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EMPLOYMENT AND UNEMPLOYMENT SERIES

**SOCIAL AND ECONOMIC CHARACTER OF
UNEMPLOYMENT IN PHILADELPHIA
APRIL, 1929**

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Preface

UNEMPLOYMENT, in one form or another, is a chronic ailment of our modern industrial society. The existence of unemployed labor and unemployed productive equipment in such a highly industrialized community as Philadelphia becomes glaringly apparent in periods of depression like those of 1914 and 1921. At such times bread lines and soup kitchens signalize the misfortune of the laborer, while deficits and receiverships threaten the investment of the capitalist. But unemployment is not confined to these periods of so-called cyclical depression. Even in years of prosperity much of industry's man power is idle and unproductive. Sickness, disability, old age—some of these causes inevitably, perhaps—contribute substantially to the burden of unemployment. Seasonal changes in raw-material supply or in consumer demand, technological improvements resulting in the displacement of manual labor by machines, shifts in the location of industries, the rise of new and the decline of old industries—these and many other characteristics of our ever-changing economic order are responsible for a considerable amount of temporary or permanent unemployment. On the other hand, many of the "unemployed," because of laziness or indifference, are themselves no doubt chiefly responsible for their own "unemployment." In whatever form it appears, however, and for whatever reason it exists, unemployed labor is a waste of human resources and an economic and social burden which, in the last analysis, is borne not only by the worker but by the entire community.

Granting that a considerable amount of unemployment is unavoidable and inevitable, we must ask ourselves: How much of it can be prevented? To what extent can we regularize employment through knowledge of the causes of unemployment? To what extent will it become necessary to adopt some such measures in solving the problem as unemployment and old age insurance? These questions can not be answered until we know more about the nature, extent, and causes of unemployment.

Recognizing that unemployment is a community problem of vital importance in Philadelphia, the department of industrial research of the University of Pennsylvania has planned to devote considerable attention to investigations in this field during the next three years. Much preliminary work has already been completed on many phases of this important problem. Among the studies now under way which will be published in the near future are:

A Study of the Occupational Experiences of 1,000 Applicants for Work at Representative Industrial and Mercantile Establishments in Philadelphia.

Technological Changes as a Cause of Labor Displacement in the Metal Industry.

Methods of Finding Jobs in the Hosiery Industry.

Factors Responsible for the Decline of Employment during Recent Years in the Manufacturing Industries of Pennsylvania.

Construction of Indicators of Industrial and Employment Conditions in Philadelphia.

The present study was undertaken as an initial step in the effort to establish statistical data which would measure the changes in the number of unemployed in the city from time to time. To determine the amount and nature of unemployment existing in Philadelphia, the latter part of April, 1929, was selected as a period which seemed to represent a fairly normal industrial and labor situation. It was believed that such an investigation must be based upon a house-to-house canvass of a carefully selected sample of the city's population.

At the time the department of industrial research contemplated this study, the bureau of compulsory education, under the direction of Mr. Henry J. Gideon, had decided to undertake a survey of unemployment in the various school districts of the city. This bureau is responsible for giving vocational advice to young people actually employed or about to become employed, for issuing employment and age certificates, for supplying placement service to juniors, and for making general occupational surveys necessary for adequate vocational guidance. In view of the many changes taking place in local industry, it was believed that such a study would be of considerable value in forwarding the work of the bureau. The bureau, with its experienced staff of attendance officers, is responsible for taking a census of school children in Philadelphia each spring. Its experience in taking this census and its familiarity with conditions throughout the city admirably qualified it for making such a survey.

In order to avoid any duplication of effort, the department of industrial research gladly welcomed the opportunity of cooperating with the bureau in making this study. The department agreed to be responsible for the compilation and analysis of the data to be collected by the bureau. After agreement upon the questionnaire and the sample areas to be covered, the canvass was undertaken and completed during the third week in April. Great credit is due to the 94 attendance officers whose whole-hearted interest and cooperation made the survey possible, and especial acknowledgment is made to Mr. Henry J. Gideon for his able direction of the field work and for the careful and intelligent supervision of the survey by the following attendance supervisors: Elizabeth W. Davis, district 1; Nelson Ogden, district 2; Joseph A. Snee, district 3; Samuel E. Van Houten, district 4; Albert W. Whitaker, district 5; Joseph W. Temple, district 6; Carson G. Hansell, district 7; H. Forest Kerbaugh, district 8; Leah A. Gingrich, district 9; and James Marks, district 10.

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SOCIAL AND ECONOMIC CHARACTER OF UNEMPLOYMENT IN PHILADELPHIA IN APRIL, 1929

Summary

ONE out of every 10 wage earners in 31,551 Philadelphia families interviewed by the bureau of compulsory education was found to have been unemployed during the latter part of April, 1929. Three-fourths of the unemployed wage earners reported themselves as unable to find work. On the basis of this sample covered in the survey of unemployment, it is estimated that 96,900 of the persons usually employed were out of work and 72,700 were unemployed because they could not find jobs suitable to their qualifications and reasonable expectations. As the survey covered families residing in 166 widely distributed school census blocks representing all economic, occupational, and racial classes, it is believed to provide an accurate cross-section of unemployment in the city.

While it is impossible to determine whether or not unemployment was abnormally large, it is enlightening to compare the results of this study, made at a time when industry was apparently fairly active, with a similar survey made in the spring of 1915 by the Metropolitan Life Insurance Co. At that time, when the industries of Philadelphia were just commencing to recover from the serious 1914 depression, 10.3 per cent—practically the same proportion—were found to be unemployed.

Unemployment probably decreased considerably from the April level during the late spring and summer, however, for the employment data collected monthly by the Federal Reserve Bank of Philadelphia showed that the city's manufacturing plants increased their working forces substantially during that period. Since August, 1929, the manufacturing employment index has again turned downward, reaching, in January, 1930, a point about 2 per cent below the April level, which indicates that there were at least as many, and probably more, workers unemployed at the latter date.

There were wide variations in the severity of unemployment in various parts of the city and among different occupational groups. A much larger proportion of the workers living in the densely pop-

ulated sections of South Philadelphia and in the industrial districts of Kensington and Frankford were out of work than in the better residential parts of western and northwestern Philadelphia. Unemployment was as high as 30 per cent in some of the blocks in the former sections, while in a few of the blocks in West Philadelphia and Chestnut Hill no workers were found to have been unemployed.

Unemployment was considerably more severe among industrial workers than among those engaged in clerical, mercantile, and professional occupations. Thus 18.9 per cent of the wage earners were out of work in district 3 of South Philadelphia, which is overwhelmingly industrial in character, while only 5.3 per cent were unemployed in district 1 of West Philadelphia, where most persons are usually engaged in clerical and professional work. That there was greater unemployment in the manufacturing and building industries is evident from the fact that, while the census shows less than one-half of the city's workers engaged in these industries, over 60 per cent of the unemployed were customarily engaged in these occupations. Less than 10 per cent of the idle workers, on the other hand, were engaged in personal and professional service, although the census assigns over 15 per cent of all workers to these occupations. Unemployment among persons engaged in trade and transportation likewise appeared to be relatively less severe than the general average for all occupations. Most of the idle factory workers were usually employed in the textile and metal industries. These industries and the food, the clay, stone, and glass, and the lumber industries appeared to have a greater number of their workers idle than did other lines of manufacturing.

Such evidence as was available indicated marked variations in the relative severity of unemployment among the various racial groups. Generally speaking, the native-born white persons fared better than the foreign born, while the negroes suffered the greatest unemployment. Of the 68 blocks classified by enumerators as having a population predominantly native-born white, 34 showed unemployment of less than 7.7 per cent, while in 20 of the 40 blocks having a preponderance of foreign-born people more than 15 per cent of the workers usually employed were idle. A larger proportion of negroes than of white persons were unable to find jobs in all but one of the nine school districts in which this comparison was made. In district 3 of South Philadelphia nearly one-fourth of the negro workers enumerated were reported as unable to find work as compared with only 14 per cent of the white workers. The disparity was even greater in district 10, where 29.2 per cent of the negroes, but only 6.3 per cent of the white workers, could not find jobs. For the city as a whole, 11.8 per cent of the negro workers could not find jobs as compared with 6.8 per cent of the white workers. This greater extent of idleness among the negroes is probably due to the fact that most of this group are engaged in manual labor and in domestic work—jobs which are frequently temporary in character.

As might be expected, unemployment was more extensive in the poor and congested parts of the city than among workers in the more prosperous residential districts. None of the 10 blocks described by the investigators as having a population of "medium to high"

economic character had unemployment above 10 per cent, which was approximately the city average; the average unemployment in this group of blocks taken as a whole, however, was 5.6 per cent. Of the 75 blocks described as lowest in economic status, 45 experienced greater unemployment than the city average; the average unemployment among these workers was 11.7 per cent.

A comparison of the results of the unemployment survey with the estimated income in various districts as determined by a survey recently published by the Philadelphia Public Ledger shows more clearly that the burden of unemployment falls most heavily upon those who can least afford it. In school districts 3 and 7, for instance, where the average per capita income was \$441 and \$418, respectively, as compared with \$550 for the city, unemployment was 18.9 per cent and 14.6 per cent, respectively, as compared with the city average of 10.4. Only 5.3 per cent of the workers—a smaller proportion than for any other district—were idle in district 1, where the per capita income amounted to \$769. It is not surprising to find less unemployment among the higher income groups in view of the fact that they contain a larger proportion of executives and professional workers whose employment status is more permanent than that of industrial laborers.

Comparison of figures on family size with unemployment showed that a relatively greater proportion of the workers in large families were out of work at the time the survey was made. The average size of the 4,914 families having unemployment was 5.3 persons, as compared with an average of 4.4 persons for the entire group of 31,551 families covered by the survey. With the exception of "families of one"—single persons without actual family responsibilities—in which unemployment amounted to 16.5 per cent, there was a general tendency for unemployment to increase as the size of the family increased. Except for this group, 9.3 per cent of the wage earners were unemployed in all families of five or less, as compared with the city average of 10.4 per cent. The families with six or more members, on the other hand, reported 12.5 per cent out of work—an indication that unemployment was nearly 35 per cent more severe in the large than in the small families.

Although it was impracticable to obtain detailed facts concerning the ages of all workers covered in the survey, some information is available which indicates that unemployment due to inability to find work was relatively more severe among persons under 21 years of age than among those 21 years of age and over. According to estimates based on the census of 1920, about 15 per cent of all persons reporting gainful occupations were under 21 years of age, while the unemployment survey showed that 23.1 per cent of all persons unable to find jobs were in this age group. Unfortunately, detailed age information is not available to check the widely held belief that unemployment in recent years has been particularly severe among "older" workers, i. e., those over 45 years of age.

Comparison of the results of the unemployment survey with figures from the census of occupations indicates that female workers experienced less unemployment from inability to find work than males. Only 23.4 per cent of the persons unable to find work were

females, while this group, according to the census, constituted approximately 27 per cent of all persons having gainful occupations. This discrepancy reflects the fact that there was less unemployment in clerical and mercantile trades, in which women are chiefly engaged, than in the manufacturing and construction industries, which are large employers of men.

Inability to find work was by far the chief reason for unemployment, accounting for three-fourths or more of the idle workers in most of the districts and occupations. About 14 per cent of the unemployed reported sickness as cause of idleness and 5 per cent were out of work because of old age. The investigators endeavored to ascertain in each case whether unemployment was due to indifference or unwillingness to work, but this reason was found to account for only 4.3 per cent of the total unemployment. Labor disturbances were practically negligible; only 5 of the 6,110 unemployed were on strike.

Further indication of the severity of unemployment is furnished by a knowledge of the time lost by workers since the last regular job. Over half of the idle workers reported that they had been without regular work for more than three months and 11.6 per cent for more than a year. Assuming that 96,900 persons were out of work at the time of the enumeration, 49,000 had been without a regular job for more than three months and over 11,000 for more than a year. As might be expected, sickness and old age accounted for much of the long-term unemployment, while the average time lost since the last regular job was noticeably less in the case of those unable to find work. Only 5.8 per cent of the latter group had been without regular work for more than a year, while 26.6 per cent of those unemployed because of sickness and 55.4 per cent of the superannuated had been idle for a similar period.

Among the negro workers, who suffered the greatest unemployment, the average time lost since the last regular work was much less than in the case of white workers. Only 2.1 per cent of the former, as compared with 6.6 per cent of the latter, had been out of a regular job for more than a year. Duration of unemployment was shorter among women than among men. Only 37.7 per cent of females unable to find work had been without regular employment for more than three months, and only 4.1 per cent for more than a year, as compared with 48.3 per cent and 6.2 per cent, respectively, for males. A similar relationship between males and females also held true both for the age group under 21 years and for that 21 years and over. As would be expected, the average time lost since the last regular work was much greater among persons 21 years of age and over than among the younger persons.

A complete description of the methods used by the bureau of compulsory education and the department of industrial research in conducting this field survey and compiling results, as well as a more detailed analysis of the information revealed by the study, will be found in the pages following.

CHAPTER 1

Scope and Method of the Survey

Industrial Character of Philadelphia

PHILADELPHIA is one of the most important industrial communities in the United States. The population of the city, according to the census of 1920, totaled 1,823,799, while in 1929 the estimated population was 2,071,000. The great diversity in the occupational, racial, and social characteristics of the city's population is evident from an examination of census data. Although the 1930 census will probably reveal some important changes in occupations, the figures showing the occupational distribution of the population in 1920 probably give a fair approximation of the vocations of the city's wage earners in 1929. In Table 1 it is shown that 819,000 persons living in Philadelphia in 1920 were reported as having gainful occupations.

