 period, but even to reduce population below the level of 1920.

⁵ Estimated Civilian Population of the United States, by Counties: November, 1943. Series P-44, No. 3. Bureau of the Census, United States Department of Commerce.

About eleven million persons moved from farms between 1940 and 1945, two million of them going directly into the Armed Forces. Four million persons moved to farms and the natural increase of the farm population amounted to two million. Hence the net result of the changes of the war period was a decline in the farm population from 30.3 million at the beginning of 1940 to 25.2 million at the beginning of 1945.⁶ Nearly one-fourth of the farm residents who were 14 years old or over in 1940 and were still living in 1945 had left the farms by the latter date. Two-thirds of the young men who had been between 20 and 25 years of age in 1940 had migrated or entered the Armed Forces by 1945.⁷

The greatest reduction in the farm population occurred in the West South Central States which had contributed heavily to the farm-nonfarm migration of the 'thirties. In these States the farm population decreased by one-fourth between 1940 and 1945. The losses were least in the more industrialized States of the East North Central, New England, and Middle Atlantic groups, where they amounted to only about one-eighth. In these areas many farm residents accepted nonfarm employment but continued to live on farms.

Little information is available on the migration of Negroes during the War. Indications are that some areas of the South lost large numbers of their Negro population. However, for the nation as a whole, the percentage of migrants in the 1945 civilian population was about 12 per cent for both the white and the non-white populations. This figure in itself indicates an increase in Negro migration as compared to the prewar period, for in 1940 the proportion of migrants among whites was almost half again as great as that among nonwhites. The 1944 Censuses of Con-

⁶ Farm Population Estimates, January 1, 1945. Bureau of Agricultural Economics, United States Department of Agriculture.

⁷ Net Movement Away from Farms in the United States, by Age and Sex: 1940 to 1944. Series Census-BAE No. 4, United States Department of Commerce and United States Department of Agriculture, June 19, 1945.

gested Production Areas revealed that the nonwhite population increased more rapidly than the white population in the western and northern cities, where the numbers were small, and increased less rapidly in the southern cities of Charleston, Hampton Roads, and Mobile, where the numbers were large.⁸

Much of the wartime migration involved entire families, more so than during the prewar period, 1935-1939. In March 1945 the proportion of migrants among children under 14 was almost as great as that in the total population over age 14. Family groups were fairly mobile when children were young, less so when the children had reached adolescence. This age pattern of childhood migration is consistent with the fact that the proportion of migrants reached its peak in the group aged 25-29, declining regularly in the older age groups. The results of the Sample Censuses of Congested Production Areas, and the Registrations for War Ration Book Four in November 1943 also indicate a heavy incidence of family migration.

The migration from farms, like the other migrations, included a large proportion of families, though in some instances the family members followed some time after the breadwinner had made the first shift. The number of farm children under 14 decreased from 8.9 million in April 1940 to 7.7 million in April 1944. The reduction in the number of children was somewhat greater than the reduction in the number of all farm residents.

The crucial demographic question is that of the permanence of wartime shifts. Will most of the wartime migrants return to their previous residences, will they remain in their wartime locations, or will they move on to some other place? A large out-migration from some areas which received migrants during the War is inevitable, but if the expressed intentions of wartime migrants concerning their postwar plans, the postwar plans of

⁸ Webb, John: *Observations on the Sample Censuses in Ten Congested Production Areas*. Washington, Committee for Congested Production Areas. December, 1944.

soldiers, the characteristics of the migration and of the migrants, and some scattered information on what has happened since VJ Day provide valid clues, there is little reason to suppose that any large proportion of the migrants will return to their former residences. So far as the farm population is concerned, there is no basis for expecting a large scale back-to-the-land movement. Experience during the War made it abundantly clear that the maintenance of a high level of agricultural production is not dependent on a return to 1940 farm employment levels. The problem of agricultural manpower today and for the immediate future is more one of distribution than of number of workers. Moreover, the areas which have contributed most to the volume of farm-nonfarm migration are generally areas with high rates of tenancy. Few of the migrants from such areas retain any rights to occupancy of the land, and, therefore, they have no place to which to return.

