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CHAPTER III

THE WORKING POPULATION IN THE UNITED STATES, 1910 AND 1920

Some of the discussion in the last chapter has already indicated that statistics of the growth and decline of trade union membership may in themselves be misleading unless compared with the changes, in similar periods, of the numbers attached to industry. And a few such comparisons were made between the membership of selected unions and the changes in the number of wage earners from 1919 to 1921. Standards for evaluating, from time to time, the changing numbers or strength of a labor movement may, of course, be many; and the problem is that of choosing one which is for the present purposes most useful. The relative position of trade unionism may, for instance, be measured by comparing membership with total population, or with the number of voters in the country; or, as will be done here, with the numbers who are gainfully employed in industry.

All of these comparisons would be, unquestionably, interesting and important; but for several reasons the last appears to be the most valuable. It is possible, first, from an analysis of the last type to discover in considerable detail the sources of growth and of decline of the labor movement and thus to understand fluctuations up and down, that would be otherwise meaningless, or, at any rate, mysterious. The allocation of unions to the various industries and services, in which the people of a country work, and the study of trends of membership and of working population discloses problems and explanations, not otherwise available. This demarcation of the field, furthermore, works largely within the boundaries which the trade unions have laid out for themselves. Their strength, and numbers, and control are the subject of inquiry in the areas where they have staked out their claims; and although their claims are often vague and ill-defined, the problems

so raised are not difficult to settle and indeed elicit new and even more significant problems. The working population in a country may, finally, pursue a course quite distinct from that of the total population. It may either increase or decline more rapidly than the total population; or large sections of it, more or less accessible to labor organization, may come to occupy a leading or subordinate position in the work of the country. Phenomena, such as these, which would be otherwise concealed are brought to light by drawing the comparison between the numbers of workers and the numbers of trade union members.

Sources of information concerning the working population of the United States are likewise many. From the federal censuses of manufactures, before 1919 quinquennial and since biennial, can be obtained the numbers who work in the manufacturing industries; the Interstate Commerce Commission publishes annual reports containing detailed information on the laboring forces of the steam railroad system; and the annual reports of the United States Geological Survey present the statistics of the number at work in mines. While each of these agencies produces statistical material of a very high order of excellence, they are in two respects inferior for the purposes of this study to the statistics furnished by the federal census of occupations. This document, based on the decennial census of population, is in the first place exhaustive. It includes statistics for all industry, agriculture, transportation, trade, and all forms of service, that bring pecuniary income. It thus makes available data for such groups as the building trades and commercial occupations, which are not included in any of the above sources, and for the whole field of service, like professional and domestic service, for which there is no other source of information. Secondly, defective as a decennial census of occupations may be in accuracy, its elements are comparable for each census period since, in the main, the same standards of enumeration and classification are applied to all of its constituent elements. Statistics drawn from separate and independent sources would lose in comparability what they might gain in reliability. For these reasons the major comparisons in the following pages are made between the membership of trade unions and the number of occupied persons reported in the decennial censuses of occupations.

The census of occupations, nevertheless, also has its defects.[1] It has first the defect common to any census, that its data are applicable to only a short period of time. The census of occupations of 1920, for example, reveals the state of affairs only during the first two weeks in January of that year. Conditions then may not have been representative of the whole year; or they may have been quite representative for some classifications, within the census, and less representative for others. This is often, as will be seen later, precisely what happens. Furthermore, the whole decennial census, as well as the occupation census, is still in the hands of a large number of untrained enumerators. Occupation enumeration is a task requiring at least a minimum of technical skill and knowledge. The overlapping of occupations, the prevalence of a vague and frequently inconsistent terminology, require of enumerators insight and discrimination which can come only from training and experience. Lacking such enumerators, the results are likely to be, and in fact are, subject to considerable error.