TABLE 1.—Occupations of gainfully employed persons in Philadelphia in 1920¹

Occupation	Persons gainfully employed	
	Number	Per cent
Agriculture, forestry, and animal husbandry	3, 594	0. 4
Extraction of minerals.....	483	. 1
Manufacturing and mechanical industries.....	388, 696	47. 5
Transportation.....	66, 218	8. 1
Trade.....	110, 579	13. 5
Public service.....	22, 068	2. 7
Professional service.....	42, 977	5. 2
Domestic and personal service.....	84, 424	10. 3
Clerical occupations.....	99, 961	12. 2
All gainful occupations.....	819, 000	100. 0

¹ U. S. Census of Occupations, 1920.

The predominance of industrial activities in the city is evident from the fact that nearly half of the gainfully employed persons were engaged in manufacturing and mechanical industries, which consist chiefly of factory and construction activities. Since 1920, however, there has evidently been a decline in the relative importance of manufacturing, for the biennial census of manufactures, taken in 1919 and in alternate years thereafter, shows that the number of wage earners employed by Philadelphia manufacturing plants has declined substantially during the past decade.

TABLE 2.—*Number of wage earners employed in Philadelphia manufacturing establishments, 1919–1927*¹

Year	Number of—		Year	Number of—	
	Estab-lishments	Wage earners		Estab-lishments	Wage earners
1919.....	9,064	281,105	1925.....	5,636	246,680
1921.....	6,788	226,042	1927.....	5,860	243,608
1923.....	6,399	273,980			

¹ U. S. Biennial Census of Manufactures, 1919, 1921, 1923, 1925, and 1927.

This falling off in the number of workers engaged in manufacturing operations, occurring in the face of an appreciable increase in the city's population, indicates that, unless these workers formerly employed in manufacturing are now unemployed, they have drifted in considerable numbers into other vocations. Manufacturing during the past decade has thus become less important as an employer of labor, both in the absolute and in the relative sense.

Despite the decline in manufacturing employment since 1919 and the probable shift of factory workers to other trades, it is obvious that, with nearly a quarter of a million people engaged in these industries, manufacturing still constitutes the economic backbone of Philadelphia.

To a considerable extent, the decline of employment in these industries has resulted from the introduction of labor-saving machinery and improvements in managerial technique which have made possible greater output with fewer workers. It is difficult to measure the extent of this saving, however, owing to the lack of information on the physical output of the city's establishments.

There is some reason to believe that Philadelphia's industries have experienced a relative decline in importance as compared with those of other industrial communities. The comparison of manufacturing employment in 1919 and 1927 in the United States as a whole, in the leading industrial sections, and in the more important manufacturing cities, shown in Table 3, gives some indication of a change in the relative industrial position of Philadelphia.

TABLE 3.—*Employment in manufacturing industries, 1919 and 1927*¹

Locality	1919	1927	Locality	1919	1927
United States.....	100.0	92.9	Detroit.....	100.0	113.6
Pennsylvania.....	100.0	86.9	St. Louis.....	100.0	101.4
Philadelphia.....	100.0	86.7	Chicago.....	100.0	92.1
Southern States ²	100.0	124.7	New York City.....	100.0	86.5
East Central States ³	100.0	96.7	Cleveland.....	100.0	83.7
Middle Atlantic States ⁴	100.0	85.9			
Lower New England States ⁵	100.0	81.9			

¹ Fourteenth Census of United States, Vol. IX, Manufactures, 1919; Bureau of Census, Statistics for industries and States, 1927, and Statistics for cities, 1927.

² Tennessee, Alabama, Georgia, North Carolina, South Carolina.

³ Ohio, Michigan, Indiana, Illinois, Wisconsin, Missouri.

⁴ New York, New Jersey, Pennsylvania.

⁵ Massachusetts, Connecticut, Rhode Island.

It is apparent from Table 3 that manufacturing employment declined 5.9 per cent more in Philadelphia from 1919 to 1927 than in the United States as a whole. Employment in Philadelphia during 1927 compared with 1919 was at a higher level than manufacturing employment in the Lower New England and Middle Atlantic States, but was considerably lower than in the East Central States and very much lower than in the Southern States. Philadelphia is evidently enjoying a relatively higher rate of activity than most cities in the surrounding States, but compares less favorably with some of the larger western and southern cities.

Nevertheless, unlike many cities of the country having but one or two major industries, Philadelphia is fortunate in having a highly diversified group of industries. Textile and metal manufacturing predominate. Table 4, based on data published by the Department of Internal Affairs of the Commonwealth of Pennsylvania, shows the relative importance of Philadelphia's manufacturing industries as employers of labor in 1927.

TABLE 4.—*Number of employees and salaries and wages paid in manufacturing industries of Philadelphia in 1927*¹

Industries	Number of employees	Salaries and wages
Chemicals and allied products.....	17, 507	\$30, 317, 300
Clay, glass, and stone products.....	2, 862	4, 582, 900
Food and kindred products.....	22, 245	33, 999, 800
Leather and rubber goods.....	12, 030	17, 349, 100
Lumber and its remanufacture.....	9, 158	14, 273, 900
Paper and printing industries.....	34, 560	59, 030, 900
Textiles and textile products.....	99, 792	142, 216, 800
Metals and metal products, primary.....	1, 708	2, 657, 300
Metals and metal products, secondary.....	60, 952	102, 801, 200
Mines and quarries.....	850	1, 399, 100
Tobacco and its products.....	9, 005	7, 557, 900
Miscellaneous products.....	18, 940	23, 387, 500
All manufacturing industries.....	289, 609	439, 573, 700

¹ Pennsylvania. Department of Internal Affairs. Productive industries, 1927. (Photostat copy, issued in 1929.)

Method Employed in this Study

FOR PURPOSES of public school administration Philadelphia is divided into 10 school districts. The bureau of compulsory education of the board of public education is charged with the responsibility of insuring the attendance of all children of school age at the public or private schools of the city. This bureau, following the general administrative organization of the school system, maintains a district office in each of the 10 school districts. An attendance supervisor in each of these districts, having under his supervision from 9 to 11 attendance officers, is responsible for maintaining attendance standards in his district. The administration of this function involves, necessarily, the taking of an annual census of all children of school age in the city. This survey is made each year during the months of April and May by means of personal interviews between attendance officers and the parents of the children. The members of the various district staffs, who are for the most part college graduates, have had years of field experi-

ence in taking the annual school census, while their daily contacts with the residents of their districts have made them thoroughly familiar with the economic character and composition of the population in various sections of the city. For this reason it was particularly fortunate that the bureau of compulsory education undertook the collection of the statistics forming the basis of this report.

Several limitations made it necessary to plan a study somewhat more restricted in scope than would otherwise have been desirable. First, in order that the investigation might not unduly retard the regular work of the bureau, it was essential that the collection of facts consume a minimum amount of time. Second, since the staff of the bureau of compulsory education already enjoyed cordial relations with the public it could not afford to ask any personal questions which might jeopardize these relations. Third, this bureau, in connection with its annual school census, employs an occupational classification which, while sufficiently detailed for the purpose for which it was designed, was not entirely satisfactory for use in a survey of unemployment. Since, however, the regular school census and the census of unemployment had to be taken simultaneously, the use of separate occupational classifications for each survey would have led to unending confusion. For this reason it was decided to adopt the school-census occupational classification for use in the census of unemployment.

Time limitations made impossible the collection of data on part-time employment, desirable as this information might have been. For the same reason, it was necessary to avoid inquiring about the occupations of employed wage earners, but to limit this information to the unemployed. It was also felt desirable to secure the approximate ages of the wage earners included in the survey in the hope that some light might be thrown on the very much debated question of industry's policy toward the man of 45 years of age and over. Owing to the reluctance of many people to furnish information concerning their age, it was deemed advisable, in order to avoid the possibility of stirring up any antagonism, not to ask for specific information on age.

The schedule as finally constructed included all the necessary facts which it seemed practicable to obtain. It provided for obtaining the following information:

For each family interviewed:

1. Address of family.
2. Number of persons in family.
3. Number of persons in family usually employed.
4. Number of persons usually employed who were unemployed at the time of the survey.
5. Race—White, Negro, or Mongolian.

For each unemployed person in families having unemployment:

1. Relationship to family (father, son, etc.).
2. Sex.
3. Age (under 21 years or 21 years and over).
4. Regular occupation.
5. Time lost since last regular work.
6. Reason for unemployment.

The following schedule, based roughly on the classification of the census of occupations, shows the industrial and occupational classification used by the bureau of compulsory education in its annual school census and in recording occupations in the unemployment survey:

Agriculture.—Farming, gardening, etc.

Manufacturing and mechanical pursuits.—Building trades; chemicals, paints, drugs, dyes; clay, stone, and glass products; clothing and millinery; food products, etc.; cigars and tobacco; leather and rubber goods (shoemakers); machinists and metal workers; printing and paper goods; textiles, knit goods, hosiery, dyeing; wood manufacturers; and miscellaneous.

Trade and transportation.—Cashiers; cash girls and bundle wrappers; errand, messenger, and office boys; office help; salespeople; shipping and stock clerks; street trades; telephone and telegraph operators; and miscellaneous.

Domestic and personal service.—Housework in the home; domestic and personal service elsewhere.

Professional service.—Musicians, actors, etc.

In order to obtain some information on the duration of unemployment, the investigators were asked to secure data on the number of weeks lost since the last regular job rather than the time lost since the last work of any kind. The former information was believed to be more significant of the real severity of unemployment, since many of the unemployed who had had no regular work for a considerable period may have had during the interim a few casual jobs of a few hours or a day's duration which afforded little substantial relief from unemployment. As an instance, a skilled workman in one of the families interviewed had been laid off three months previous to the time the survey was made. During that period he had been employed on only two occasions, on each occasion for less than a day at casual work entirely unrelated to his regular occupation. If this question had been worded to indicate the number of weeks since the last work of any kind, it would have shown him "out of work for only two weeks" rather than for the actual period of three months. For this reason it was believed more important to obtain information on the duration of unemployment since the last regular job held by the worker. The tabulated results on this item, therefore, should not be interpreted to mean the time lost since the last work of any kind.

The most commonly accepted and most satisfactory definition of an unemployed person is one who is both willing and able to work but unable to find a job suitable to his qualifications and reasonable expectations. For the purposes of this study, however, it was desirable to determine how many persons, in addition to the number unable to find work owing to causes beyond their immediate control, were out of work on account of sickness, superannuation, or indifference. Those persons totally and permanently disabled for work of any kind were excluded from the group out of work on account of sickness and were not listed as unemployed. If a person considered himself or was considered by the attendance officer as unable to find work because of advanced age, he was listed as superannuated. But all other persons of advanced age, who no longer desired to

work or who reported themselves as retired, were excluded from this classification. Those persons who were considered by other members of the family or by the attendance officers as indifferent to employment opportunities or unwilling to work were classified as unemployed because of indifference.

The field survey covered the period from April 15 to April 24, although in practically all of the districts the interviews were completed within the first three or four days. This is a seasonally active period in most industries, and employment in Philadelphia manufacturing industries as indicated by Chart 1, was not far from "normal" at that time in 1929. An additional advantage resulting from making the survey in April is that it makes possible a comparison with the amount of unemployment existing at the same season one year later, since a Federal census of unemployment was taken in connection with the census of population in April, 1930. This evidence that employment and business activity were fairly normal at the time of the survey should be remembered in interpreting the results of the study.

When the field survey was completed by the staff of the bureau of compulsory education, the work of tabulating and analyzing the results was undertaken by the department of industrial research of the University of Pennsylvania. Each of the 36,000 cards received was carefully edited and checked for possible and obvious discrepancies. It became necessary to exclude from the tabulation approximately 500 cards on which certain necessary data had been omitted. Approximately 4,000 of the homes visited were either unoccupied or the investigators were unable to secure any response. Return calls were not made at the homes where the attendance officers had failed to secure response. Whenever questions arose concerning the accuracy of the information recorded on the individual schedules, the attendance supervisor in charge of the particular district involved was consulted in the attempt to straighten out the difficulty.

Suitable codes were devised and the original records transferred to tabulating machine cards. Tabulations of the extent of unemployment in each block and each district were then made and the district totals were combined into summary tables for the entire city. Inasmuch as the primary interest was in that group of people who were both willing and able to work but unable to find a job, more detailed analyses were made for this portion of the unemployed.

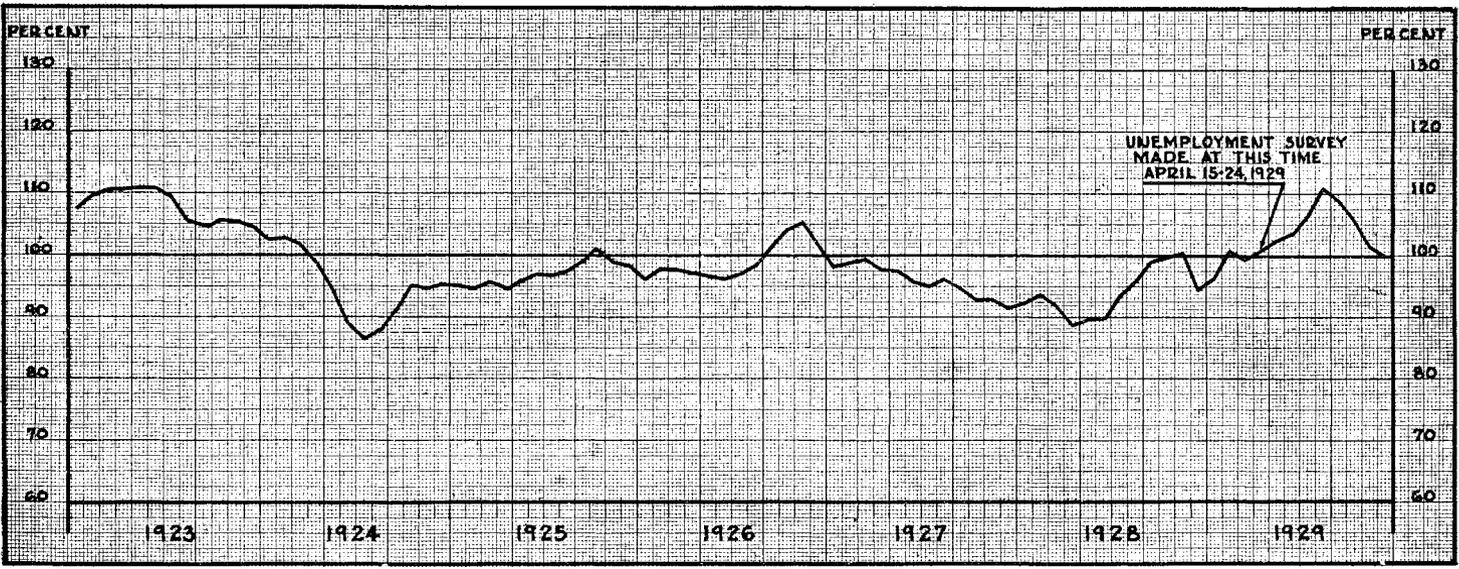
Representativeness of the Data Collected

ATTENDANCE OFFICERS interviewed every family in 166 school census blocks¹ during the last week of April, 1929. These blocks were carefully selected by the attendance supervisors in consultation with the attendance officers in each of the various school districts so as to give an adequate representation to people of varying economic status and to racial differences. A further effort was made to include in the survey the same proportion of families in each district as the proportion of all families living in that district was of the total number of families in the city. In all, 31,551 families were visited. These

¹ The school census blocks are not "city blocks," but may include two or more city blocks.