Studies in the San Diego, California, and Portland, Oregon, areas indicated that perhaps three-fourths of the wartime migrants were planning to remain after the War.⁹ A survey of the post-war plans of soldiers indicated that there probably would be a heavy out-migration from the highly agricultural areas running from the West North Central States through the entire tier of Southern States. Another survey of white enlisted men in the Army found that nearly two-thirds of the men with farm experience who left farms to enter the Armed Forces planned to return to full-time farming, but that only 9 per cent of the young farm men who had entered some other occupation prior to their induction into the Armed Forces definitely planned to return to farming after the War.¹⁰ Figures recently released by the Bureau

⁹ *After the War What? San Diego*, Post War Planning Bureau, San Diego Chamber of Commerce, July, 1944.

¹⁰ *Post War Plans of the Soldier*. Washington, D. C., Research Branch, Information and Education Division, Army Service Forces, War Department, 1945. *Also: Soldiers' Plans for Farming after they Leave the Army*. Report B-131. Washington, D. C., Research Branch, Information and Education Division, Army Service Forces, War Department, December, 1944.

of the Census indicate that as of April 1946 some 760,000 World War II veterans were working on farms. This number is equal to slightly more than one-half of all the farm workers who had entered the Armed Forces before the War ended.¹¹

Estimates of the size of the farm population as of the end of 1945 indicate that no appreciable return movement of civilian migrants had yet occurred. During 1945 the farm population of the country increased by about 800,000 after a series of years with record-breaking decreases. However, most of the increase in the total farm population was due to an increase in the number of males 14 years of age and over during the year, and the bulk of that increase was due to the return of men from the Armed Forces.¹² A report on field observations in seventy-one counties throughout the country early in 1946 indicated that local informants did not expect most workers who had migrated to war industry to be available for hired farm work so long as any other work is available. They were willing to predict a sizable return of migrants only in the event of a severe and prolonged depression.¹³

If the patterns of migration during the War generally correspond to those existing before the War, there is some presumption that the population shifts may become permanent. To a very large extent the wartime movements were of such a character. From 1900-1940 the North exported a net total of about 1,800,000 persons to other sections of the country, and the South exported about 2,800,000 persons. In contrast, the West has gained about 4,700,000 persons through net in-migration. Between 1940 and 1945 the North exported a total of about 750,000 civilians, and the

¹¹ Ducoff, Louis J. and Hagood, Margaret Jarman: *Veterans Returning to Farm Work*. Washington, D. C., Bureau of Agricultural Economics, United States Department of Agriculture, May, 1946.

¹² *Farm Population Changes: April, 1940 to January, 1946*. Series Census-BAE No. 7. Washington, D. C., United States Department of Commerce and United States Department of Agriculture, May, 1946.

¹³ *Farm Population Adjustments Following the End of the War*. Washington, D. C., Bureau of Agricultural Economics, United States Department of Agriculture, February, 1946.

South about 1.2 million; whereas the West gained about 2 million.

Shryock and Eldridge have compared the estimates of net interstate migrations for 1940-1945, 1935 to 1940, 1930 to 1940, and 1920 to 1930, along with State birth residence indexes (*i.e.*, net gain or loss through interstate migration of the native population) for 1940, 1930, and 1920.¹⁴ The coefficient of correlation between the net migration by States for the 1935-1940 and 1940-1945 periods was 0.92. The correlations between the values for the wartime years and the earlier periods ranged between .71 and .87, all indicating a high degree of relationship between the net migration of the wartime period and that for earlier periods. Even if the influence of California, which has consistently had a high net immigration, is eliminated, the relationships remain positive and significant.

Hauser secured similar results in his analysis of the migrations to large cities.¹⁵ Largely in keeping with previous trends in internal migration, large numbers of migrants went to the cities of the West Coast, the Gulf Coast, the Great Lakes, and the South Atlantic Seaboard. The areas of out-migration were chiefly the West North Central and the Middle Atlantic States. For a considerable number of larger centers which experienced large immigration, the population movements since 1940 have been chiefly a continuation of past trends. Conversely many of those losing population had a recent history of losses or of very slow gains.