There are, indeed, persisting types of error, due to unskilled enumeration, which are recognized by the Census and which are discussed periodically in the decennial reports on occupation statistics. For instance, factory operatives frequently report their old trade names, such as bakers, tailors, and there consequently results an overestimate of the number of bakers, millers, jewelers, tailors and tailoresses. Clerks in stores are often not distinguished from salesmen and saleswomen. Locomotive engineers and fire-

[1] Dr. Wolman having accounted for the membership in American trade unions, naturally desired to compare their memberships with the total number of workers according to occupations. In order to do so the only possible source was the reports of the Census. It is well recognized that the Census reports on this subject are unreliable. There is in the first place confusion between principles of industrial classification and occupational. In the second place enumerations are made carelessly. And in the third place the statistician has to deal with shifting conditions, in that workers change from one industry to another and from one occupation to another. Dr. Wolman has regrouped the Census statistics in order to eliminate certain manifest incongruities, but obviously such work can be nothing more than the exercise of judgment. Another statistician might obtain different results. Such work resolves itself into an expression of probability, and in no sense to a determination of fact. The basic data are of such nature that from them no facts can be determined.

It is important that these conditions should be understood lest the National Bureau of Economic Research be considered as endorsing as facts what it knows to be doubtful. It may be that Dr. Wolman's correlation of membership in trade unions with probable occupational numbers is near enough for practical purposes. We may reasonably assume that it is. His findings in such terms, however, are to be viewed as those of an intelligent reconnaissance rather than as something of definite scientific determination.—Note by WALTER RENTON INGALLS.

men are frequently confused with stationary firemen and engineers. In the group of domestic and personal service, careful distinction is not made between cooks and general servants; housewives not receiving wages and working at home are returned as housekeepers and stewardesses; the classification of the various kinds of nurses is not successful. Within a major division of industry, it is found difficult to distinguish clearly the constituent groups. From the returns in the clothing industry it is hard to differentiate the employees in the various branches of that industry. Similar problems are encountered in the other industries as well.[1]

Any occupation census, moreover, is useful to the degree in which it is comparable to an earlier or a later census. As instructions to enumerators are changed for the purpose of improving the returns and as the system of classification is modified, comparison becomes difficult and more uncertain. This is the case with regard to any two successive censuses; and it is true also with regard to the censuses of 1910 and 1920, which will be used in this and later chapters. The signal difference between the censuses of occupations of 1920 and 1910 lies in the change in the date of enumeration. The census of 1920 shows conditions in early January and that of 1910 in the middle of April. The change admittedly confuses comparison by the introduction of a seasonal element, for such items, particularly, as agriculture and building, known to exist but exceedingly hard to measure. Obviously the injection of an indeterminate variant like this makes somewhat difficult the task of measuring growth and decline.

The 1910 census, moreover, afforded a much more detailed classification of occupations than is offered by the 1920 census. In the earlier census, occupations were classified within each industrial division into employer and supervisory group, clerical occupations, occupations not peculiar to the industry and occupations peculiar to the industry. For the cotton manufacturing industry, for example, it was possible in the 1910 census to derive directly from the printed tables the number of employers and supervisors, the number of clerical and office workers associated with cotton manufacturing establishments, the number of persons, like machinists, not peculiar to that industry who worked in and around cotton

[1] Fourteenth Census of the United States, 1920, Vol. IV, *Occupations*, p. 14 ff.

factories, and finally the number of strictly cotton manufactory operatives. With this highly detailed material it was, of course, possible to make most illuminating groupings and rearrangements. This elaborate classification is in large part discarded in the 1920 census, because the returns on which it was based are not regarded as sufficiently trustworthy. In its place the last census of occupations presents pretty much the same list of industries and sub-industries, and reports for each the numbers of semi-skilled persons and laborers there employed. Gross figures, which do not indicate the industries to which the members of the occupation are attached, are reported for such general occupations as carpenters, machinists, bricklayers, molders, painters; and there are reported the numbers in such categories as "manufacturers," distributed among the major divisions of industry like "extraction of minerals" and "manufacturing industries," but not apportioned to the sub-industries, like "iron and steel," "textiles," or "food."