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REPRESENTATIVENESS OF THE DATA COLLECTED



Source: Bureau of Statistics, Department of Labor, Commonwealth of Pennsylvania

CHART 1.—INDEX OF FACTORY EMPLOYMENT IN PHILADELPHIA (1923-1925=100)

families had a total family membership of 140,174 persons, of whom 58,866 were usually employed. The smallest number of families interviewed in any district was 2,114 and the largest, 4,922. It is believed that the sample obtained in this survey represents an adequate and accurate cross section of the city's population despite the fact that only a fraction of the total number of families in the city was interviewed.

Accurate data concerning the size and characteristics of the population of Philadelphia in 1929 are not available. The latest available information is contained in the census of occupations taken in 1920. For the purpose of evaluating the sufficiency of the data collected in the present survey, estimates have been made of the number and composition of the population of Philadelphia for the year 1929 based on the census for 1920 and earlier years. Following the customary practice of assuming that the net increase in population from 1920 to 1930 is at the same rate as from 1910 to 1920, it is estimated that the population of Philadelphia in 1929 was 2,071,000 persons.

In 1900 the average size of the Philadelphia family was 4.9; in 1910, 4.7; and in 1920, 4.5. Assuming the same rate of decrease, the average size of the Philadelphia family in 1930 would be 4.3. For the purpose of this study 4.3² has been considered as the average size of the families of Philadelphia in 1929. Applying this estimated average size of the family to the estimated population, there appear to have been approximately 481,630 families in Philadelphia in 1929.

It is very difficult, if not impossible, to estimate with accuracy the relative numbers of white persons and of negroes in Philadelphia in 1929. Large numbers of the latter started coming north at the time of the World War and this migration continued at a rapid rate during the post-war years. Even during the period from 1910 to 1920 the census showed an increase of 58.9 per cent in the negro population of the city while the white population increased but 15.4 per cent. In the previous decade, from 1900 to 1910, the negro population increased 34.9 per cent while the white population increased only 19 per cent. Assuming that the rate of increase during the past nine years has been somewhat less than that for the previous decade which included the war period—approximately 50 per cent—the negro population in 1929 was doubtless close to 200,000.

The percentage of the population reporting a gainful occupation has been almost the same for each of the last three census periods. In 1900, 44 per cent of the total number of persons in the city were reported as having a gainful occupation; in 1910, 45.9 per cent; and in 1920, 44.9 per cent. Assuming the year 1929 to show about the same proportion of the total population gainfully employed, there would have been approximately 931,950³ persons in Philadelphia with gainful occupations at the time the unemployment survey was made.

² Since the decline in size of the family probably occurs at a decreasing rate and also because only nine years have elapsed since the last census, 4.3 persons per family may prove to be too low an estimate. Possibly 4.4 will be found to be more nearly accurate.

³ Forty-five per cent of the estimated total population of 2,071,000.

The proportion of employed females to the total number of persons reporting a gainful occupation has not shown any great variation from 1900 to 1920. In 1900, 26 per cent of the total number of persons reporting a gainful occupation were females; in 1910, 28.2 per cent; and in 1920, 26.3 per cent. Assuming that the proportion in 1929 was greater than in 1920 but less than in 1910, or 27 per cent, the total number of females having a gainful occupation in 1929 would have been 251,627 and the total number of males 680,323.

An idea of the size and representativeness of that fraction of the city's population included in the survey may be obtained from an examination of Table 5, which shows a comparison of the sample under consideration with estimates of the city's population in 1929 based on the United States census reports.

TABLE 5.—Comparison of families and persons in unemployment survey with estimates for entire population of Philadelphia

Item	Estimates based on census	Unemployment survey	
		Number	Per cent
Number of families.....	481, 630	31, 551	6. 6
Number of persons.....	2, 071, 000	1 140, 174	6. 8
Average number of persons per family.....	4. 3	4. 4	-----
Number of persons usually employed.....	931, 950	58, 866	6. 3
Number of persons per family usually employed.....	1. 9	1. 9	-----
Number of white persons.....	1, 871, 000	123, 663	6. 6
Number of negroes.....	200, 000	12, 346	6. 2

¹ Includes 4,165 persons for whom color was not specified.

Table 5 shows that 6.6 per cent ⁴ of all the Philadelphia families were visited in connection with the unemployment survey. These families represented 6.8 per cent of the total population of the city and 6.3 per cent of the persons estimated as having a gainful occupation in 1929. From a comparison of these figures it would seem that, while the survey covered 6.6 per cent of the families, it reached only 6.3 per cent of the wage-earners, and that, therefore, the families showing a relatively high proportion usually employed were inadequately represented. However, this is probably not true since this study determines the number "usually employed" while the census determines the number of people having a "gainful occupation." The broader classification of the United States census in 1920 included a considerable number of such persons as children under fourteen and inmates of institutions who are regularly employed, but who were not considered in this study as being usually employed. In addition, owing to the failure of the census enumerators to follow instructions accurately, a large number of housekeepers who were doing housework without wages in their own homes were also included as having gainful occupations. If these groups and others of similar character were to be deducted from the

⁴ It was pointed out previously that the estimated figure of 4.3 persons per family from which the total number of families was estimated might be too low. If 4.4 were used the percentage of families included in the survey would amount to approximately 6.8 per cent.

estimated population having gainful occupations, the percentage of usually employed included in the survey would naturally be raised. The table indicates further that the number of white persons and of negroes included in the sample was very nearly in the proper proportion, 6.6 per cent of all white persons in the city and 6.2 per cent of all negroes being included in the survey. The slight overweighting of white persons should have little effect, if any, on the accuracy of the results.

It is recognized that any sample of the city's population to be used in estimating the extent of unemployment must include persons of different racial origins. The impracticability of ascertaining the nationality of all persons enumerated and thus testing the adequacy of the sample in this respect has already been pointed out. In order partly to overcome this lack of information concerning the nationality of the persons enumerated and to furnish other data which would help to evaluate the representativeness of the sample, each attendance supervisor was asked to express the joint opinion of himself and his attendance officers concerning the predominant racial, occupational, and economic characteristics of the population in each block covered in the survey. Table 6 presents this information.

TABLE 6.—*Racial, occupational, and economic character of population in school census blocks included in survey, by district*

Item	District No.—										Total
	1	2	3	4	5	6	7	8	9	10	
Number of school census blocks	13	13	12	18	20	14	22	10	18	26	166
Racial characteristics:											
Native white	5	5		9	5		15	3	15	11	68
Native and foreign white	6	1			4		1	2	2	11	27
Native and colored, foreign and colored, colored	2	2		8	7	3	3	3		3	31
Foreign white		5	12	1	4	11	3	2	1	1	40
Occupational status:											
Professional	4							1	1	1	7
Clerical and trade	6	3		1			1	2	1	4	18
Industrial and trade	1				17			2	5	14	39
Industrial	2	10	12	17	3	14	21	5	11	7	102
Economic status:											
High to medium	4		1		1			2	1	1	10
Medium	6	10	8	10	9	4	14	4	6	10	81
Medium to low	3	3	3	8	10	10	8	4	11	15	75

Table 6 sheds additional light on the adequacy of the sample used. Of the 166 school census blocks included in the survey, 68 were predominantly native white, 40 predominantly foreign-born white, 27 a combination of native and foreign white, while the remaining 31 consisted of blocks that were either native white and colored, foreign white and colored, or predominantly colored. One hundred and two blocks were populated largely by people engaged in manufacturing and mechanical industries, 39 by people engaged in industrial occupations and trade, 18 by clerical workers and sales people, and 7 largely by professional men and executives. Ten blocks were classified as being populated largely by people having an economic status

ranging from high to medium, 81 as medium economic status, and 75 included families of medium to low economic status.

It will of course be recognized that "high," "medium," and "low" are relative terms and subject to different interpretation by different persons. The experience and training of the persons supplying

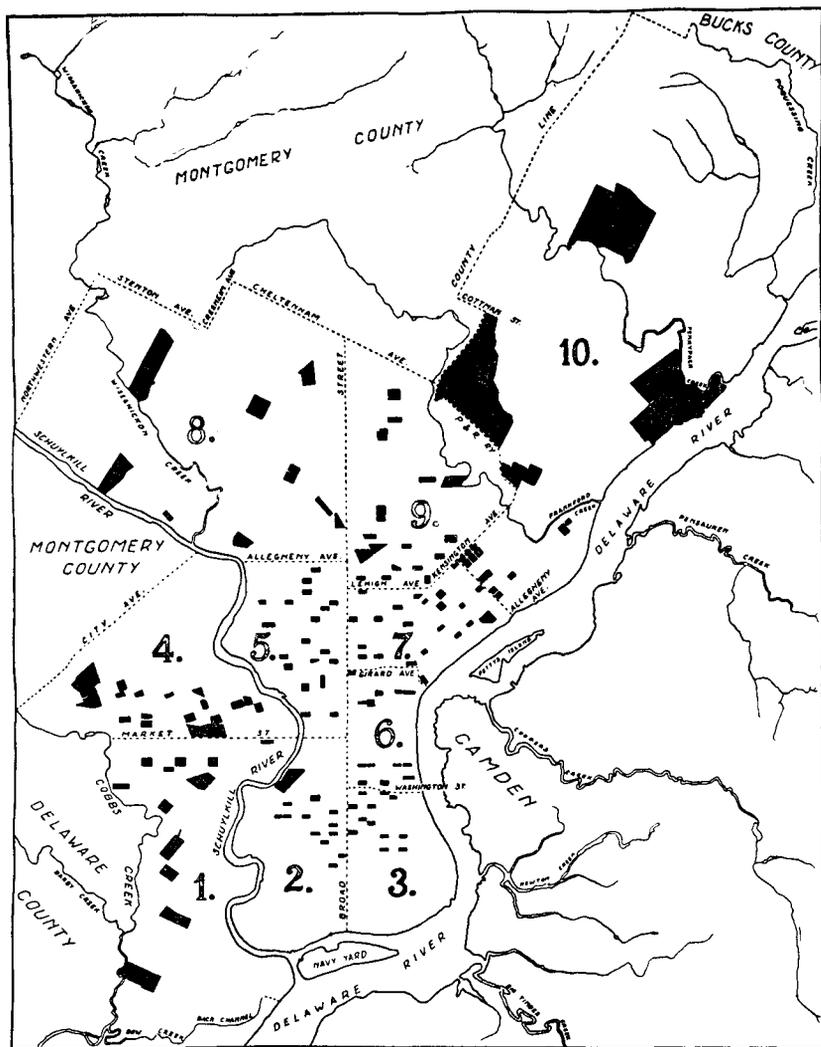


CHART 2.—LOCATION OF THE SCHOOL BLOCKS SAMPLED IN EACH SCHOOL DISTRICT

these data were such, however, as to warrant the assumption that the interpretation has been fairly uniform from district to district. Similarly, in the case of occupational and racial characteristics, the statements for each block in the district are based on the mature judgment of the supervisors. In view of the careful selection of

blocks, it seems safe to conclude that the sample accords adequate representation to people of different races, of varying economic status, and of unlike occupational pursuits.

TABLE 7.—*Number of families and persons included in unemployment survey*

District	Number of—			
	Census blocks	Families	Persons	Persons usually employed
No. 1.....	13	2, 445	10, 190	4, 222
No. 2.....	13	2, 738	13, 262	5, 311
No. 3.....	12	2, 114	11, 111	4, 088
No. 4.....	18	3, 075	13, 732	5, 833
No. 5.....	20	3, 248	15, 862	7, 048
No. 6.....	14	2, 657	10, 566	5, 152
No. 7.....	22	3, 129	14, 515	6, 147
No. 8.....	10	4, 922	21, 347	8, 495
No. 9.....	18	4, 387	17, 245	7, 431
No. 10.....	26	2, 836	12, 344	5, 139
Total.....	166	31, 551	140, 174	58, 866

Chart 2 shows the geographic diversity of the sample. Each of the black areas represents one of the school census blocks included in the survey. As was pointed out previously, each of the school census blocks includes one or more city blocks. Generally speaking, the density of the population varies inversely with the size of the shaded areas. Approximately as many families were interviewed in district 10, the northern section of which had extremely large school census blocks, as were interviewed in district 2, where practically all of the blocks were small.