There were exceptions, but in general the patterns of migration during the war years were not inconsistent with those of earlier periods. They represent an acceleration of the population shifts resulting from basic forces which have operated in population distribution during much of our recent history rather than exceptions that could easily be reversed when the war ended.

¹⁴ Shryock, Henry S., Jr. and Eldridge, Hope T.: Paper presented at the meeting on Migration of the American Sociological Society, Cleveland, Ohio, March, 1946. (Unpublished.)

¹⁵ Hauser, Philip M.: Wartime Population Changes and Post War Prospects. *Journal of Marketing*, January 1944, pp. 238-248.

The marked and probably permanent increase in urbanization and industrialization associated with the war period would tend in the long run to act as a strong depressant on the birth rate, other things being equal. This residential and occupational shift toward conditions favorable to the further decline of national fertility makes the question of the significance of the wartime increases in fertility particularly important. Has the downward trend of the birth rate been retarded, or was it simply interrupted by the coincidence of an abnormal stimulus to the establishment of families and a level of employment far above that of the decade of the 'thirties? The fact that the wartime increase follows an upward movement from a depression low makes it difficult to assess the factors involved in the war shifts.

The peak of births was reached in October 1942, ten months after Pearl Harbor. If allowances are made for seasonal variations, the decline began the next month and continued with minor irregularities to the spring of 1944; afterward there were only slight changes around an almost horizontal trend line.¹⁶ The total number of births in 1945 was more than 7 per cent below the number for 1943. It is too early to state whether or not the expected postwar boom in births will materialize, although marriages increased contraseasonally during the last quarter of 1945 and continued at a high level early in 1946. The decline from the 1943 high may be interrupted in 1946, but that in itself is no reason for assuming a continuation of the relatively high levels of births reached during the war years.

It is easy to over-estimate the significance of the increases in fertility that have occurred in recent years. Whelpton has estimated that from two-fifths to three-fifths of the increase in birth rates during the war years would be eliminated if allowances were made for the post-depression increase of births which would probably have occurred even in the absence of war. Furthermore,

¹⁶ Whelpton, P. K.: *Op. cit.*

although a birth rate of 22.9 per 1,000 population in 1943 (corrected for under-registration) may seem high at the present time, it is far below the rates that prevailed prior to World War I. In 1921, when the number of births was nearly equal to the number in 1943, the birth rate was 27.2. The birth rates of the war years, just as those of the depression, reflected the variations in a fertility subject to a high degree of control. That control, relaxed from the earlier period of depression and unemployment, could easily be intensified again if conditions become less favorable to the bearing and rearing of children.

Analysis of the fertility changes during the War indicates that the groups which had previously more effectively controlled their fertility, were the ones whose fertility increased most during the War. Whelpton reports that colored births were affected by the War to a lesser degree than white births. According to his computations, the average annual number of white births increased during World War II by 25.1 per cent, but the increase for colored births was only 20 per cent. If it is correct to assume that during the depression relatively larger numbers of white than of colored births were postponed, there were then larger deficits of white than of colored births to be made up during the high income years following 1939. Insofar as there was also some drawing on the future during the War, white births more frequently than colored births would reflect that phenomenon.

Farm women generally have had higher levels of fertility than nonfarm women, due in large part to differences in the extent to which fertility is controlled. Hitherto unpublished data supplied by the Bureau of the Census indicate that the ratio of children under 5 per 1,000 women 14-44 increased by 14.1 per cent between 1940 and 1945 for farm women compared with an increase of 28.7 per cent for nonfarm women. For both groups the level of fertility ratios in 1945 was greater than those for 1930. During the 1930 decade, the birth rate in the nonfarm population

appears to have decreased more rapidly than birth rates for the farm population and in the years since 1940 it appears to have increased more rapidly. These comparisons would be more conclusive if they could have been made on the basis of figures reflecting marital fertility. The very large migration of women in the reproductive ages from farms after 1940, may well have removed from the farm population more of those who were not married and those who had few or no children. It seems likely that if this factor could be taken into account, the differentials in the rates of increase between farm and nonfarm women would be greater than those reflected by these figures.