Without stopping at this time to analyze the census figures any further, it would be well to give the outstanding results in 1910 and 1920, as reported by the Bureau of the Census. For the first time since 1880, the 1920 census shows a relative fall in the rate of increase of the gainfully occupied population of the United States in the decade from 1910 to 1920. The table [1] below shows that

Year	Persons 10 Years of Age and Over Engaged in Gainful Occupations		
	Number	Per Cent of Total Population	Per Cent of Population 10 Years of Age and Over
1920	41,614,248	39.4	50.3
1910	38,167,336	41.5	53.3
1900	29,073,233	38.3	50.2
1890	23,318,183	37.2	49.2
1880	17,392,099	34.7	47.3

while there was an increase in the absolute numbers of persons 10 years of age and over gainfully engaged in industry from 1910

[1] 1920 Census of Occupations, p. 33.

to 1920, the rate of increase in the number of occupied persons relative to that of the population slackened. This retardation in the rate of increase the Census regards as real, since it is general throughout the country, except in Michigan and the District of Columbia, and ascribes to a number of causes. The most important cause it considers the change in the census date from 1910 to 1920, which found some important occupational divisions in the latter year at their low ebb of employment. In these cases the enumerators apparently reported many persons who were unemployed but probably still attached to the industry as unoccupied. Another factor was the more rigid enforcement of child labor laws and the spread of this type of restrictive legislation, which reduced appreciably the numbers reported in the age group 10–15. The most striking changes took place in agriculture where there were actually fewer persons engaged in 1920 than in 1910; the Census reporting a drop of roughly 1,700,000 persons. A large but unestimated portion of this decrease, the Census ascribes to overenumeration of certain groups in 1910 and to underenumeration of certain groups in 1920. It believes, also, that the war led to a substantial shifting of labor from farm to factory and that this redistribution of the working population is revealed in the drop in 1920 of the number engaged in agricultural pursuits.[1]

For a considerable period of time, agriculture, in terms of the relative numbers of persons gainfully engaged, has increased much less rapidly than the industrial and commercial groups. The large absolute and relative drop in agriculture in the last intercensal period has, of course, accentuated this movement and agriculture stands lower in the entire industrial picture in 1920 than ever before. The next table,[2] which shows the relative rank of the general divisions of occupations in 1910 and 1920, reveals the changing status of agriculture and other important groups during that decade. The striking changes of the period are the drop in agriculture, both the absolute and relative drop in the group of domestic and personal service, and the very large rise, absolutely and relatively, in manufacturing and mechanical industries, and in clerical occupations.

[1] For a full discussion of these points, see 1920 Occupation Census, pp. 18–24.
[2] *Ibid.*, p. 34.

TABLE 9.—INDUSTRIAL DISTRIBUTION OF PERSONS ENGAGED IN GAINFUL OCCUPATIONS
1920 AND 1910

General Division of Occupations	Total Persons 10 Years of Age and Over Engaged in Gainful Occupations			
	1920		1910	
	Number	Per Cent Distribution	Number	Per Cent Distribution
All Occupations	41,614,248	100.0	38,167,336	100.0
Agriculture, Forestry, Animal Husbandry	10,953,158	26.3	12,659,082	33.2
Extraction of Minerals	1,090,223	2.6	965,169	2.5
Manufacturing and Mechanical	12,818,524	30.8	10,628,731	27.8
Transportation	3,063,582	7.4	2,637,420	6.9
Trade	4,242,979	10.2	3,614,670	9.5
Public Service (not elsewhere classified)	770,460	1.9	459,291	1.2
Professional Service	2,143,889	5.2	1,693,361	4.4
Domestic and Personal Service	3,404,892	8.2	3,772,559	9.9
Clerical Occupations	3,126,541	7.5	1,737,053	4.6

In order to examine in greater detail the nature of the rates of rise and decline since 1910, the figures for both census years, as they appear in the 1920 census, were recast into a slightly larger number of groups and the per cent of change in the number in each group from 1910 to 1920 was computed. The results are presented in the next table; and they show that, while the total population, 10 years of age and over, increased 15.6 per cent, the total number gainfully engaged in industry increased just slightly more than 9 per cent. It is the distribution of this increase among the constituent groups, however, that is interesting and significant. Thus manufacturing industries, which next to agriculture is the most numerous category, rose from 1910 to 1920 at a rate considerably faster than that of the population 10 years of age and over. Clerical occupations, likewise, including more than 1,500,000 persons in 1910 and nearly 3,000,000 in 1920, grew much more rapidly than population. Trade and professional service, which between them include from 5,000,000 to 6,000,000 persons, exceeded appreciably

the rate of population increase; while the rate of growth of transportation and mining was only slightly slower than that of the population. The marked decline, both relatively and absolutely, came in the building trades, domestic and personal service, and in agricultural pursuits. But it is in precisely these occupations that the 1920 census is least comparable to the census of 1910.