The wide scattering of the blocks throughout the city would provide in itself, even if other facts were not available, sufficient indication of the representativeness of the sample. Within each of the ten districts, as indicated by Table 6, there is a wide variation in the occupational and economic status of the residents as well as racial differences. Inasmuch as the blocks in each district were selected as a reliable cross section of the district, they should, when combined, give an excellent cross-section picture of the city as a whole.

CHAPTER 2

Unemployment in Philadelphia

Extent of Unemployment

OF THE 31,551 Philadelphia families included in the survey, 4,914, or 15.6 per cent, reported one or more of their members unemployed, while 6,110, or 10.4 per cent, of the 58,866 wage earners in these families were not employed at the time the enumeration was made. Assuming the latter percentage to be representative of the city's entire estimated working population of 931,950 persons, 96,900 were idle for one reason or another at the time the field survey was made in the latter part of April, 1929. What is still more significant, three-fourths of this total, or approximately 72,700, were idle because they were unable to find work.

Whether or not this total represents "normal," "subnormal," or "abnormal" unemployment for Philadelphia is, of course, entirely conjectural in view of the almost total lack of recently compiled comparable data for this city or for other large cities of similar economic character. It may be of interest, however, to compare the results of this survey with a similar study made by the Metropolitan Life Insurance Co.¹ in March and April, 1915, at which time there was believed to be considerable unemployment in the larger cities of the country. The results of that survey, which covered 79,058 Philadelphia families, including 137,244 wage earners in their membership, showed that 14.2 per cent of the families suffered unemployment, and that 10.3 per cent of the workers were idle at the time of the enumeration.

Thus unemployment in Philadelphia appears to have been no less severe in the spring of 1929 than at the time the earlier survey was made, when business was just commencing to recover from the rather serious depression of 1914. This inference is particularly striking in view of the fact that the present survey was made at a time when business activity in Philadelphia appeared to be fairly normal.

A fair measure of industrial activity in Philadelphia is provided by the monthly index of employment in manufacturing industries compiled by the Federal Reserve Bank of Philadelphia. As indicated on chart 1 in chapter 1, employment had advanced substantially during the first few months of 1929, and in April, when the unemployment survey was made, the employment index was 100.7, less than 1 per cent above the base of 100 which represents average employment during the period from 1923 to 1925. During the four following

¹ U. S. Bureau of Labor Statistics, Bul. No. 195: Unemployment in the United States, p. 6.

months the index rose to a high point of 110.9 in August, or 10.1 per cent above the April level. This rise probably reflects a general increase in employment throughout the city and a corresponding decrease in unemployment during the late spring and summer. Since August, however, the employment index has declined each month and in December was 99.9, slightly below the April level. This indicates that fully as many—and possibly more—workers were unemployed in December, 1929, as at the time the survey was made.

It is hardly safe, however, to place too great reliance upon interpolations of this nature, since the employment index measures the trend of factory employment only, in which both upward and downward fluctuations are probably more pronounced than in the general level of employment. Moreover, migration of workers into or out of the city may have caused an increase or decrease in the number of unemployed. It seems safe to conclude, however, that the 10.4 per cent unemployment revealed by the survey was a fairly close approximation of the situation existing in Philadelphia in the latter part of April when the survey was made, and that the following four months, during which manufacturing and construction activities employed more labor, witnessed a decline in unemployment, which was followed, during the fall, by a slackening of business and an increase of unemployment to nearly the same volume as existed earlier in the year.

Regional Differences in Unemployment

ANALYSIS of the results for each of the 166 blocks included in the survey and for each of the 10 school districts revealed the existence of striking variations in severity of unemployment in different parts of the city.

TABLE 8.—*Unemployment in school districts of Philadelphia*

District	Number of families interviewed	Families having unemployment		Number of persons—		Unemployed (all reasons)	
		Number	Per cent	In families	Usually employed	Number	Per cent
No. 1.....	2,445	207	8.5	10,190	4,222	222	5.3
No. 2.....	2,738	487	17.8	13,262	5,311	616	11.6
No. 3.....	2,114	594	28.1	11,111	4,088	772	18.9
No. 4.....	3,075	459	14.9	13,732	5,833	580	9.9
No. 5.....	3,248	524	16.1	15,862	7,048	672	9.5
No. 6.....	2,657	610	23.0	10,566	5,152	763	14.8
No. 7.....	3,129	678	21.7	14,515	6,147	900	14.6
No. 8.....	4,922	501	10.2	21,347	8,495	589	6.9
No. 9.....	4,387	401	9.1	17,245	7,431	465	6.3
No. 10.....	2,836	453	16.0	12,344	5,139	531	10.3
Total.....	31,551	4,914	15.6	140,174	58,866	6,110	10.4

An examination of Table 8 shows that the amount of unemployment ranged from as low as 5.3 per cent in district 1 to more than three times as much—18.9 per cent—in district 3. In four of the districts unemployment was considerably greater than the average

of 10.4 per cent for the entire city; in three other districts unemployment was substantially under the Philadelphia average, while only in district 10 was it practically the same as in the city as a whole. As might be expected, unemployment was most severe in the densely populated parts of South Philadelphia and in the eastern section of the city bordering on the Delaware River, including such industrial sections as Kensington, Frankford, and Tacony. The least unemployment was found in western and northwestern Philadelphia, especially in the better residential districts of Overbrook, Germantown, and Chestnut Hill. Data for individual blocks show even more strikingly the disparity between the poorer and better sections. Unemployment was as high as 30 per cent in some of the crowded and poor parts of South Philadelphia, while in a few instances some of the high-grade residential blocks reported no unemployed workers.

Racial Differences in Unemployment

COMPARISON of the information on the racial and economic character of the school districts presented in Table 6 with that given in Table 8 helps to explain the marked differences in unemployment in the various districts. Generally speaking, the districts with larger proportions of native-white residents had less unemployment than those in which foreign-born and negroes predominate. This was particularly true in districts 3 and 6, which had the greatest proportion of foreign-born residents and which show the greatest amount of unemployment. Native-born population noticeably predominated in districts 1, 7, and 9 and in the first and last of these districts, unemployment was less severe than in any of the others. District 7, including parts of the Kensington textile section, proved an exception to this general tendency, for (although having a preponderance of native born) unemployment was large, amounting to 14.6 per cent.

Since nearly all of the districts contain a mixture of blocks with various racial elements, these differences in the extent of unemployment become even more evident in an analysis of the returns for individual blocks. The enumerators classified 68 of the 166 blocks as having a predominant native-white population and in this group of blocks the average unemployment was less than for the entire city. In only half of these blocks was unemployment greater than 7.7 per cent.

In the blocks in which there was a preponderance of foreign-born white residents, on the other hand, average unemployment was much above that for the city as a whole; in 20 of the 40 blocks with a preponderance of foreign-born population, more than 15.2 per cent of the workers were unemployed. Unemployment in the blocks having a mixture of native white, foreign-born white, and negro families fell between the two extremes just mentioned. In the 27 blocks inhabited by both native and foreign born, 9.3 was the median percentage of unemployment, while in the 31 blocks with a mixture of all three racial elements, the median percentage of unemployment was 10.7.

TABLE 9.—Number of white persons and of negroes unable to find work

District	White persons			Negroes		
	Number usually employed	Unable to find work		Number usually employed	Unable to find work	
		Number	Per cent		Number	Per cent
No. 1.....	4,081	162	4.0	98	6	6.1
No. 2.....	4,411	349	7.9	462	34	7.4
No. 3.....	3,913	549	14.0	159	39	24.5
No. 4.....	3,764	208	5.5	1,767	160	9.1
No. 5.....	5,728	344	6.0	1,129	96	8.5
No. 6.....	3,234	287	8.9	1,731	241	13.9
No. 7.....	5,741	608	10.6	400	92	23.0
No. 8.....	7,941	368	4.6	475	28	5.9
No. 9.....	6,770	269	4.0	2	1	(¹)
No. 10.....	4,884	309	6.3	233	68	29.2
Total.....	50,467	3,453	6.8	6,456	765	11.8

¹ Sample too small to be significant.

Greater severity of unemployment is particularly apparent among negro workers. From all families visited, whether unemployment existed or not, the enumerators were asked to ascertain whether they were white or colored. It is thus possible to compare directly the severity of unemployment among white and negro workers. Table 9 shows, for each district and for the city as a whole, the number of white persons and negroes usually employed in the families interviewed and the number and percentage of each group who were unemployed because they were unable to find work. Inability to find a job, of course, measures more accurately the relative work opportunity in the two groups than does total unemployment, which, of course, includes workers idle because of sickness and other reasons. Not only was average unemployment for this cause much greater among negroes than among white workers for the city as a whole, but likewise in each of the nine districts for which comparable information was available. The contrast was particularly striking in district 10, where 29.2 per cent of the negroes, as compared with only 6.3 per cent of white workers, were out of work for this cause. In three of the districts more than 20 per cent of the negro workers could not find jobs at the time the survey was made, while the largest proportion of unemployment among white workers was in district 3 in South Philadelphia, where 14 per cent were unable to find jobs. The greater severity of unemployment among negro workers is undoubtedly attributable to the fact that custom and lack of education restrict their working opportunities chiefly to manual and casual labor and domestic work, jobs that are likely to be somewhat temporary in character.

Unemployment and Occupational Status

MANY OF the regional variations in unemployment are accounted for by occupational differences in the population living in various sections of the city. Since the enumerators obtained detailed information on occupations only from the unemployed persons in the families interviewed, it is impossible to determine with any great

accuracy the percentage of unemployment existing in each occupation. As in the case of racial characteristics, however, the enumerators were requested to indicate the predominant occupation in which the wage earners of each block were engaged. In Table 6, which gives this information for each of the 10 school districts, it is seen that most of the blocks are described as "industrial." This classification is, of course, an indefinite one, but can be interpreted as including not only workers in manufacturing industries, but also those engaged in construction and other manual occupations, as well as many of those employed in transportation. Since the census of occupations shows quite definitely that a substantial majority of the city's wage earners are engaged in these occupations, the group of 166 blocks canvassed in the survey seems to be a fairly representative cross section of Philadelphia's population. It is quite apparent from a comparison of Table 6 with Table 8 that the burden of unemployment fell most heavily upon the districts which were overwhelmingly industrial in character. Thus in districts 3 and 6, in which all of the blocks were described as industrial, unemployment amounted to 18.9 per cent and 14.8 per cent, respectively, higher than for any other district. In district 1, on the other hand, with professional and clerical and trade occupations predominating, only 5.3 per cent of the workers were idle. Districts 8, 9, and 10, in which there was a noticeable proportion of trade, clerical, and professional occupations, likewise experienced less unemployment than the city as a whole.

Analysis of the data for individual blocks indicates even more clearly that unemployment was more serious among industrial workers than among clerical and professional workers. In half of the 102 industrial blocks more than 11.5 per cent of the workers were idle, while in the blocks where professional occupations were most important the corresponding median percentage of unemployment was only 1.8. In the blocks with a mixture of industrial and trade, and of clerical and trade occupations, unemployment fell between these two extremes, and below the average for the city, the median percentages being 8.5 for the former and 8 for the latter group.

TABLE 10.—*Customary occupations of unemployed compared with those of all persons reporting gainful occupations*

Customary occupation	Unemployed persons		All gainfully employed persons ¹	
	Number	Per cent	Number	Per cent
Agriculture	23	0.4	3,594	0.4
Building trades	801	13.1	55,431	6.8
Manufacturing	3,000	49.1	333,265	40.7
Personal and professional	563	9.2	127,401	15.6
Trade and transportation	1,469	24.0	276,758	33.8
Other	254	4.2	22,551	2.7
Total	6,110	100.0	819,000	100.0

¹ Estimated from Census of Occupations, 1920.

Further evidence of the occupational incidence of unemployment can be obtained from a comparison of the distribution of the unemployed among the principal trades and industries with the occupations of all persons having gainful occupations in the city, according to the census

of occupations. Table 10 shows the estimated occupational distribution of all gainfully employed persons in 1920, based on the census of 1920, and similar information for the 6,110 unemployed workers enumerated in the survey. More than two-fifths of the workers in Philadelphia were engaged in the various manufacturing occupations and about one-third in trade and transportation, with building trades and personal and professional service of subordinate importance.

Of the unemployed workers, however, a much larger proportion—nearly a half—reported that they were usually engaged in manufacturing, while less than a fourth reported trade and transportation pursuits as their usual occupations. Since the geographic diversification of the blocks included in the survey is believed to have provided a satisfactory occupational diversity as well, the fact that 49.1 per cent of the unemployed were engaged in manufacturing as compared with only 40.7 per cent of all wage earners, indicates that unemployment was considerably more severe in these industries than in others. The reverse is true of trade and transportation, which account for only 24 per cent of the unemployed, but for 33.8 per cent of all workers, thus indicating relatively less severe unemployment among these workers. The same situation appeared to exist in personal and professional occupations, which include 15.6 per cent of the workers according to the census and only 9.2 per cent of the unemployed. In the building trades unemployment was also apparently more severe than the general average of 10.4 per cent for all occupations, since 13.1 per cent of the unemployed were engaged in building as compared with 6.8 per cent of all workers. That unemployment was considerably more severe among workers in manufacturing and mechanical industries than among those engaged in trade and transportation and in professional and clerical service is shown in Table 10, thus confirming the results of the comparison of unemployment in individual blocks with the occupational status of the families in each block.