Analysis of trends in the numbers of births by age of mother and birth order permits a more precise evaluation of the dynamics of fertility during the war years, although only on a national level. Whelpton has summarized the trends in births by age of mothers as follows:

Births to native white women 15-34 were rising gradually before the War and were affected but little by the European War phase. During U. S. preparation for the war, the rise was speeded up considerably; after Pearl Harbor there was a further substantial rise at ages 25-34. Births to women 35 and older were declining before the War, but the decline was checked during the European War period, and a substantial increase occurred during the U. S. preparation and U. S. war periods. Much of this increase probably represents births postponed because of the unemployment and low incomes which occurred during the depression.¹⁷

Statistics on the order of birth offer further evidence that the recent increases in birth rates may not represent continuing deviation from pre-existing trends. First births to native white women increased from an average of 740,000 during the five prewar years to a high of 1,095,000 in 1942, then declined somewhat in 1943. Their proportionate contribution to all births increased from 39

¹⁷ Whelpton, P. K.: *Op. cit.*

per cent in the prewar years to 44 per cent in 1942, then declined again to 39 per cent in 1943. The number of second births continued to increase in 1943, when it reached a level of 60 per cent above that of the prewar years. This increase in second births was to some extent a consequence of the prior increases in the number of first births, for an increasing number of women were subject to the risk of having a second child. The increase in the number of first and second births combined over the prewar average was 543,000 in 1942 and again in 1943.

The number of third and fourth births also increased; in 1943, the former were 45 per cent, the latter 24 per cent, above their prewar levels. Fifth and higher order births continued to decline in the early war period, although there were some slight increases in the later war period. For sixth and higher order births the later increases were not sufficient to bring the number in 1943 back to the prewar average.

Whelpton concluded on the basis of a detailed analysis of the number of births by parity order to native white women by age cohorts that the substantial increase in fertility during the war years was due primarily to the occurrence of births postponed during the depression. World War II and its attendant economic conditions enabled the women born in 1905-1919 to have the first births that had been postponed by the depression, together with a relatively small number that would not have been expected on the basis of prewar trends. The experience of the cohorts of 1920 and later years was similar except that the surplus of actual over "expected" births was very small. The cumulative totals for first and second births to these cohorts were only approximately "normal" by the end of 1943. All cohorts of women had made up the deficits of first births below the "normals" established by Whelpton by the end of 1943 and even accumulated a small surplus. The larger deficits in second and higher order births had been reduced until they varied from a low of about 4 per

cent for second births to about 22 per cent for sixth and higher order births.

Whelpton's analysis offers evidence that the increase in fertility during the war years did not constitute a major alteration of long-time trends in this country. The precise relationship of wartime fertility to the expected "normal" may be altered somewhat when the experience of the future permits the computation of more satisfactory trend values for the period under review. Broadly speaking, however, his conclusions seem unlikely to be subject to serious challenge.

No numerical estimates of the future population or the future rate of natural increase will be presented here. Numerical projections of the postwar population of the United States into the future on assumptions that take into account the experience of the war years are now being prepared by the Bureau of the Census in consultation with Whelpton. It may be pertinent, however, to consider some of the factors growing out of recent developments that will have some relevance to the future trend of fertility and thus to the future rate of increase of the American people.

If the rural-urban migrations and the other population shifts of the war years are to a large extent irreversible, they are likely to result in somewhat lowered levels of fertility. Migrations from farm to nonfarm areas and from the South to the North and West, involve shifts from areas of higher to areas of lower fertility, and it is to be expected that women will tend to manifest the fertility patterns of the areas in which they are living rather than those of the areas in which they were reared.

