

THE NATURAL INCREASE OF THE RURAL NON-FARM POPULATION

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THE ill-defined element between the open country and the city which is classed as "rural non-farm" by the census includes a segment of the population which has not been sufficiently analyzed with respect to its natural increase. The analysis has lagged because the basic data have been lacking. Before 1930 it was difficult to measure the difference between rural and urban natural increase. Births and deaths were allocated to "urban" or "rural" classifications according to whether they occurred in incorporated cities of 10,000 and over or in smaller cities and open country. Population was classed as urban or rural according to whether it was located in towns of 2,500 and over or in smaller villages and open country. Even the latter dividing point of 2,500 includes in the "rural" group too numerous and too heterogeneous a segment of the population to be of much use in precise measurements of natural increase.

With the split of census population data into rural farm and non-farm and the further segregation of metropolitan districts from the open country, a much clearer delineation of the elements in the rural non-farm population is possible. The recent publication of age-group data for villages and minor civil divisions makes it possible to center definitely on non-farm areas. No such progress has been made in the segregation of birth and death statistics into significant non-farm classifications. In fact the study of births and deaths in non-farm groups would require original tabulations of minor civil divisions and even of areas within minor civil divisions.

In 1930 nearly twenty-four million, or about a fifth of the total population, was classed as rural non-farm. The increase of this

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element in the previous ten years had been 18 per cent, a faster rate than the total increase.

The subdivision of the rural non-farm by areas, as far as it can be carried from the census data, is shown in Table I.

As will appear in the subsequent discussion, further subdivision would be most valuable—division of the villages into types of village, especially agricultural and industrial, division of the metropolitan into industrial and white-collar residential suburbs division of the “other”

into suburbs of small cities—unincorporated industrial areas and scattered open country dwellers. Such analysis, however fruitful, will have to await more elaborate research into the field than was possible in preparation of this paper.

These groups with the exception of the agricultural villages were increasing their proportion in the composition of the national population up to the depression. Suburbanization increased by leaps and bounds, industrial villages and centers spread along expanding electric power lines, and there was a normal increase in open country dwellers obtaining a livelihood from other than agricultural pursuits. Since the depression, normal movements and the efforts of planners have been directed in several channels which will increase the relative importance of the element which is neither farm nor city. The planned movements referred to are the promotion of the decentralization of industry, of part-time farming, and of farm-industrial colonies. Even partial success of any of these will materially increase the proportion of the non-farm group.

Table I. Rural non-farm population, 1930.

Type of Community	Number (in millions)	Per Cent
TOTAL	23.7	100
Detached village ¹	8.5	36
Metropolitan “rural” ²	5.4	23
Other ³	9.8	41

¹ Includes all incorporated villages (under 2,500) except those in metropolitan areas. Fifteenth Census, Vol. 1.

² Includes all non-urban metropolitan villages and unincorporated areas. Fifteenth Census, 1930, *Metropolitan Districts*.

³ Includes all other non-farm groups such as unincorporated suburbs of small cities, unincorporated industrial and mining areas, and dwellers in the open country. Total rural non-farm minus detached villages and metropolitan rural.

In spite of the large and increasing importance of this group, we are without sufficient facts to answer fully such fundamental questions as: Does the rural non-farm fertility rate correspond more closely to the urban than to the rural farm? How rapidly is it declining? What are the factors incident to the decline? What is the relative incidence of these factors in the sub-groups of the rural non-farm elements?

In view of the gaps in the basic material, this article does not propose to present any exhaustive answers to these questions but will be confined to description of the general characteristics of rural non-farm increase with the hope that the clues discovered will point the way to more intensive study and the application of more refined methods.

Lack of birth and death statistics is, in a sense, compensated by the fact that sex and age distributions are available for minor civil divisions, making possible the calculation of the ratio of children under 5 per 1,000 women 15 to 44 years of age as a measure of natural increase.² It is recognized that this ratio has many defects. The principal ones arise from divergencies in age distribution within the 15 to 44 group and variations in the proportion of married women in populations disturbed by migration and the variations in the infant death rate. Some insight into the elements of the problem is, however, afforded by the comparison of the ratios of children to women.