TABLE 11.—*Customary occupations of the unemployed persons, by districts*

District	Unemployed persons (all reasons)		Number of unemployed persons customarily employed in—							
	Number	Per cent	Manufacturing	Trade and transportation	Building trades	Personal and professional service	General	Agriculture	No regular occupation	Occupation not specified
No. 1.....	222	5.3	59	109	34	9	6	0	0	5
No. 2.....	616	11.6	298	129	97	53	7	3	8	21
No. 3.....	772	18.9	393	110	159	24	62	1	9	14
No. 4.....	580	9.9	146	114	102	96	93	5	9	15
No. 5.....	672	9.5	293	156	59	70	49	1	12	32
No. 6.....	763	14.8	222	175	38	137	169	3	3	16
No. 7.....	900	14.6	428	166	87	72	111	0	4	32
No. 8.....	589	6.9	329	142	43	40	8	3	11	13
No. 9.....	465	6.3	268	80	40	19	16	4	11	27
No. 10.....	531	10.3	331	57	80	43	5	3	0	12
Total.....	6, 110	10.4	2, 767	1, 238	739	563	526	23	67	187

Examination of Table 11, which shows, for each of the districts and for the city as a whole, the number of unemployed engaged in each of the main groups of occupations, reveals the wide vari-

ations in the occupational nature of unemployment in different parts of the city. In the entire city more than twice as many of the idle workers were normally engaged in manufacturing as in the next largest class—trade and transportation. This excess of manufacturing over trade and transportation occupations was great in districts 3 and 7, in which there were also large proportions of building workers among the unemployed, and in which unemployment was above the city average. Unemployed manufacturing workers also considerably exceeded trade and transportation workers in districts 9 and 10 in which unemployment was below the city average. In district 6, in which unemployment was particularly heavy, the number engaged in manufacturing was relatively small, but this district contained large numbers of unemployed domestic servants and casual industrial laborers, groups which are especially subject to unemployment. In district 1, which had less unemployment than any other district, practically half of its unemployed were engaged in trade and transportation and a much smaller number in manufacturing.

TABLE 12.—Persons unemployed for all reasons, classified by customary occupation

Customary occupation	Persons unemployed	
	Number	Per cent
Agriculture.....	23	0.4
Building trades.....	739	12.5
Manufacturing:		
Chemicals, paints, drugs, dyes.....	67	1.1
Cigars and tobacco.....	60	1.0
Clay, stone and glass products.....	61	1.0
Food products.....	197	3.3
Leather and rubber goods.....	75	1.3
Machinists and metalworkers.....	518	8.8
Printing and paper goods.....	131	2.2
Clothing, textiles, knit goods, hosiery and dyes.....	886	15.0
Wood manufacturers.....	91	1.5
Miscellaneous.....	681	11.5
Total.....	2,767	46.7
Personal and professional service:		
Housework in the home.....	121	2.0
Domestic and personal service elsewhere.....	378	6.4
Musicians, actors, etc.....	64	1.1
Total.....	563	9.5
Trade and transportation:		
Cashiers.....	19	.3
Cash girls and bundle wrappers.....	13	.2
Errand, messenger and office boys.....	70	1.2
Office help.....	338	5.7
Salespeople.....	158	2.7
Shipping and stock clerks.....	75	1.3
Street trades.....	39	.6
Telephone and telegraph operators.....	18	.3
Miscellaneous.....	508	8.6
Total.....	1,238	20.9
General:		
Chauffeurs.....	116	2.0
Helpers.....	13	.2
Laborers.....	397	6.7
Total.....	526	8.9
No regular occupation.....	67	1.1
Not specified.....	187	---
Grand total.....	6,110	100.0

The industrial and occupational distribution of the unemployed is shown in somewhat greater detail in Table 12. The classification, which generally follows that of the census of occupations and is used in taking the census of school children in Philadelphia each spring, is by no means satisfactory, since it is partly an industrial and partly an occupational classification. Lack of information on the occupations of the workers covered in the survey, employed as well as unemployed, as in the case of Table 10, makes it impossible to compare accurately the extent of unemployment in various industries and occupations. The largest group of unemployed manufacturing workers were those usually engaged in the clothing and textile industries, constituting 15 per cent of all unemployed, and machinists and metal workers constituting 8.8 per cent of the unemployed were the second largest group. Food-products industries and printing and paper goods were also important among the occupations of the unemployed. Building laborers were the most important in the nonmanufacturing trades, while large proportions of the unemployed consisted of chauffeurs, laborers, sales people, office employees, and domestic servants.

TABLE 13.—Comparison of number of unemployed in the several manufacturing industries, with number in the same industries reported as employed, in 1927

Industry	Persons unem- ployed		Persons employed in 1927 ¹	
	Number	Per cent	Number	Per cent
Chemicals, paints, drugs, dyes.....	67	3.2	17,507	6.5
Cigars and tobacco.....	60	2.9	9,005	3.3
Clay, stone, and glass.....	61	2.9	2,862	1.1
Food products.....	197	9.4	22,245	8.2
Leather and rubber goods.....	75	3.6	12,030	4.5
Metal products.....	518	24.8	62,660	23.2
Printing and paper goods.....	131	6.3	34,500	12.8
Textiles and clothing.....	886	42.5	99,792	37.0
Lumber and its remanufacture.....	91	4.4	9,158	3.4
Total.....	2,086	100.0	269,819	100.0
Miscellaneous and unspecified.....	681	-----	19,790	-----
Grand total.....	2,767	-----	289,609	-----

¹ Pennsylvania. Department of Internal Affairs. Productive industries, 1927. (Photostat copy-issued in 1929.)

Table 13 shows the number and proportion of unemployed workers in each of the leading groups of manufacturing industries in Philadelphia compared with the distribution of all persons employed in these industries in 1927. It is noticeable that in five of the nine industries—clay, stone, and glass; food products; metal products; textiles and clothing; and lumber and its remanufacture—the proportion of all unemployed workers was larger than the proportion of workers employed in these industries in 1927. In the remaining industries, on the other hand, the proportions of unemployed were less than those of all employed workers in 1927. If the 1927 figures are indicative of the numbers engaged in these industries in 1929, it would seem that unemployment was relatively more severe in the former than in the latter group of industries.

Unemployment and Economic Status

It MIGHT be expected from the comparison of unemployment with the racial and occupational characteristics of the population that the burden of unemployment would fall most heavily on the less prosperous families. Although, of course, it was impossible to obtain specific information on the economic status of their wage earners from the families interviewed, certain other information is available which makes it feasible to compare income with unemployment. The school census enumerators who made the field survey were requested to classify each of the blocks included in the survey, according to the economic status of the residents, as high, low, or medium. It is realized, of course, that the status of all the families in each block was not uniform, and that high, low, and medium are relative terms possessing different meanings in the minds of different people. The enumerators, however, being thoroughly familiar with conditions in their districts, could be depended upon to exercise sound judgment in making such a classification, and for that reason this comparison should not be without value.

In Table 6 is shown the number of blocks in each district classified as "high to medium," "medium," and "medium to low" in economic status. Thus, of the 166 blocks in the city included in the survey, 10 were described as "high to medium" in economic character, 81, or about half the total, as "medium," and 75 as "medium to low." District 1, which had the smallest proportion of the poorer blocks and the largest proportion of the best blocks, reported the smallest amount of unemployment. In district 6, 10 of the 14 blocks were classified as "medium to low" in economic status, and unemployment amounted to 14.8 per cent, being exceeded in only one other district. In districts 3 and 7, on the other hand, a majority of the blocks were above the lowest economic status, yet unemployment was high, amounting to 18.9 per cent and 14.6 per cent, respectively. Although there is a tendency for districts with heavy unemployment to have a low economic status, any pronounced relationship is not definitely established by this comparison between districts.

When the same comparison is made on the basis of individual blocks, however, a fairly close relationship is revealed. In none of the blocks classified as high to medium was unemployment above 10 per cent, which was approximately the city average, while the average unemployment in this group of blocks taken as a whole was 5.6 per cent. Of the 75 blocks described as lowest in economic status, 45 experienced greater unemployment than the city average, while the average unemployment in all these blocks was 11.7 per cent. Half of the blocks of medium economic character showed more than 9 per cent unemployment, while the percentage of idle workers in all of them was 9.9 per cent—between the extremes for the other two groups.

Unemployment Compared with Income

A STUDY of family incomes in Philadelphia made for the Public Ledger by Dr. F. R. Cawley, of the University of Pennsylvania, in the winter of 1927-28 makes it possible to throw some further

light upon the relative severity of unemployment among various income classes. In that study the entire area of the city, as shown in Chart 3, was divided into 47 districts of various sizes, in each of which the economic and occupational status of the families was fairly homogeneous and uniform. Average family-earned income in

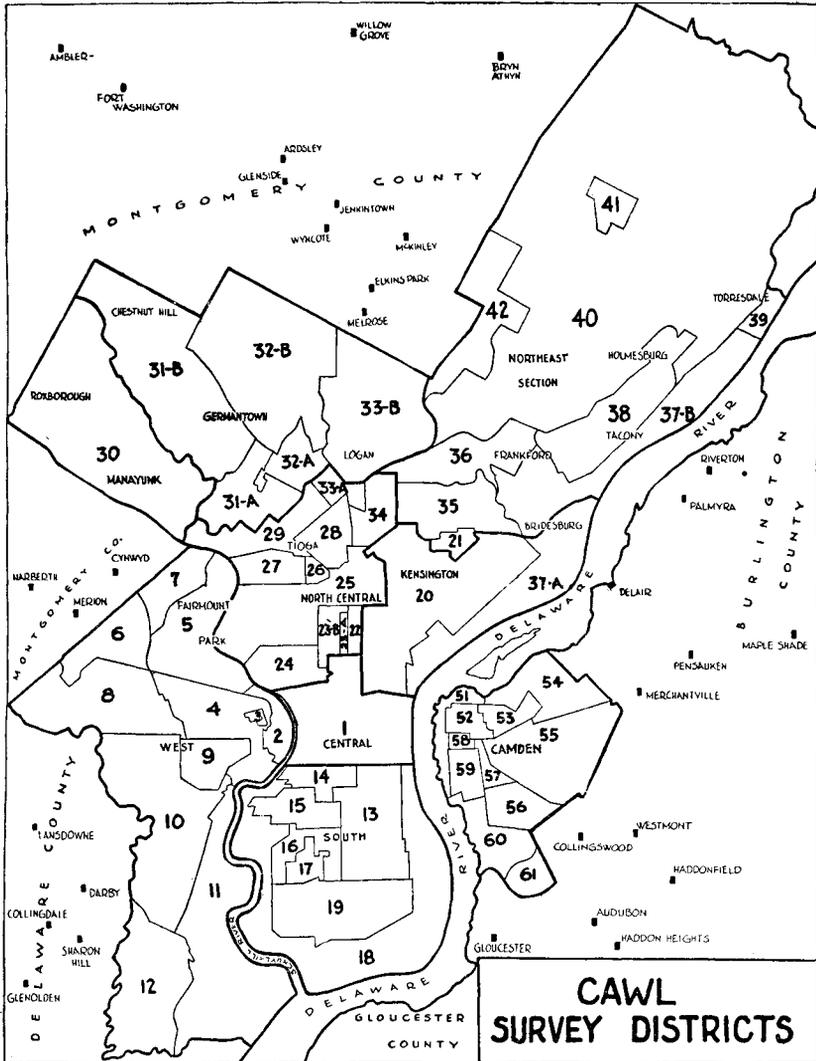


CHART 3.—CAWL SURVEY (1927-28) DISTRICTS

each district was then carefully determined and checked. As might be expected, family income in different sections varied widely from the city average of \$2,581, ranging from as low as \$1,346 in South Philadelphia (district 18) to as high as \$7,390 in Chestnut Hill (district 31A), and \$13,409 in a small section of the city northwest of Fairmount Park (district 7).

The 166 blocks included in the unemployment survey were widely scattered throughout the city and gave adequate representation to nearly all of the economic districts of the Cawl survey except a few of the wealthiest sections. It is, therefore, possible to compare the family income in each of the Cawl survey districts with the amount of unemployment existing in those families included in that district.

This comparison is made in Table 14, which shows the estimated family-earned income in each Cawl survey district, the number of families canvassed in the unemployment survey living in that district, and the percentage of unemployment among working members of these families. The unemployment sample is probably too small to be representative in some cases, notably in districts 36B and 41, but the general tendency toward a small amount of unemployment in the high income districts and heavier unemployment in districts with small family income is quite evident. The district with the highest family income—\$6,745—for instance, reported unemployment of only 1.3 per cent, lower than for any other district. And while the district, in which unemployment amounted to 22.3 per cent—higher than for any other—did not have the lowest family income, the income in this district was only \$2,047, much beneath the average for the entire city.

TABLE 14.—Average family income and unemployment in Cawl survey districts

Cawl survey district	Number of families interviewed in unemployment survey	Average family income (earned)	Per cent of unemployment	Cawl survey district	Number of families interviewed in unemployment survey	Average family income (earned)	Per cent of unemployment
No. 31B	255	\$6,745	1.3	No. 37B	771	\$1,983	9.2
No. 9	340	5,669	2.2	No. 24	1,022	2,070	9.2
No. 12	101	1,921	2.5	No. 23A	147	3,659	9.2
No. 33B	858	3,594	3.0	No. 41	73	2,904	9.4
No. 26	178	1,950	3.4	No. 42	233	2,421	11.1
No. 36A	440	4,744	3.6	No. 40	308	2,554	11.2
No. 32B	1,620	3,285	4.4	No. 4	1,675	2,096	11.3
No. 27	156	2,068	4.8	No. 16	1,019	2,474	11.6
No. 36B	60	4,744	5.0	No. 30	785	2,197	11.7
No. 28	409	2,595	5.7	No. 18	370	1,346	11.8
No. 10	2,004	2,855	6.1	No. 14	314	2,035	12.0
No. 34	984	2,045	6.3	No. 37A	758	1,919	12.1
No. 32A	659	2,636	6.4	No. 15	1,339	1,809	12.4
No. 38	418	2,198	6.6	No. 20	4,779	1,879	13.5
No. 23B	208	2,719	6.9	No. 1	1,446	2,963	13.8
No. 8	1,400	2,633	8.1	No. 13	2,518	2,321	18.5
No. 21	172	2,033	8.6	No. 22	245	2,047	22.3
No. 29	1,194	1,925	8.7				
No. 25	2,293	2,166	8.8	All districts	31,551	2,440	10.4

¹ This average was calculated to show the estimated income of the families covered by the unemployment survey; the estimated income of all families in the city according to the Cawl survey was \$2,581.