TABLE 10. — CHANGES IN NUMBER ENGAGED IN GAINFUL OCCUPATIONS
1910 TO 1920

General Division of Occupations	Per Cent Change 1910 to 1920
Extraction of Minerals	13.0
Manufacturing Industries	31.6
Transportation	12.9
Building Trades	− 6.1
Stationary Engineers	4.8
Stationary Firemen	29.3
Trade	21.7
Professional Service	26.6
Domestic and Personal Service	− 9.9
Clerical Occupations	80.8
Public Service (not elsewhere classified)	68.3
Agriculture, Forestry, and Animal Husbandry	− 13.5
Total	9.3

The building industry is subject to violent seasonal fluctuations, and the 1920 census was taken in early January, whereas the preceding census was taken in the middle of April, a comparatively open season for construction. The results for agriculture were influenced not alone by possible seasonal factors, but also by thoroughgoing modifications in the methods of enumeration. The occupations that fall in the category of domestic and personal service are notoriously difficult to enumerate and are, therefore, probably subject to a substantial margin of error. In the light of these observations, conclusions concerning the trends in the size of the working population of the United States between the years 1910 and 1920 require further scrutiny and analysis. Except, however,

for probable inaccuracies in reporting certain categories in agriculture, the census statistics of occupations, in general, appear to be reliable enough for the purposes of this inquiry.

Since the trade union movement is composed of organizations of persons who work for wages and whose industrial status is tolerably clear, any fair estimate of the strength of the movement would be derived from a comparison between its membership and the number of employed persons in the country who have, as nearly as can be determined from the statistics of occupations, the status of wage earners. In order to obtain figures for the total number of wage earners in all industry, service, and agriculture in 1910 and 1920, the occupation statistics for those years, presented in the 1920 census, were recast into the following classifications: employers and self-employed, salaried persons, and wage earners. This regrouping was naturally not accomplished without difficulty and without frequent arbitrary decision. Where the census reports such a group as "employers," the case is, of course, clear. With regard to such an item as "officials," however, it is sometimes doubtful whether those included in the group fall within the salaried or employer group, or in both. Since no data for making the distribution were available, it was assumed that all members of the "official" group were in the supervisory or salaried class. In general the salaried class was restricted to those occupations that appeared to be supervisory or managerial and to those members of the professional group who worked for employers.

The employer and self-employed class was limited to owners, persons working for themselves and persons like doctors and lawyers, in the professional service groups, who may be regarded as the fee-receiving class. The greatest difficulty in determining the constitution of this group was found in allocating to it portions of such occupations as dressmakers, milliners, shoemakers, tailors, where it was impossible to determine from the available data how many were self-employed and how many worked for employers. In all of these cases, arbitrary decisions were made after a careful study of the classified indexes of occupations of the 1920 census.[1]

[1] *Classified Index to Occupations*, Fourteenth Census, 1920, and *Alphabetical Index to Occupations*, Fourteenth Census, 1920.

The wage earner group is composed of all occupied persons described in the census as "semi-skilled" and "laborers"; of persons working at such industrial occupations as bricklayers, carpenters, locomotive engineers; of clerks, bookkeepers, salesmen and saleswomen in stores, stenographers and typists; and of farm laborers.

The general results of this reclassification of the census figures are taken from Table IV of the Appendix to this book and are presented in the next tabulation. From this tabulation it would appear that the total number of wage earners constituted 62.7 per cent of the total number of gainfully engaged persons in 1920 and 58.7 per cent in 1910; the salaried group represented 8.5 per cent in 1920 and 6.5 per cent in 1910; and the employer and self-employed group 28.8 per cent in 1920 and 34.7 per cent in 1910. Judging largely from the character of the raw data and the way in which these groups were made up, it is highly probable that, in both 1920 and 1910, the numbers in the employer and self-employed group were exaggerated at the expense of the numbers in the salaried group. Some who seem to be described in the census as employers or self-employed persons are unquestionably salaried persons engaged in supervisory and managerial functions. While there are also a number designated as officials and now placed in the salaried group, who properly belong among the employers and self-employed, their number is relatively small in comparison with the former. A fairer comparison, then, is between the total number of wage earners and the aggregate number in both the employers and self-employed, and salaried groups. If this comparison is made, it is found that of the total working population in 1920, 62.7 per cent were wage earners and 37.3 per cent non wage earners; whereas in 1910, 58.7 were wage earners and 41.3 per cent salaried persons and employers. These conclusions, also, need to be accepted with caution. There is good internal evidence that a number of persons, probably between 5 and 10 per cent, included in the group of wage earners, in both census years properly belong in either the employer or salaried classes. There is, however, no exact method for estimating the number of such persons for either census year or for measuring the disparities in this regard as between the two censuses.