The general comparison of rural non-farm with other elements is shown in Table 2.

It is apparent that the rural non-farm group is much closer in fertility to the rural farm than to the urban, and that the index of fertility is higher for the whites than for Negroes in all areas except the rural farm. The increase of the Negro ratio of children to women in the urban area from 1920 to 1930 is probably

²In order to calculate this ratio for villages or minor civil divisions it is necessary to estimate the women 15 to 44 from the total within this age category divided by two, and adjusted for the divergence of the sex ratio from 100.

more apparent than real, owing first, to the undercount of Negroes in 1920, which was greater in the urban and rural non-farm groups than in the open country, and greater in the young age groups than in the older,³ and second, to the fact that the 1920 Negro population was much disturbed by internal migration, and the consequent disproportionate piling up of middle-age groups in industrial towns. This was to some extent adjusted between 1920 and 1930. However, there is probably some real basis for a slower decline in Negro increase, since their rapid reduction in infant mortality more than offsets the reduction in the birth rate.

The ratio of children to women in the Southeast by color in 1930 and the change in the total from 1920 to 1930 is given in Table 3.

The differential changes from 1920 to 1930 in the state ratios are difficult to explain both because of insufficient basic data and because of the complexity of the problem.

When the state-to-state fluctuations in the white rate for 1930 are considered, some of the factors involved are evident. States with a high rate of white illiteracy in the rural non-farm group also tend to have a higher rate of natural increase. States with high ratios of children in the rural farm population also have high ratios in the rural non-farm, indicating that to a marked extent the mores of the farm group carry over into the non-farm.

³ *Vide.* The Census of 1920 enumerated 1,144,000 Negroes, under 5. In spite of deaths in this group and without appreciable migration, the Census of 1930 enumerates 1,252,000 as 10 to 14.

Table 2. Number of children under 5 years of age per 1,000 women 15-44 years of age by color in the urban, rural farm, and rural non-farm population of the United States, 1920 and 1930.¹

Type of Community	Native White	Negro
Urban 1920	313	248
1930	292	269
Rural farm 1920	596	604
1930	529	566
Rural non-farm 1920	496	433
1930	463	426

¹ Native white ratio is native white mothers divided into children native white of native parents plus children native white mixed parents minus children of mixed parentage with foreign mother. 1920 ratios based on Thompson's estimate of ratio of children to women.

STATE	RURAL NON-FARM					RURAL FARM 1930
	1930		Both Races			
	Native White	Negro	1920	1930	Decrease	
Alabama	553	426	525	505	20	610
Arkansas	504	324	507	459	48	574
Georgia	454	404	486	434	52	578
Kentucky	611	410	589	584	4	614
Louisiana	554	412	505	495	10	587
Mississippi	468	350	452	415	37	564
North Carolina	552	506	604	539	76	631
South Carolina	509	468	525	493	32	585
Tennessee	541	375	547	517	30	566
Virginia	544	524	599	539	60	573

Table 3. Children under 5 years of age per 1,000 women 15-44 years of age, rural non-farm population 1920 and 1930, and rural farm, 1930, Southeastern states.

On the whole, however, analysis by states is an unsatisfactory procedure. The unit is too large and the rural non-farm population of any one state is made up of too many and too complex elements to warrant comparison of one state with another even in so homogenous a section as the white South.

On the basis of the above conclusion, that the rural non-farm increase is closely related to the rural farm increase and is between the urban and rural rates, one would expect a steady upward progression of the ratio of children as the distance from the city increases. This was hinted by Kolb and Brunner in their analysis of rates of increase according to progressive distance from the city.⁴ They compared the rate in the city county with those of the first surrounding tier, the second surrounding tier, and the third and fourth surrounding tiers, showing a steady increase in child-woman ratios as the distance from the city increased (except in the fourth tier).