Composite figures showing the estimated average income among the families covered in the unemployment survey in each of the school districts of the city were calculated from the data collected by Doctor Cawl. These estimates are shown in Table 15, together with the percentage of unemployment and the average size of all families interviewed in each district. Since the economic status of

a family is measured not only by the family income but by the number of persons to be supported by this income, average per capita income was calculated for each district by dividing family income by the average number of persons per family. Examination of the data in this table reveals a fairly close inverse relationship between income, especially per capita income, and the extent of unemployment.

TABLE 15.—*Unemployment and income in school districts of Philadelphia*

District	Number of families	Average—			Per cent	
		Number in family	Family income	Per capita income	Unemployment	Unable to find work
No. 1.....	2,445	4.2	\$3,208	\$769	5.3	4.1
No. 2.....	2,738	4.8	2,035	420	11.6	8.6
No. 3.....	2,114	5.3	2,321	441	18.9	14.7
No. 4.....	3,075	4.5	2,496	558	9.9	7.2
No. 5.....	3,248	4.9	2,210	453	9.5	6.9
No. 6.....	2,657	4.0	2,341	588	14.8	11.2
No. 7.....	3,129	4.6	1,939	418	14.6	11.8
No. 8.....	4,922	4.3	2,817	649	6.9	4.9
No. 9.....	4,387	3.9	2,587	658	6.3	4.8
No. 10.....	2,836	4.4	2,166	498	10.3	7.4
All districts.....	31,551	4.4	2,440	550	10.4	7.8

Thus, in the three districts (1, 8, and 9) with highest per capita income, unemployment was less than in any of the others. The heaviest unemployment was found in district 2, with 11.6 per cent unemployed; in district 3, with 18.9 per cent; in district 6, with 14.8 per cent; and in district 7, with 14.6 per cent. Three of these four districts had a per capita income much below the city average and lower than for any of the other six districts. District 6, with 14.8 per cent unemployment and per capita income of \$588, appeared to be the only striking exception to this general tendency for unemployment to be more severe in the poorer sections.

A number of factors combine to cause more unemployment among those who can least afford it. The higher income classes include a large proportion of professional workers, whose employment status is of a permanent nature, and of persons occupying managerial and other responsible positions in business. These workers are more likely to be retained when business declines, while many of the wage earners are laid off. Moreover, executive and professional workers, with their superior training and ability, find it easier to satisfy the requirements of a greater variety of jobs than the more specialized workers at lower economic levels. Quite probably also there is less voluntary unemployment resulting from shifts from one job to another among the higher income group.

Unemployment in Families of Different Size

THE CHARACTER and extent of unemployment in Philadelphia are indicated not only by the proportion of the city's wage earners who are out of work but by the number of families affected by unemploy-

ment and the severity of unemployment among families of different sizes. As previously indicated, the survey shows that 4,914 families, or 15.6 per cent of the total number of families included in the study, experienced some unemployment, while the unemployed numbered 6,110 workers, or 10.4 per cent of the total. Thus, of the 12,862 persons reported as usually employed in these 4,914 families, 6,110, or 47.5 per cent, were unemployed at the time the survey was made.

Reference to Table 15, showing the average number of persons per family compared with the extent of unemployment in each of the school districts, suggests the possibility that unemployment may be more severe among the large than among the small families. Thus, district 3, with the largest average family size—5.3 as compared with 4.4 for the city as a whole—reported unemployment amounting to 18.9 per cent, higher than in any other district. In three of the four districts with family size below that for the city as a whole, unemployment was lower than in other districts. District 6, with an average of 4 persons per family and unemployment of 14.8 per cent, appeared to be the only striking exception to the tendency for unemployment to be large in districts with large family size and vice versa.

In order to test this relationship more carefully, an analysis was made of the 31,551 individual family returns to show the relationship between size of family,² number usually employed, and number unemployed. As has been stated, there were 140,174 persons in the 31,551 families included in the survey, an average family size of 4.4, which is believed to approximate closely the average size of all families in Philadelphia.³ Of the total number of persons covered in the survey, 58,866 were reported as usually employed, or an average of 1.9 wage earners per family. This coincides with the average number of workers per family computed from the census of occupations and indicates that the sample is adequately representative of the entire population. The 4,914 families reporting unemployment had a total family membership of 25,977, or an average of 5.3 persons per family, while 12,862 of these persons, or 2.6 per family, were usually employed. Since both average family size and number of workers per family in the unemployed group exceed the corresponding averages for the entire population, it appears that unemployment was more severe among the larger families.

Table 16 shows the distribution of the 31,551 families according to the number of persons in the family and the number usually

² "The word 'family' for census purposes has a somewhat different application from what it has in popular usage. It means a group of persons living together in the same dwelling place. The persons constituting this group may or may not be related by ties of kinship, but if they live together and form one household they should be considered as one family. Thus a servant who sleeps in the house or on the premises should be included with the members of the family for which he or she works. Again, a boarder or lodger should be included with the members of the family with which he lodges, but a person who boards in one place and lodges in another should be returned as a member of the family at the place where he lodges or rooms. It should be noted, however, that two or more families may occupy the same dwelling house without living together. If they occupy separate portions of the dwelling house and their housekeeping is entirely separate, they should be returned as separate families." (Census of Population, 1920.) This definition was used in the unemployment survey.

³ See chapter 1.

employed. As would be expected in view of the fact that the average family size was 4.4, the largest single group, constituting over a fifth of the total, were the families of 4 persons. As the family size increases above 4 persons and decreases below this number the number of families in each group progressively declines, there being less than 1 per cent of the families with 12 or more persons per family and only 2 per cent with one person per family. In over four-fifths of all families the family membership, was between two and six persons. The number of workers per family generally varied with the size of the family and ranged from none in 426 families to as high as 12 in one family. Nearly half of the total number, however, reported one person usually employed and almost a third of the families had two wage earners.

TABLE 16.—Number of persons in family, compared with number usually employed

Number in family	Number of families	Number of families in which specified number of persons usually employed were—														
		0	1	2	3	4	5	6	7	8	9	10	11	12		
1 person.....	680	128	552													
2 persons.....	4,967	172	3,441	1,354												
3 persons.....	5,868	53	3,458	1,896	461											
4 persons.....	6,851	27	3,176	2,527	846	275										
5 persons.....	4,929	12	2,104	1,424	894	393	102									
6 persons.....	3,501	25	1,121	1,040	710	401	145	59								
7 persons.....	2,068	5	552	532	498	270	138	53	20							
8 persons.....	1,248	1	257	308	336	194	81	41	18	12						
9 persons.....	679	1	107	141	181	126	69	27	11	10	6					
10 persons.....	397	1	37	83	95	103	39	14	4	12	3	6				
11 persons.....	185	1	12	23	50	49	27	13	6	2	2					
12 persons.....	88		2	9	19	24	16	10	1	5	1					1
13 persons.....	48		2	4	12	5	9	5	6	4	1					
14 persons.....	19		1	1	1	3	7	4			1	1				
15 persons.....	12				1	3	2	1	4	1						
Over 15 persons ¹	11				1	4	2	2		2						
Total.....	31,551	426	14,822	9,342	4,105	1,850	637	229	70	46	14	9				1

¹ Includes 4 families with 16 persons; 4 with 18 persons; 3 with 21 persons.

The severity of unemployment in families with varying numbers of wage earners is shown in Table 17. Thus 976 families, or 6.6 per cent of the 14,822 families with one wage earner, experienced unemployment, which in this case obviously amounted to 100 per cent of all the persons usually employed in these families. Of the families with two wage earners, 1,682, or 18 per cent, experienced unemployment, but of this total in only 225 families, or 13.4 per cent, were both of the family's wage earners out of work. In the same way, as the number of wage earners per family increases the number of families affected by unemployment also increases, but the proportion of families having all of their wage earners out of work becomes progressively smaller.

The extent to which the effects of unemployment were concentrated in relatively few families is evident from the fact that in 1,260 families—more than a fourth of all families having unemployment, and 4 per cent of the total number of families covered in the survey—all of the wage earners were out of work. Furthermore,

3,257 families covered in the survey, or 10.3 per cent of the total number, had half or more of their wage earners unemployed. Thus, on the average, one out of ten of the city's families was deprived of the income from half or more of its wage earners.

TABLE 17.—*Number of persons usually employed compared with number unemployed*

Number in family usually employed	Number of families	Number of families with—						
		Unemployed workers	Specified number of persons unemployed					
			1	2	3	4	5	6
None.....	426							
1 person.....	14,822	976	976					
2 persons.....	9,342	1,682	1,457	225				
3 persons.....	4,105	1,151	858	248	45			
4 persons.....	1,850	700	463	153	70	14		
5 persons.....	637	251	141	70	33	7		
6 persons.....	229	106	50	31	16	6	3	
7 persons.....	70	25	12	7	5		1	
8 persons.....	46	13	5	2	3		2	
9 persons.....	14	3	2			1		
10 persons.....	9	6	5	1				
12 persons.....	1	1			1			
Total.....	31,551	4,914	3,969	737	173	28	6	
							1	

The greater severity of unemployment among the large families is well illustrated in Table 18, showing the extent to which unemployment was experienced in families of different sizes. Obviously, since the number of wage earners tends to increase as the size of the family increases, a greater percentage of the large families than of the small families experience unemployment. The fourth column of the table shows that the proportion of families affected by unemployment increases steadily from as low as 9.7 per cent of the families of two to 46.5 per cent of the 185 families with 11 members. The data for the still larger families are probably not entirely representative owing to the small size of the sample.

Since the larger families have a larger number of wage earners upon whom to depend for their livelihood, the real severity of unemployment can not be adequately measured by the proportion of families affected, but only by the proportion of unemployed wage earners in each family group. The information in the last two columns of Table 18 shows quite distinctly that unemployment was more severe among the larger families. As might be expected, unemployment among the small group represented by "families of one," consisting of single persons without actual family responsibilities, was quite heavy, amounting to 16.5 per cent. Except for this group, families with fewer than six members reported a smaller proportion of their wage earners out of work than the general city average of 10.4 per cent. On the other hand, in families of six 10.8 per cent of the workers were unemployed, and in all of the other larger family groups, a still greater percentage was out of work, rising to as high as 25 per cent in the case of families of 14. Of the total of 31,551

families included in the survey, 8,256 had 6 or more members. This group reported 2,750 of their 21,948 working members, or 12.5 per cent, unemployed, while unemployment among the wage earners of the families with 2 to 5 members amounted to only 9.3 per cent. Thus, unemployment was nearly 35 per cent more severe among the large than among the small families.

TABLE 18.—*Unemployment in families of different size*

Number in family	Number of families	Families with unemployment		Number of persons usually employed	Persons unemployed	
		Number	Per cent		Number	Per cent
1 person.....	680	91	13.4	552	91	16.5
2 persons.....	4,967	481	9.7	6,149	530	8.6
3 persons.....	5,868	692	11.8	8,633	797	9.2
4 persons.....	6,851	822	12.0	11,868	980	8.3
5 persons.....	4,929	782	15.9	9,716	962	9.9
6 persons.....	3,501	701	20.0	8,014	866	10.8
7 persons.....	2,068	501	24.2	5,338	684	12.8
8 persons.....	1,248	315	25.2	3,530	420	11.9
9 persons.....	679	224	33.0	2,154	311	14.4
10 persons.....	397	143	36.0	1,390	195	14.0
11 persons.....	185	86	46.5	697	130	18.7
12 persons.....	88	35	39.8	381	60	15.7
13 persons.....	48	19	39.6	224	40	17.9
14 persons.....	19	12	63.2	96	24	25.0
15 persons.....	12	5	41.7	67	12	17.9
Over 15 persons.....	11	5	45.5	57	8	14.0
Total.....	31,551	4,914	15.6	58,866	6,110	10.4

Table 19 shows the number and percentage of males and females under 21 years of age and 21 years of age and over in the families interviewed in each district and in the city as a whole who were unable to find work at the time the survey was made. As was stated before, about three-fourths of all unemployed persons reported inability to find work as the reason for their idleness. Females constituted 23.4 per cent of this group, whereas, according to estimates based on the census of occupations, females constitute approximately 27 per cent of all persons having gainful occupations. This difference seems to indicate that unemployment owing to lack of work was somewhat less severe among females than among males, reflecting the fact that clerical and mercantile trades, in which women are chiefly engaged, were more active at the time of the survey than the manufacturing and construction industries which are the principal employers of male workers. In most of the districts the ratio between males and females unable to find work was not far from the city average. Table 19 does not, however, include 27 persons unable to find work for whom sex was not reported and 116 for whom age was not reported.