The influence of the levels of employment and income on fertility patterns may become increasingly important in future years as the population becomes increasingly industrial and non-rural. Hauser's correlation between fertility and the legislative and administrative acts affecting the rate of induction into the Armed Forces, the rapid increase in marriage rates since VJ Day,

and the continued high correlation between marriages and first births suggest a direct influence of non-economic factors. But this was also a period of high levels of employment, lasting long enough to give many established families an opportunity to recover some of the losses of the depression years, and many new families an opportunity to have children and give them a level of care to which many had previously, and unsuccessfully, aspired.

The evidence now available is not sufficient to unravel the factors that were involved in the increase and later decline of fertility during the war years, but it does suggest that full employment may serve to maintain fertility above the levels established during periods of irregular employment. Should this nation succeed in providing continuing high levels of employment and security of income, the pattern of population growth in the future may differ from that projected on the basis of past experience. It is recognized that the lack of many desired consumption goods during the War may have reduced the competition between children and some major consumption goods, and that this may have resulted in higher fertility, either because of a reduction in the social pressures which ordinarily work toward a reduction in family size, or, in a few instances, because families rescheduled their larger expenditures, having children during recent years when high incomes made that relatively more easy and postponing heavy consumption expenditures until goods were more readily available. On the other hand, a reduction in fertility might have been anticipated on the basis of the large-scale employment of women, the crowded housing conditions in many industrial centers, the shifts of rural women to urban areas, the high rate of mobility required of many persons during the War, the separation of families because of military service or industrial migration, the disruption of many of the accustomed patterns of living and the increased exposure to knowledge of and increased access to contraceptive devices. These factors may have served

to restrain the increase in the birth rate below the level it would otherwise have reached. Perhaps the major implications of the recent experience for the evaluation of the immediate and the long run future is the possibility that full employment and its correlative of greater job and income security may result in some alteration of the pre-existing patterns of relationships between income levels and fertility. Projections based on "other conditions being equal" may need to be modified if other conditions are no longer equal to those which prevailed in the past.

Conditions affecting the birth rate in the future may differ from those in the past in still other respects than the level of employment. During the War this country became conscious of manpower and the implications of manpower for industrial development and military strength. More than ever before there was an awareness of the factors in population growth, a need for comparing the relevant facts for this and other countries, and a concern over the long range prospects for population growth. Countries which suffered many more casualties in both World Wars than we did are actively investigating the factors involved in population decline, and are establishing or intensifying pronatalist measures. The anticipated reduction of fertility from its wartime highs to more "normal" levels may touch off concern over population numbers in this country and thus create a more favorable climate for discussion and action in the field of population policy.

During the War this country experimented with some elements that probably would be found in any population policy which might be developed. The family allowances provided through the Armed Forces were direct payments to families to assist in providing for wives and children. The emergency maternity and infant care programs provided medical and hospital care to wives and infants of enlisted servicemen in the four lowest pay grades.

In addition to family allowances and the emergency maternity

and infant care programs there were other provisions operating to reduce somewhat the direct costs of maintaining children in the urban industrialized world. Provisions for nursery schools were developed in many areas, special feeding programs organized, school lunch programs maintained or expanded, and food distribution programs developed with the needs of children and pregnant and nursing women particularly in mind. Widespread attention was given to nutrition, particularly for the "vulnerable" groups. These activities did not constitute a population policy. They were expedients to solve problems incident to the conduct of the War, and in many cases they were dropped as soon as the immediate wartime urgency disappeared. It is not easy to assess their possible carryover. Perhaps the experience with them would arouse favorable responses from many persons should they be presented again under the auspices of a population program.

This discussion has not dealt with war casualties. Such losses are not to be minimized, but in the long run the wartime increases in fertility and the wartime population shifts are more significant than the wartime losses. There is no direct evidence that the War altered the long time downward trend in the fertility of the American population, although it may have arrested it somewhat and provided a period in which the abnormal losses of the depression years could be made up. Nonetheless, equal caution is called for in evaluating the supposition that in demographic matters there will soon be a return to prewar normalcy.