In Table 4 it appears that the rates rise with increasing spatial distance from the city. More detailed analysis of areas, however, indicates that the opposite is in some respects the case.

When the increases are calculated according to types of suburbs

⁴ See footnote to Table 4.

REGION	CITY COUNTY	TIERS OF COUNTIES			
		1st	2nd	3rd	4th
<i>Rural Farm</i>					
All regions	1,368	1,435	1,488	1,504	1,485
South	1,474	1,629	1,696	1,681	1,638
<i>Rural Non-Farm</i>					
All regions	1,139	1,148	1,167	1,213	1,121
South	1,169	1,269	1,310	1,369	1,215

¹ Adapted from: Brunner, E. deS. and Kolb, J. H.: RURAL SOCIAL TRENDS. New York, McGraw-Hill Book Co., Inc., 1933, p. 118.

Table 4. Children under 10 years of age per 1,000 women 20-44 years of age in rural farm and rural non-farm population, 1930.¹

and villages as in Table 5, it appears that some of the areas which are closest to the city in occupational distribution and physical distance are higher in natural increase than others. Industrial suburbs immediately adjacent to the city and industrial villages have much higher ratios of children to women than agricultural villages.

Such a surprising divergence from the expected calls for a careful review of the method to ascertain what factors are controlled and what uncontrolled. It will be noted that the per cent of Negroes is fairly uniform throughout and that the sample is pre-

Table 5. Children under 5 years of age per 1,000 women 15-44 years of age, and certain descriptive data for selected rural non-farm areas, Cotton States, 1930.¹

TYPE OF AREA	CHILDREN UNDER 5	WOMEN 15-44	CHILDREN UNDER 5 PER 1,000 WOMEN 15-44	PER CENT OF WOMEN 15-44 WHO WERE 25-34	MALES PER 100 FEMALES	PER CENT NEGRO
7 Agricultural villages	1,162	3,113	373	30	89	10
7 Textile villages	1,401	3,195	438	31	91	13
5 Industrial suburbs	3,916	7,520	521	33	102	12
5 Resident suburbs	2,280	7,139	320	37	94	18

¹ *Areas Sampled:* Villages—Agricultural: Alabama, Scottsboro; Arkansas, Nashville; Georgia, Jefferson, Cornelia; North Carolina, Carthage, Murphy; Tennessee, Crossville, Textile; Georgia, Hogansville; North Carolina, Randleman, Gibsonville, Leaksville, Rutherfordton; South Carolina, Liberty, Pickens.

Suburbs—Industrial: Alabama (Birmingham), Jefferson County, Precinct 40; North Carolina (Charlotte), Mecklenburg County, Paw Creek Twp. (Winston-Salem), Forsyth County, Middle Fork Twp.; Tennessee (Chattanooga), Hamilton County, District No. 2, (Knoxville) Knox County, District No. 3.

Residential—Georgia (Atlanta), College Park, Peachtree, Buckhead; Tennessee (Nashville), Davidson County, District No. 7; Virginia (Washington, D. C.), Fairfax County, Falls Church District.

dominantly a white sample. As was previously pointed out, the nativity and religious factors are uniform in the white South and the sex ratio has been fairly well controlled in the sample. Although in the industrial suburbs the higher ratio of males and slightly greater proportion of women 25 to 34, undoubtedly contribute to the higher child-woman ratio. The important uncontrolled factors are the proportion of women married, occupational and cultural distribution, and infant mortality rate.

To test the validity of the conclusions still further, some villages and suburbs outside the South were also sampled⁵ with somewhat the same results—the agricultural villages showing the same ratio of children to women as those in the South, the industrial villages a higher ratio and the industrial suburbs a still higher ratio.