TABLE 19.—*Classification of persons unable to find work, by sex and age*

District	Sex			Age						
	Total	Males	Fe- males	Total	Males and females		Males		Females	
					Under 21 years	21 years and over	Under 21 years	21 years and over	Under 21 years	21 years and over
Number										
No. 1.....	168	125	43	163	44	119	27	96	17	23
No. 2.....	450	360	90	446	142	304	90	268	52	36
No. 3.....	592	459	133	591	177	414	96	362	81	52
No. 4.....	403	311	92	397	67	330	47	259	20	71
No. 5.....	471	346	125	443	110	333	66	260	44	73
No. 6.....	565	438	127	548	85	463	57	372	28	91
No. 7.....	698	540	158	698	121	577	79	461	42	116
No. 8.....	400	289	111	396	96	300	63	225	33	75
No. 9.....	333	259	74	312	71	241	44	202	27	39
No. 10.....	378	286	92	375	98	277	76	209	22	68
Total.....	4,458	3,413	1,045	4,369	1,011	3,358	645	2,714	366	644
Per cent										
No. 1.....	100.0	74.4	25.6	100.0	27.0	73.0	21.9	78.1	42.5	57.5
No. 2.....	100.0	80.0	20.0	100.0	31.8	68.2	25.1	74.9	60.0	40.0
No. 3.....	100.0	77.5	22.5	100.0	29.9	70.1	24.0	79.0	61.9	39.1
No. 4.....	100.0	77.2	22.8	100.0	16.9	83.1	15.4	84.6	22.0	78.0
No. 5.....	100.0	73.5	26.5	100.0	24.8	75.2	20.2	79.8	37.6	62.4
No. 6.....	100.0	77.5	22.5	100.0	15.5	84.5	13.3	86.7	23.5	76.5
No. 7.....	100.0	77.4	22.6	100.0	17.3	82.7	14.5	85.4	26.6	73.4
No. 8.....	100.0	72.2	27.8	100.0	24.2	75.8	21.9	78.1	20.6	69.4
No. 9.....	100.0	77.8	22.2	100.0	22.8	77.2	17.9	82.1	40.9	59.1
No. 10.....	100.0	75.7	24.3	100.0	26.1	73.9	26.7	73.3	24.4	75.6
Total.....	100.0	76.6	23.4	100.0	23.1	76.9	19.2	80.8	36.2	63.8

Nearly a fourth of all unemployed persons—almost a fifth of the males and more than a third of the females—were reported as under 21 years of age. Owing to lack of similar information on age for all persons covered in the survey, it is impossible to state accurately the percentage unemployed in each age group, but a comparison of these proportions with similar estimates based on the 1920 census of occupations indicates that unemployment was relatively more severe among young persons. According to estimates based upon the 1920 census, about 15 per cent of all persons reporting a gainful occupation were under 21 years of age; of the males approximately 11 per cent, and of the females nearly 25 per cent, were under 21. In each case these proportions were substantially less than the proportions of unemployed persons in this age group, as shown in Table 19, so that unemployment was apparently much more severe among those under 21 years of age than among those 21 years of age and over. These data, unfortunately, do not help to test the assertion so frequently made that unemployment in recent years has been particularly severe among the "older" workers—over 45 years of age—since detailed information on the age of the unemployed was not collected.

Reasons for Unemployment

WITH A VIEW to determining as accurately as possible the causes of unemployment, and especially to discover how many of the unemployed were unwilling to work or were indifferent to employment opportunities, the enumerators were requested to record the reason which, in their judgment, was actually responsible for each instance of unemployment, rather than to depend entirely upon the statements of the families interviewed.⁴

TABLE 20.—Reasons for unemployment, by district

District	Number of unemployed persons	Per cent of all idle workers unemployed for each specified reason					
		Total	Unable to find work ¹	Sickness	Superannuation	Indifference	Other reasons
No. 1.....	215	100.0	78.2	11.6	5.1	4.7	0.4
No. 2.....	604	100.0	74.5	13.4	5.2	6.6	.3
No. 3.....	759	100.0	78.0	11.9	3.7	5.9	.5
No. 4.....	567	100.0	72.3	17.1	5.8	3.0	1.8
No. 5.....	654	100.0	72.2	16.5	5.2	5.0	1.1
No. 6.....	754	100.0	75.4	14.9	3.6	4.1	2.0
No. 7.....	865	100.0	80.9	10.1	6.2	1.9	.9
No. 8.....	582	100.0	71.0	17.4	5.8	3.6	2.2
No. 9.....	441	100.0	75.5	16.3	5.7	2.3	.2
No. 10.....	523	100.0	72.3	13.9	4.6	6.5	2.7
All districts.....	² 5,964	100.0	75.2	14.2	5.0	4.3	1.3

¹ Includes also such reasons as "slack season," "laid off," "work irregular," etc.

² Does not include 146 persons for whom data on reasons for unemployment were not given.

An analysis of the principal causes of unemployment is shown in Table 20 for 5,964 of the 6,110 unemployed persons in the 10 districts. Inability to find work was the predominant reason for unemployment in all of the districts and accounted for more than 75 per cent of the unemployment in the entire city. Thus, an estimated total of some 72,700 of Philadelphia's wage earners, or 7.8 per cent of all persons usually employed, were out of work at the time the survey was made because they were unable to find jobs. It is of some significance to note that, although total unemployment in the spring of 1929 was about as great as in 1915, when the earlier survey was made, the proportion of all workers unable to find work amounted to only 7.8 per cent, as compared with 8.5 per cent in 1915.⁵ Hence, lack of work appears to have been more pronounced in 1915 than in the spring of 1929.

Sickness was responsible for 14.2 per cent of the unemployment in the city, and superannuation or old age for 5 per cent, despite the fact that all persons who had definitely retired were eliminated from the latter group. It is interesting to note that only 4.3 per cent of the unemployed, or about 0.4 per cent of all persons usually occupied, were reported as out of a job owing to indifference or unwillingness to work. Assuming this proportion to be representative, approximately 4,000 of the estimated total of 96,900 unemployed persons were out of work because they were lazy or indifferent to

⁴ See chapter 1.

⁵ U. S. Bureau of Labor Statistics, Bul. No. 195: Unemployment in the United States, p. 78.

employment opportunities. Only 5 out of the total of 6,110 unemployed, or one-tenth of 1 per cent, reported that they were out of work because of a strike.

Variations between districts in the reasons for unemployment appear to be without any easily explainable significance. More than 80 per cent of the unemployed were unable to find work in district 7, where unemployment was heavy, while only 71 per cent reported this reason in district 8, which experienced comparatively light unemployment. Sickness as a cause of idleness ranged from 17.4 per cent to 10.1 per cent, while superannuation accounted for only 3.6 per cent of the unemployment in district 6 and for 5.8 per cent in districts 4 and 8. Only 1.9 per cent of those without jobs in district 7, where unemployment was much above the city average, were reported as indifferent to work opportunities, while in district 2, where unemployment was not excessive, 6.6 per cent were disinclined to work.

In Table 21 are shown the reasons for unemployment in each of the principal occupations. Manufacturing, building trades, and "general" occupations, which include chauffeurs, helpers, and laborers, showed the largest proportions unable to find work, while in agriculture and personal and professional service, scarcity of jobs was relatively less important as a cause of unemployment. In the latter group of occupations, where considerable numbers of women are employed, sickness accounted for an unusually large amount of unemployment, as was also true for agriculture. Old age and indifference were responsible for only a small amount of unemployment in most of the occupations, but were particularly important in agriculture and in the casual labor group which reported no regular occupations, and in the group for which no information on occupations could be obtained.

TABLE 21.—Reasons for unemployment, by occupations

Occupation	Number of unemployed persons	Per cent of all idle workers unemployed for each specified reason					Other reasons
		Total	Unable to find work	Sickness	Superannuation	Indifference	
Manufacturing.....	2,767	100.0	76.5	14.4	4.4	3.8	0.9
Trade and transportation.....	1,238	100.0	74.6	15.6	5.0	3.4	1.4
Building trades.....	739	100.0	77.6	11.4	5.1	5.4	.5
Personal and professional service.....	563	100.0	72.5	16.9	4.5	3.6	2.5
General.....	526	100.0	83.2	10.2	1.2	3.9	1.5
Agriculture.....	23	100.0	43.4	26.1	17.4	13.1	-----
No regular occupation.....	67	100.0	66.2	13.8	-----	20.0	-----
Unspecified.....	187	100.0	40.7	13.1	30.6	11.9	3.7
All occupations.....	6,110	100.0	75.2	14.2	5.0	4.3	1.3

Time Lost by Unemployed Since Last Regular Job

THE SEVERITY of unemployment is measured not alone by the number of workers out of a job at a given time but by the duration of their idleness. For this reason the enumerators endeavored to ascertain from each unemployed person the length of time lost since his last regular job. For reasons stated in chapter 1, the "time

lost since last regular work" was believed to provide a more adequate measure of the "intensity" of unemployment than "time lost since last work of any kind."

TABLE 22.—*Time lost since last regular job, by all unemployed persons, by length of time*

Length of time	All unemployed persons		Per cent of all persons usually employed
	Number	Per cent	
1 day and over.....	1 6, 110	100. 0	10. 4
More than—			
1 week.....	5, 573	95. 8	9. 9
1 month.....	4, 480	77. 0	8. 0
2 months.....	3, 670	63. 1	6. 5
3 months.....	2, 944	50. 6	5. 3
4 months.....	2, 443	42. 0	4. 4
5 months.....	2, 103	36. 1	3. 8
6 months.....	1, 661	28. 5	3. 0
7 months.....	1, 508	25. 9	2. 7
8 months.....	1, 397	24. 0	2. 5
9 months.....	1, 286	22. 1	2. 3
10 months.....	1, 211	20. 8	2. 2
11 months.....	1, 200	20. 6	2. 1
1 year.....	676	11. 6	1. 2

¹ Includes 292 unemployed who did not specify time lost since last regular job.

In Tables 22 and 23 this information on duration of unemployment is shown for the city as a whole and for each of the 10 school districts. Generally speaking, more than three-fourths of the total number of unemployed workers had been without regular work for more than a month, approximately half of them for more than three months, and between a third and a fourth for more than six months. In the case of 11.6 per cent of the unemployed persons, or 1.2 per cent of all persons usually employed, more than a year had elapsed since the last regular job.

Applying these same percentages on the assumption that 10.4 per cent of the city's wage earners, or approximately 96,900 persons, were unemployed at the time of the survey, 49,000 had been without a regular job for more than three months, 27,600 for more than six months, and 11,200 for more than a year.

TABLE 23.—*Time lost since last regular job by all unemployed persons, by school district, and length of time*

District	Number of unemployed persons	Per cent of all idle workers unemployed for more than—					
		One week	One month	Two months	Three months	Six months	One year
No. 1.....	222	96. 3	75. 5	64. 4	53. 7	32. 4	7. 9
No. 2.....	616	96. 9	73. 1	61. 0	49. 5	27. 8	11. 5
No. 3.....	772	97. 6	82. 9	66. 9	49. 5	24. 7	6. 8
No. 4.....	580	94. 9	77. 1	65. 6	51. 1	27. 5	11. 5
No. 5.....	672	95. 0	74. 4	62. 5	49. 5	28. 2	11. 5
No. 6.....	763	96. 6	76. 3	59. 9	49. 4	24. 9	9. 7
No. 7.....	900	95. 7	77. 4	63. 1	50. 0	29. 4	11. 3
No. 8.....	589	95. 5	80. 8	68. 7	58. 0	38. 1	20. 8
No. 9.....	465	95. 6	78. 7	64. 3	55. 0	34. 5	15. 4
No. 10.....	531	93. 0	71. 3	54. 6	43. 9	23. 5	10. 7
Total.....	6, 110	95. 8	77. 0	63. 1	50. 6	28. 5	11. 6

The time lost since last regular work varied widely among the different districts. In district 3, for example, where unemployment was more severe than in any other district, the proportion of unemployed without regular work for more than month was also greater than in other districts, but only 6.8 per cent of the idle workers—fewer than in any other district—had been without a regular job for more than a year. On the other hand, in districts 8 and 9, unemployment was comparatively slight and much beneath the city average, but unusually large proportions of the unemployed in these districts had been without regular work for more than a year.

It can not be assumed, however, that the extent and duration of unemployment are inversely related, since district 1, with light unemployment, also had an unusually small proportion of unemployed without regular work for more than a year. Comparison of the duration of unemployment in the various districts with the causes of unemployment as shown in Table 20 suggests the probability that duration is greater in districts where sickness and superannuation are relatively more important reasons for idleness. Thus in districts 1, 3, and 7, with comparatively few out of work because of sickness and old age, the proportion unemployed for more than a year is below the average. In districts 4, 5, 8, and 9, where sickness and superannuation account for a larger share of unemployment, the proportions out of work for more than a year were relatively heavier.

TABLE 24.—*Time lost since last regular job, by persons unemployed, for specified reasons*

Length of time	Per cent of persons unemployed for—			
	All reasons	Unable to find work	Sickness	Superannuation
1 day and over.....	100.0	100.0	100.0	100.0
More than—				
1 week.....	95.8	95.8	95.7	99.2
2 weeks.....	90.0	89.7	90.9	98.0
3 weeks.....	85.0	84.2	87.0	97.2
1 month.....	77.0	75.6	80.0	95.2
2 months.....	63.1	60.2	68.7	93.6
3 months.....	50.6	46.0	61.2	88.8
4 months.....	42.0	36.2	56.1	85.7
5 months.....	36.1	29.7	52.5	82.9
6 months.....	28.5	21.8	46.3	79.3
7 months.....	25.9	18.9	44.3	78.9
8 months.....	24.0	16.8	42.9	77.7
9 months.....	22.1	14.7	41.3	76.1
10 months.....	20.8	13.4	40.0	76.1
11 months.....	20.6	13.3	39.5	74.9
1 year.....	11.6	5.8	26.6	55.4

This relationship is illustrated more clearly in Table 24, showing time lost since last regular work by workers unemployed for various reasons. Slightly more than half of all the unemployed had been out of regular work for more than three months, as compared with only 46 per cent of those unable to find work, while 61.2 per cent of those reporting sickness as the cause of idleness, and 88.8 per cent of the superannuated, had been without a regular job for the same

period. Only 5.8 per cent of the wage earners unable to find work—half the percentage of all unemployed persons—had been without regular employment for more than a year, whereas 26.6 per cent of those unemployed because of sickness and 55.4 per cent of the superannuated reported more than a year's time since the last regular job.