TABLE 11.—DISTRIBUTION OF WORKING POPULATION INTO EMPLOYER, SALARIED AND WAGE-EARNING CLASSES
1920 AND 1910

	1920	1910
Employers and Self-Employed	11,974,369	13,175,711
Extraction of Minerals	17,334	14,287
Manufacturing Industries	562,199	814,974
Transportation	81,488	59,572
Building Trades	90,109	174,422
Trade	1,786,902	1,530,340
Professional Service	758,336	612,444
Domestic and Personal Service	426,688	512,081
Agriculture, etc	8,251,313	9,457,591
Salaried (supervisory and professional)	3,540,608	2,482,478
Extraction of Minerals	53,922	34,285
Manufacturing Industries	557,363	300,792
Transportation	212,228	160,091
Trade	524,014	396,721
Professional Service	1,237,286	999,251
Domestic and Personal Service	52,736	57,273
Public Service (not elsewhere classified)	801,826	476,347
Agriculture, etc	101,233	14,345
Wage Earners (manual and clerical workers)	26,080,689	22,406,714
Extraction of Minerals	1,018,967	916,597
Manufacturing Industries	8,775,543	6,401,436
Transportation	2,962,614	2,664,674
Building Trades	2,397,391	2,475,329
Stationary Engineers	242,096	231,041
Stationary Firemen	143,875	111,248
Trade	1,937,600	1,563,117
Professional Service	148,267	81,666
Domestic and Personal Service	2,902,955	3,185,907
Clerical Workers	2,950,769	1,631,926
Agriculture	2,600,612	3,143,773

The figures just cited for the numbers included in the employer and self-employed group may seem to be disproportionately large. The largest single item in this group, however, is the agriculture, forestry and animal husbandry class, which contained 8,251,313 persons in 1920 and 9,457,591 in 1910. If these figures are de-

ducted from the total for the group, the category of employers and self-employed stands at 3,723,056 in 1920 and at 3,680,120 in 1910. Thus the effect of omitting agriculture is to leave the group larger in 1920 than in 1910. In the construction of these groups, two decisions were made concerning which there might conceivably be wide difference of opinion. Farm laborers, working on home farms, were in both census years included in the agricultural employer group. This added in 1920 to that group, 1,850,119 persons and in 1910, 3,310,534 persons. Secondly, the professional group was split into three parts. Those items designated by the census as "semi-professional pursuits" and "attendants and helpers (professional service)" were placed in the category of wage earners. Those left in the census group of "professional service" were distributed, after a careful examination of the specific occupations, roughly, in the proportion of 38 and 62 per cent respectively to the employer and self-employed, and salaried groups.

The results obtained by this recasting of the statistics of occupations of the United States Census do not in all particulars agree with the conclusions reached in another study of the same subject conducted in the National Bureau of Economic Research. Dr. W. I. King, in connection with his studies of the national income, has, for a longer series of years, classified the working population of the United States into much the same categories as are here presented. A comparison of Dr. King's figures and those of this study is shown in the following table. The existing differences between these sets of figures arise from two sources. Except for his estimate of the number included in the employer and self-employed group, Dr. King's statistics represent averages for the year, whereas the other set is referable to the census period January 1 to January 15, 1920. Dr. King's figures, moreover, are drawn from many places. His data are estimates based not alone on the statistics of the census of occupations, but also on the statistics of occupations of the censuses of manufactures, of the reports of the Interstate Commerce Commission and the Geological Survey, and on other statistical reports. The figures in the last column, however, are estimates drawn almost solely from the returns of the census of occupations, because it was deemed desirable to use as the