Graphic presentation of a case of the piling up of the proportion of children just outside the city limits of a new industrial center is given in Figure I showing the ratio of children under 5 to women 15-44 in Flint,⁶ Michigan, in the adjoining township, in the next township, and in villages located in those townships. This ratio is 402 in Flint, 890 in Mount Morris township, 560 in Mount Morris village, 620 in Vienna township, and 422 in Clio City.

It will be observed that the latter agricultural village drops almost as low as the city of Flint while the industrial suburban area has a ratio of children twice as high as the agricultural village. The fact which stands out is that the decline in the rate of rural non-farm increase is not a function of physical distance, but is a function of temporal distance from agriculture. The agricultural villages are generally long-settled, stable communities

⁵ Areas sampled: Rural Village—Ohio: Hicksville, Jefferson, Versailles, Waverly.
Industrial Village—Ohio: Londonville, Wellington; Wisconsin: Kohler; Vermont: Essex Town.
Industrial Suburb—Michigan: Flint, unincorporated metropolitan area; Wisconsin: Milwaukee, Cudahy.

⁶ Flint is an industrial city which had a very rapid growth between 1920 and 1930.

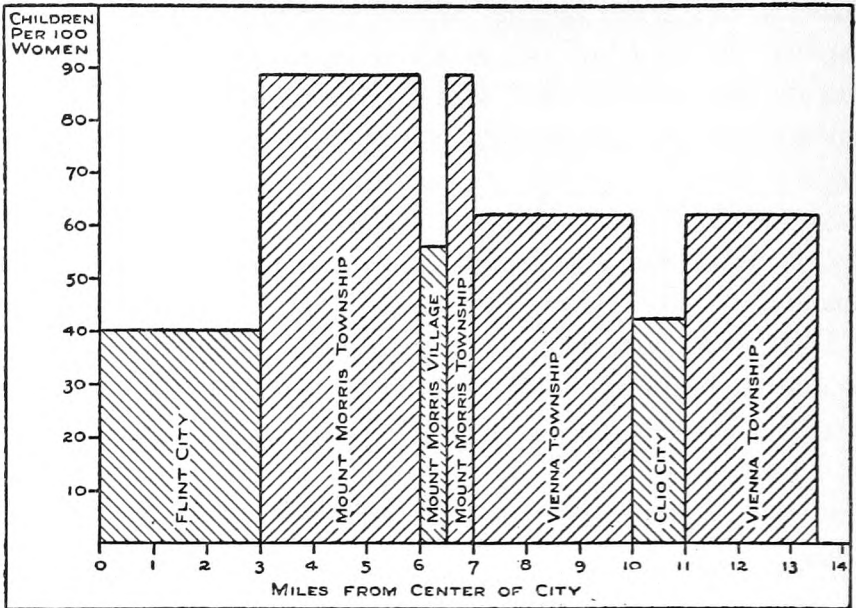


Fig. 1. Children under 5 years of age per 100 women 15-44 years of age, Flint, Michigan, and suburban areas, 1930.

composed of merchants and professional people serving the country. The textile villages and industrial suburbs are composed, especially in the South where industry is relatively new, of recently detached migrants from the farm.

This means that the high ratio of children to women in industrial suburbs and villages is not entirely the result of a high birth rate within those areas, but that families with high fertility on the farm have moved in, bringing with them a large number of children.

This temporal relationship suggests also that some of the high fertility of unskilled labor groups and miners which have been sampled in various other studies may have a similar relation to agriculture since such unskilled groups are temporally the closest to the farm.

The facts developed within the limited time at the disposal of the writer for preparing this paper seem definite enough to

warrant the hope that this field will be much more carefully explored by students of natural increase. It is suggested that specific birth and death rates as well as replacement ratios be analyzed in groups chosen so as to represent various temporal distances from agriculture. That is to say, data on births and deaths should be related not only to occupational classes, but also to occupational mobility. Such analysis must, however, be preceded by more accurate reallocation of births and deaths to place of residence. Data on replacement ratios should not only be related to types of areas but also to source and length of residence of migrants into the areas.