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## OCCUPATIONS IN THE UNITED STATES

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THE record of the changes in occupation in the United States as reported in two censuses, 1910 and 1920, may be of temporary interest as a measurement of the economic changes during the interval between the two periods, or it may have a more permanent value if the shifting of labor from one group of industries to another shows over a number of years a persistent trend. Whatever their value, the rearrangement of some of the tables of the fourteenth census of the United States, particularly in this instance of those of the abstract of occupation statistics, brings into prominence some changes which have been known or long suspected and others that are little realized.

### THE GROUP SUBJECT TO OCCUPATION

Table I, which gives statistics from 1880 to 1920 inclusive, shows that the percentage of population over 10 years of age has increased from 73 per cent. in 1880 to 78 per cent. in 1910, and no further increase is recorded in 1920. If there is any proper ratio which

TABLE I

Year	Total population	Population over 10 years	Per cent. of Total	Per cent. of population over 10 years old gainfully occupied
1880	50,155,783	36,761,607	73	47.3
1890	62,622,250	47,413,559	75	49.2
1900	75,994,575	57,949,824	76	50.2
1910	91,972,266	71,580,270	78	53.3
1920	105,710,626	82,739,315	78	50.3

ought to be maintained between the group over 10 years old and the total population, in order that the race may properly perpetuate itself, the writer does not know it. Certainly, the percentage of persons over 10 years old can not go on increasing indefinitely. Two or three queries arise from the table. Is the increase in percentage of population over 10 years old to the total population due to an influx of adult foreigners? Is the lack of increase in the percentage over 10 years old in 1920 the result of the restriction of immigration? Does the increasing percentage of the population over 10 years old mean a gradually lessening birth rate? Or does

the lack of increase in this population in 1920 reflect the losses in war due to casualties and the return of the foreign born to add to the man power of the armies of their native land?

It would appear that the influx of adult population aided the increases of the population over 10 years of age and also was a factor in the lack of increase in the percentage between 1910 and 1920, but it can not account for the full amount of these increases. Table II shows the immigration for ten-year periods from 1880 to 1920, with the number of children below 14 years of age during the last two decades.

TABLE II

Immigration in 10 years per 1000 initial population	Decade	Total immigration during the 10 year period	Number of children under 14 years
104	1881-1890	5,246,613	
61	1891-1900	3,844,420	
116	1901-1910	8,795,386	1,058,541
62	1911-1920	5,735,811	814,377

In the two periods, 1901-1910 and 1911-1920, the percentage of children to the total immigration was about 12; these referred to children under 14 years and in the latter period for a few years it included the children under 16 years. If figures were given for children under 10 years the percentage would have been much smaller. In Table I, the percentage of children under 10 years ranges from 22 per cent. to 27 per cent., which, taken in comparison with the percentages of immigration above, shows a marked percentage in favor of adult immigration.

In Table III, which gives the proportion of males to the total immigration, it will be seen that the proportion has constantly increased with the exception of the year 1914 which registered a slight decrease, possibly as a wartime factor. In general the older migrations to this country appear to be by families, and the newer less so. Even in the later years, certain races, the Hebrews, Germans and English, have migrated by families rather than by adult males; but these are largely offset by the newer group of immigrants who have apparently been represented by the men of the families.

TABLE III

Years	Percentage of males to total immigration
1893-1895	61.5
1896-1900	63.5
1904-1905	69.2
1914	65.4

On the other hand, the lack of increase for 1920 (Table I) in

the percentage over 10 years old can not be ascribed in any large degree to the restriction of immigration; and in a less degree can the cause be found in the return of native sons to the aid of the land of their birth. Table II shows that while the immigration for the decade, 1911 to 1920, was less than that of the decade, 1901 to 1910, it was greater than during any previous decade. Table IV

TABLE IV

Years	Aliens departed
1908	395,073
1909	225,802
1910	202,436
1914	303,338
1915	204,074
1919	123,522
1920	288,315
1921	247,718
1922	198,712

gives the number of departures for selected years between 1908 and 1922 covering the wartime period. This table leads Mr. J. C. Welliver<sup>1</sup> to remark that the report of a great return of aliens to Europe to take part in the war was very much of a fiction. Mr. Welliver also calls attention to the sum of the departures during 1915 and 1916, which was 333,839; while the average yearly departure during the four years previous was 310,000.

One other factor must be admitted to explain the constantly increasing population over 10 years old. Table V lists the number of families and the size of the family from 1850 to 1920.