TABLE 12. — COMPARISON OF CLASSIFICATIONS OF THE WORKING POPULATION OF THE UNITED STATES
1920

Group	King	Wolman[d]
Employers and Self-Employed	10,029,274[a]	10,124,250
Home Farm Laborers	[b]	1,850,119
Wage Earners (manual and clerical workers)	.....	26,080,689
Wage Earners (excluding clerical workers)	23,058,191[c]	.....
Salaried (supervisory and professional)	.....	3,540,608
Salaried (including clerical workers)	6,900,809[c]	.....
Total	39,988,274	41,595,666

[a] As of December 31, 1919.
[b] This group King omits from his figures.
[c] Average for year 1920.
[d] Figures in this column, taken from the Census of Occupations, 1920, are as of January 1–15, 1920.

basis for comparison with trade union membership the results of a census count.

Another elaborate reclassification of the census of occupations for 1920 was made by Carl Hookstadt in 1923.[1] In this study, he recasts the occupation statistics into groups of employees, officials and managers, and employers and independent workers, within the framework of the industrial classification employed by the census. He reclassified, also, the statistics of occupations in accordance with the main industrial classifications adopted by the International Association of Industrial Accident Boards and Commissions. A comparison of Hookstadt's gross totals with those derived from Tabel IV in the Appendix of this study is given in the accompanying table. The outstanding differences appear in the number of employees, which is, roughly, 3,000,000, larger in the Hookstadt tabulation; and in the number of salaried persons which is 2,600,000 greater in the present author's classification. The principal sources of these discrepancies are two. Mr. Hookstadt breaks up the group of professional service and throws the bulk of it into his employee class. But in the grouping here adopted, more than 1,200,000 persons of the professional service group are placed in the salaried class. The difference is one merely of definition. The

[1] *Monthly Labor Review*, U. S. Department of Labor, July, 1923, p. 1.

TABLE 13. — COMPARISON OF TWO CLASSIFICATIONS OF UNITED STATES CENSUS OF OCCUPATIONS, 1920

Industry	Hookstadt			Wolman		
	Employees	Officials and Managers	Employers, Independent Workers, etc.	Wage Earners (Manual and clerical workers)	Salaried (Supervisory and professional)	Employers and Self-Employed
Agriculture, Forestry, Animal Husbandry	2,699,064	2,095	8,251,999	2,600,612	101,233	8,251,313
Extraction of Minerals	1,055,898	16,991	17,334	1,018,967	53,922	17,334
Manufacturing and Mechanical Industries	11,869,506	249,950	699,068	8,775,543	557,363	562,199
Building Trades	.....	.....	.....	2,393,391	.....	90,109
Transportation	2,857,796	73,172	132,614	2,962,614	212,228	81,488
Trade	2,439,673	342,120	1,461,186	1,937,600	524,014	1,786,902
Public Service (not elsewhere classified)	614,270	156,190	.....	.....	801,826	.....
Professional Service	1,434,487	11,655	697,747	148,267	1,237,286	758,336
Domestic and Personal Service	2,871,115	56,021	477,756	2,902,955	52,736	426,688
Clerical Occupations	3,126,541	.....	.....	2,950,769	.....	.....
Stationary Engineers	.....	.....	.....	242,096	.....	.....
Stationary Firemen	.....	.....	.....	143,875	.....	.....
Total	28,968,350	908,194	11,737,704	26,080,689	3,540,608	11,974,369

second large source of difference arises from diverse methods of treating such groups as foremen and supervisors. In the group of "extraction of minerals," for example, the foremen, overseers, and inspectors are placed by Mr. Hookstadt in his employee class, and in this study in the salaried class. This difference in approach obtains throughout the various classifications of industry and accounts largely for the excess in the number of employees in the Hookstadt tabulation. Granting the assumptions made here in distributing the persons gainfully engaged in industry among these three classes, and assuming further that there still remains a substantial number in the wage-earner class who are engaged in managerial and supervisory functions or who are self-employed, it would appear that the total number of wage earners in the United States in early January, 1920, should be put in round numbers at 25,000,000.