TABLE V

Census year	Number of families	Persons to a family
1850	3,598,240	5.6
1860	5,210,934	5.3
1870	7,579,363	5.1
1880	9,945,916	5.0
1890	12,690,152	4.9
1900	16,187,715	4.7
1910	20,255,555	4.5
1920	24,351,676	4.3

The family in this instance is the "economic family," not the natural family, and it may vary from a person living alone to the entire population of an institution. The summary of the census on dwellings and families states that "it is believed, however, that the changes in the average size of census families from decade to decade, as well as the variations in this respect among the geographic divisions and states, are due mainly to differences in the size of private families and particularly in the number of children."

<sup>1</sup>Judson C. Welliver, "World migrations and American immigration," *Amer. Rev. of Rev.*, LXVIII, No. 403, Aug., 1923, 193-200.

One is safe, then, in the conclusion that the main factors in the increasing percentage of the population over 10 years old are adult immigration and the decreasing birth rate.

## GAINS AND LOSSES IN OCCUPATIONS, 1910-1920

Table VI shows the numbers engaged in the various occupations in 1920 and the percentage of the gains (+) and losses (—) recorded over the 1910 figures. The classification is the one adopted by the 1920 census, which is "occupational rather than industrial."

TABLE VI

Occupation	Per cent. loss or gain	1920 totals
All occupations .....	+ 9	41,614,248
1. Agriculture, forestry and animal husbandry	— 14	10,953,158
2. Extraction of minerals.....	+ 13	1,090,223
3. Manufacturing and mechanical industries.....	+ 21	12,818,524
4. Transportation .....	+ 15	3,063,582
5. Trade .....	+ 16	4,242,979
6. Public service (not otherwise classified).....	+ 70	770,460
7. Professional service .....	+ 30	2,143,889
8. Domestic and personal service.....	— 10	3,404,892
9. Clerical occupations .....	+ 79	3,126,541

It will be noted that in the large groups of this table losses were sustained in the agricultural group and the domestic service group. Both of these losses have been generally recognized; the former by constant references to the diminution in farm labor by newspaper and magazine articles, and the latter by the inability of housekeepers to obtain domestic help with the ease prevalent in 1910. On the other hand there are very large increases in the clerical occupations group and the public service group, with normal increases in the remaining groups. In order to better analyze the situation abbreviated tables are presented showing the distribution in detail of the sub-occupations under the larger classifications of Table VI.

## AGRICULTURE, FORESTRY AND ANIMAL HUSBANDRY

Table VII indicates a great increase in foremen and a great decrease in laborers. Second to these are the increases in lumbermen, raftsmen and wood-choppers and the decrease in fishermen and oystermen. In these four cases there seems to be justification for the explanatory note of the Census Bureau stating that the loss in agriculture may be due to the change of time in taking the census. The 1910 census was of April 15, and the 1920 of January 1, and since farm labor is a seasonal occupation and January the dull season, a loss may be expected, inasmuch as a large number of farm laborers may have been missed or assigned to other occupa-

TABLE VII

Subheadings of agriculture, forestry and animal husbandry group	Gains or losses per cent.	Totals so occupied 1920
Dairy farm, farm, garden and orchard foremen.....	+ 82	93,048
Lumbermen, raftsmen, wood choppers.....	+ 27	205,315
Gardeners, florists, fruit growers, nurserymen.....	+ 22	169,399
Owners and managers of log and timber camps.....	+ 6	8,410
Dairy farmers, farmers, stock raisers.....	+ 4	6,201,261
Garden, greenhouse, orchard and nursery laborers	+ 3	137,010
Other agriculturist and animal husbandry pursuits (apiarists, poultry raisers, bailers, etc.).....	— 8	401,599
Fishermen and oystermen .....	— 24	52,836
Dairy farm, farm and stock farm laborers.....	— 37	4,041,627

tions by the enumerators in 1920. That there is some justification in this attitude is upheld by the tables in the gains established by other seasonal occupations, particularly in lumbering and wood-chopping; and also by the losses in the number of fishermen and oystermen. Just how effective this change of time was in affecting the numbers in the occupation mentioned may be judged from the following table (Table VIII).

TABLE VIII

Occupation	Numbers in			
	1890	1900	1910	1920
Agricultural pursuits .....	8,565,929	10,438,219	12,659,082	10,953,158
Agricultural laborers .....	4,410,877	4,459,346	6,069,321	4,041,627
Fishermen, oystermen .....	60,162	73,190	68,275	52,836
Lumbermen, wood-choppers	65,866	72,190	161,268	205,315

The change in the census period has been made twice recently; in 1900 the enumeration is of July 1. The change from July to April did not apparently cause a diminution in the agricultural laborers, even though July is the busy time for agricultural work. On the other hand, the increases and decreases in the other two industries appear to be radically affected by the seasonal factor.

#### EXTRACTION OF MINERALS

This group, which registered an increase as a whole of 13 per cent., has individual occupations ranging from an increase of 213 per cent. to a decrease of 9 per cent., as shown by Table IX.

TABLE IX

Subheadings of extraction of minerals group	Loss or gain percentage.	1920 totals
Oil, gas and salt well operatives.....	+213	91,022
Foremen, overseers and inspectors.....	+ 54	36,931
Operators, officials and managers.....	+ 36	34,325
Coal mine operatives.....	+ 19	733,936
Quarry operatives .....	— 4	45,162
Operatives in other mines (lead, zinc, etc.).....	— 9	41,162

The great increase in the production of oil in recent years would

make the increase of 213 per cent. in oil and gas well operatives easy of acceptance. Possibly, as in the case of the other industries of Table VII, the decreases in the last two items under mining operations may be due to the seasonal feature of the industry.

## MANUFACTURING AND MECHANICAL PURSUITS

TABLE X

Subheadings of manufacturing and mechanical pursuits group	Loss or gain per cent.	1920 totals
Cotton mills—semi-skilled operatives.....	+ 102	302,454
Iron and steel industries (semi-skilled operatives)	+ 87	689,980
Machinists, mill wrights, tool-makers.....	+ 83	894,622
Iron and steel industries—laborers.....	+ 51	729,613
Carpenters .....	+ 8	887,379
Clothing industry (semi-skilled operatives).....	+ 6	409,361
Lumber and furniture industries—laborers.....	+ 1	320,613
Painters, glaziers, varnishers, etc. ....	— 2	323,032
General building laborers.....	— 28	623,203

This table has been abbreviated to include only those occupations in which the total numbers engaged exceeded 300,000. Altogether, there are 29 different types of workers in the list. The cotton semi-skilled operatives head the entire list with the biggest gain; this is followed in turn by the food industry laborers, with a gain of 94 per cent. and the managers and superintendents in manufacturing establishments with a gain of 93 per cent. At the foot of the list with a loss of 47 per cent. are dressmakers and seamstresses; then come the general building laborers tabulated above, then the clay, glass and stone laborers with a loss of 19 per cent. and the brick and stone masons with a loss of 18 per cent.

## TRANSPORTATION

TABLE XI

Subheadings of transportation group	Loss or gain per cent.	1920 totals
Garage keepers and managers.....	+ 740	42,151
Chauffeurs .....	+ 535	285,045
Telephone operators .....	+ 94	190,160
Switchmen, flagmen, yardmen.....	+ 23	111,565
Brakemen .....	+ 23	114,107
Locomotive engineers .....	+ 14	109,899
Laborers, steam and street railways.....	— 13	495,713
Hostlers and stable hands.....	— 70	18,976
Livery stable keepers and managers.....	— 70	11,240
Carriage and hack drivers.....	— 76	9,057

In this table the substitution of the automobile for the horse is indicated, and the allied occupations have moved in keeping with the general trend. In the 1900 census, the automobile did not appear as a source of occupation; in 1910 there were 45,785 chauffeurs and 35,376 carriage and hack drivers. This change in transportation, which is of course very evident, has occurred with great suddenness; and in addition the spread of the automobile is much more extensive than that of the horse-drawn vehicle ever was.

TRADE  
TABLE XII

Subheadings of trade group	Loss or gain per cent.	1920 totals
Laborers in coal and lumber yards, warehouses, etc.	+ 54	125,609
Bankers, brokers and money lenders.....	+ 52	161,613
Insurance agents and officials.....	+ 37	134,978
Laborers, porters and helpers in stores.....	+ 22	125,007
Salesmen and saleswomen.....	+ 20	1,177,494
Real estate agents and officials.....	+ 18	149,135
Retail dealers.....	+ 11	1,328,275
Clerks in stores.....	+ 7	413,918
Deliverymen.....	- 26	170,235

This is the nearest normal of any group listed. The entire group has had an increase of 16 per cent., which is about the average increase expected. The excesses in this group are less than in any other. The loss in deliverymen between 1910 and 1920 is indicated in a footnote of the census report as probably due to the substitution of motor for horse-drawn delivery wagons.

PUBLIC SERVICE (not otherwise classified)

TABLE XIII

Subheadings of public service group	Loss or gain per cent.	1920 totals
Soldiers, sailors and marines.....	+ 192	225,503
Other pursuits; life-savers, lighthouse keepers, etc.	+ 108	21,453
Laborers (public service).....	+ 57	106,915
Officials and inspectors.....	+ 51	80,334
Firemen—fire department.....	+ 42	50,771
Marshals, sheriffs, detectives.....	+ 36	32,214
Guards, watchmen and doorkeepers.....	+ 35	115,553
Policemen.....	+ 32	82,120
Officials and inspectors (city and county).....	+ 6	55,597

The increase of 192 per cent. in soldiers, sailors and marines is easily accepted as a war hold-over. The gain of 108 per cent. in other pursuits, of which life-savers and lighthouse keepers are mentioned, is somewhat misleading. Life-savers, which form only 2,287 of the group, increase less than 6 per cent., and lighthouse keepers (1,463) suffered a loss of about 4 per cent. The gain was the result of "other pursuits" and is not specified.

PROFESSIONAL SERVICE  
TABLE XIV

Subheadings of professional service group	Loss or gain per cent.	1920 totals
Trained nurses.....	+ 82	149,128
Semi-professional pursuits (notaries, healers, welfare workers, etc.).....	+ 79	116,555
Technical engineers.....	+ 54	136,121
Teachers.....	+ 27	761,766
Clergymen.....	+ 8	127,270
Lawyers, judges, etc.....	+ 7	122,519
Physicians and surgeons.....	0	150,007
Musicians and teachers of music.....	- 7	130,265

It is probable that the increase in trained nurses is a war resultant; possibly the larger call arising from the widespread epidemics of influenza, the increased wages resulting from the scarcity of nurses during and directly subsequent to the war, and the change in the hours or working day for nurses. The increase in the so-called semi-professional pursuits is due in large measure to the welfare worker class, which numbers 41,078 of the total given for this sub-group and which increased in ten years by about 150 per cent. During the war there was a great shortage of teachers, and daily it was reported that schools had to be closed because there were no teachers available. The loss sustained at that time must have very quickly righted itself, because in January, 1920, the gain over 1910 is given as 27 per cent. This gain is a little above the average gain for all pursuits and about the average gain for this group.

## DOMESTIC AND PERSONAL SERVICE

TABLE XV

Subheadings of the domestic and personal service group	Gains or losses per cent.	1920 totals
Elevator tenders .....	+ 60	40,713
Janitors and sextons.....	+ 58	178,623
Billiard room, dance hall, etc., keepers.....	+ 50	24,897
Restaurant and lunch room keepers.....	+ 40	87,987
Waiters .....	+ 22	228,985
Housekeepers and stewards.....	+ 17	221,612
Midwives and nurses (not trained).....	+ 16	156,769
Barbers, hair dressers, manicurists.....	+ 10	216,211
Porters (except in stores).....	+ 5	88,168
Boarding and lodging house keepers.....	- 20	133,392
Servants .....	- 20	1,270,946
Launderers and laundresses (not in laundries).....	- 21	396,756
Laundry, owners and officials.....	- 31	13,692
Laborers (domestic and personal service).....	- 38	32,893
Bartenders .....	- 64	26,085
Saloon keepers .....	- 75	17,835

In general this group suffered a loss of 10 per cent. during the period. The gains above 20 per cent. show an extension of certain types of occupations which are characteristic of the times. The losses in this group are interesting; first, the loss in domestic service which arose rapidly following the war and which reflects probably the idea of servant as contrary to a liberty-loving people, and the losses sustained because of the prohibition amendment to the constitution.

Clerks in this table refer to shipping clerks, weighers and the like. Agents, canvassers and collectors are given an increase of 68 per cent., but this is made up of an increase of 156 per cent. in agents, with decreases in the numbers of canvassers and collectors. The interesting part of the table refers to accountants, which is

CLERICAL OCCUPATIONS  
TABLE XVI

Subheadings of the clerical occupation group	Gains and losses per cent.	1920 totals
Clerks (except clerks in stores).....	+ 109	1,487,905
Agents, canvassers and collectors.....	+ 68	175,722
Stenographers and typists.....	+ 66	615,154
Bookkeepers, cashiers and accountants.....	+ 50	734,688
Messengers, bundle and office boys and girls.....	+ 4	113,022

relatively a new occupation or better an old occupation with a great increase of business because of statutory demands. Accountants and auditors increased in the 10 year period to 201 per cent.