Table 25 shows the time elapsed since the last regular work by males and females and by white persons and negroes who were reported as unemployed because of inability to find work. Duration of unemployment is noticeably greater among males than among females, with 6.2 per cent of the former and 4.1 per cent of the latter without regular work for more than a year. Of the females, 67.9 per cent had been out of work for more than a month, 37.7 per cent for more than three months, and 17.6 per cent for more than six months. The proportion of male workers out of work for the corresponding periods—77.8 per cent, 48.3 per cent, and 23 per cent, respectively—was greater in each instance.

Although as has been indicated, unemployment among negroes was much more severe than among white persons, the average duration of unemployment among the latter was much greater than among the former. Only 2.1 per cent of the negroes, less than a third as many as the proportion of white persons, had been unable to find work for more than a year. Nearly a fourth of the latter group had been without regular work for more than six months, while only 16.3 per cent of the negroes reported an equally long period without a job.

TABLE 25.—*Time lost by persons unable to find work since last regular job, classified by sex and race*

Length of time	Per cent of persons unable to find work				
	Total	Males	Females	White persons	Negroes
1 day and over.....	100.0	100.0	100.0	100.0	100.0
More than—					
1 week.....	95.8	96.2	94.5	95.9	95.0
2 weeks.....	89.7	90.7	86.7	90.0	87.8
3 weeks.....	84.2	85.4	79.9	84.6	81.4
1 month.....	75.6	77.8	67.9	76.0	71.9
2 months.....	60.2	62.5	52.0	60.6	58.0
3 months.....	46.0	48.3	37.7	46.3	43.5
4 months.....	36.2	38.4	28.6	36.8	33.0
5 months.....	29.7	31.7	22.6	30.6	25.1
6 months.....	21.8	23.0	17.6	22.9	16.3
7 months.....	18.9	19.7	16.1	20.0	13.5
8 months.....	16.8	17.2	15.0	17.7	11.9
9 months.....	14.7	15.2	12.7	15.5	10.3
10 months.....	13.4	14.0	11.1	14.2	9.0
11 months.....	13.3	13.8	11.0	14.0	8.9
1 year.....	5.8	6.2	4.1	6.6	2.1

Unfortunately, it was not possible to obtain more specific data on age than whether the unemployed persons were under 21 years of age or 21 years of age and over. As was shown in Table 19, nearly a fourth of all persons unable to find work were under 21 years of age and comparison with estimates based on census data showed unemployment to be relatively more severe among the

younger group than among those 21 years of age and over. The duration of unemployment among this younger group as indicated by Table 26 is, however, much less than among the older workers. Of those under 21, 34 per cent had been out of work more than three months, and only 1.7 per cent for more than a year as compared with 49.5 per cent and 7 per cent, respectively, for the older workers. It is also quite noticeable that in both age groups, the male workers had been out of work for relatively longer periods than the female workers. Of the persons under 21, 37.2 per cent of the males and only 28.4 per cent of the females had been out of work more than three months, while 14.3 per cent of the males had been without regular work for more than six months, as compared with only 10.9 per cent of the females.

Of the total number of males over 21 unable to find work, 51 per cent had been without a regular job for more than three months, 25.3 per cent for more than six months, and 7.3 per cent for more than a year, as compared with 43 per cent, 21.5 per cent, and 5.6 per cent, respectively, for female workers over 21 years of age.

TABLE 26.—*Time lost since last regular job by persons unable to find work, classified by age*¹

Length of time	Persons under 21 years			Persons 21 years and over		
	Total	Males	Females	Total	Males	Females
1 day and over.....	100.0	100.0	100.0	100.0	100.0	100.0
More than—						
1 week.....	94.2	95.2	92.5	96.2	96.4	95.7
2 weeks.....	85.1	88.1	82.5	90.7	91.2	88.9
3 weeks.....	78.4	80.6	74.7	85.8	86.5	82.7
1 month.....	66.4	70.8	58.8	78.1	79.4	72.9
2 months.....	48.8	53.2	41.2	63.5	64.8	58.1
3 months.....	34.0	37.2	28.4	49.5	51.0	43.0
4 months.....	24.5	26.8	20.6	39.6	41.0	33.2
5 months.....	19.0	21.2	15.3	32.7	34.2	26.5
6 months.....	13.0	14.3	10.9	24.5	25.3	21.5
7 months.....	10.4	11.5	8.4	21.6	21.8	20.5
8 months.....	8.7	9.3	7.8	19.3	19.3	19.3
9 months.....	7.2	8.0	5.8	16.9	17.0	16.7
10 months.....	6.8	7.4	5.8	15.5	15.7	14.6
11 months.....	6.5	7.2	5.3	15.3	15.5	14.4
1 year.....	1.7	1.8	1.7	7.0	7.3	5.6

¹ Includes a total of 1,011 persons under 21 and 3,358 persons 21 years and over; 654 males under 21 and 2,714 males 21 years and over; 366 females under 21 and 644 females 21 years and over.

CHAPTER 3

Unemployment in School Districts of Philadelphia

ANALYSIS of the results of the survey for Philadelphia as a whole indicated striking variations in the extent and severity of unemployment existing in various sections of the city. Owing to the existence of these variations, which reflect the diversity in the economic, racial, and occupational characteristics, it was believed advisable to extend the analysis in some detail to each of the 10 school districts in which the survey was made, even though this involved some repetition of facts already presented. Moreover, there is local need for more detailed information which may help to reveal the sections in which unemployment appears to be most severe and in greatest need of relief. While it is true that even within the various districts there exists a considerable range of economic and occupational levels, these districts are far more homogeneous and uniform in character than the entire city.

Reference to Chart 1 will show the approximate location of the blocks in each district which were canvassed in the survey, while Tables 6 and 15 contain certain information showing variations in family size, income, occupations, and racial and economic character of the population in the 10 districts. Map 3 shows the location of each district, the average per capita income calculated on the basis of the Cawl survey, and the percentage of persons interviewed in the unemployment survey who were reported as unable to find work. It is immediately apparent that unemployment was most severe in the densely populated sections—the southern and eastern parts of the city where average income was low—while in the better residential parts, such as West Philadelphia, Germantown, and Overbrook, a much smaller proportion were unable to find work. Generally speaking also, unemployment was found to be more extensive in sections with a large proportion of industrial workers and among the foreign-born and colored population.

District 1

THIS DISTRICT includes the southern part of West Philadelphia extending south from Market Street and west from the Schuylkill River to the city limits. The southeastern part of the district, bordering on the Schuylkill River, contains much swampy and vacant land and a considerable industrial development, but it is sparsely populated, with a generally low-grade residential development. The Eastwick section in the extreme southwestern part of this district is only slightly developed residentially, most of the area being vacant land or devoted to truck farming.

The densely populated northern and northwestern parts of district 1 are a high-grade residential district, most of the population being native white engaged in clerical and mercantile pursuits. The average per capita income of the families covered by the unemployment survey estimated on the basis of the Cawl survey, was \$769,

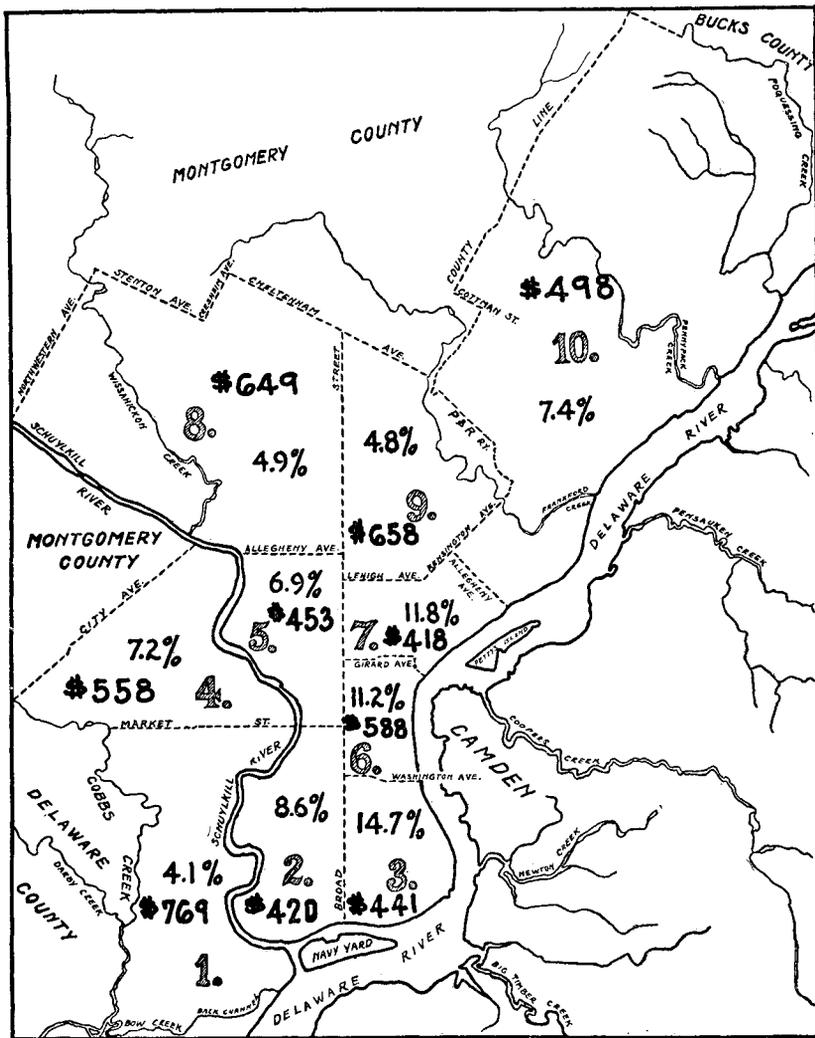


CHART 4.—PERCENTAGE OF PERSONS IN EACH SCHOOL DISTRICT UNABLE TO FIND WORK

higher than for any other school district and considerably above the city average of \$550.

Unemployment was less severe here than in any of the other school districts, a fact which is particularly significant in view of the relatively high economic status of the inhabitants. Of the 4,222 persons usually employed in the families interviewed, only 222, or

5.3 per cent, were unemployed at the time the survey was made. As indicated in Table 27 (p. 51), this is little more than half the proportion for the city as a whole, while the percentage unable to find work, but among the white persons and the negroes, was also substantially less than in most other parts of the city. About three-fourths of the unemployed had lost more than a month's time since the last regular job, but only 7.9 per cent of the total, as compared with 11.6 per cent for the entire city, reported no regular work for more than a year.

Inability to find a job, as in other districts, was the principal cause of unemployment, nearly four out of five unemployed workers reporting this reason. Sickness, with only 11.6 per cent as compared with 14.2 per cent for the city as a whole, was less important as a cause of unemployment than in most other districts. Since this district is nonindustrial in character, by far the largest proportion of the unemployed were engaged in trade or clerical occupations. In general, this district, with better-than-average homes occupied chiefly by native white population having high incomes, experienced much less severe unemployment than did most other parts of Philadelphia.

District 2

THE WESTERN part of South Philadelphia, between Broad Street and the Schuylkill River and south from Market Street to the city limits, is included in this district, which presents a considerable diversity of economic and racial characteristics. In the extreme south and west, along the Schuylkill River, industrial and shipping activities are important, while the residential development, with foreign-born and negro population predominating is poor in character. Somewhat similar in economic and racial character is an area in the north central part of this district included between South and Moore Streets and extending west from Broad Street nearly to the Schuylkill. Directly to the south of this section and extending to Pollock Street there is a residential area of much better character with a predominantly native-white population of a considerably higher economic status. In the northern part of this district, extending a few blocks south of Market Street, the residential character is rather poor except for the presence of a number of high-grade apartments.

Despite the few striking exceptions noted above it can be said that the major portion of district 2 is characterized by a rather poor population with a predominance of foreign born and negroes, engaged for the most part in industrial pursuits. The average family size of 4.8 is larger than for the city as a whole, and the estimated per capita income, based on the Cawl survey, is \$420, less than for any other district except district 7, which includes a large part of the Kensington mill section.

Unemployment in this district, amounting to 11.6 per cent of those usually employed, was somewhat higher than the average for Philadelphia, and was exceeded in only three other districts. Within the district, however, local variations existed, and unemployment

varied from as low as 6 to 8 per cent in a few blocks in the better residential section to nearly 20 per cent in one of the poorer blocks. The proportion of workers reported as unable to find jobs was also higher than in most other parts of the city, although only 7.4 per cent of the negroes in this district were unable to find work, as compared with 11.8 per cent for the entire city.

About half of the unemployed had had no regular work for more than three months and somewhat more than a tenth had been without a regular job for more than a year. Most of this latter group suffering from a long period of unemployment, however, were unemployed because of sickness or old age rather than from inability to find work. Among the total number of unemployed, nearly three-fourths reported themselves as unable to find work.

Nearly half of the unemployed—298 out of 616—were regularly engaged in manufacturing industries, particularly in the clothing and millinery trades. Unemployment appears to have been most severe among men; a majority of the unemployed females were under 21 years of age.

District 3

DISTRICT 3 includes the eastern part of South Philadelphia, extending south from Washington Avenue and east from Broad Street to the Delaware River. This district, like district 2, has a generally poor residential character, the northern part being densely populated chiefly with foreign born engaged in industrial activities. The southern half of the district, especially the territory along the Delaware River, is an industrial and shipping area, with a scattered residential development generally poor in character and containing a preponderance of foreign born and negroes. Further evidence of the economic and social status of the people in district 2 is seen in the fact that the average size of the families interviewed, which is believed to be typical, is 5.3 persons, noticeably larger than that of any other district. An average family income of \$2,321, somewhat higher than might be expected from the general character of the district, was indicated by the Cawl survey, but owing to the large family size, the average per capita income was only \$441, much below the city average.

Unemployment was much more serious here than in any other district; 18.9 per cent of the 4,088 usually employed persons enumerated were reported as out of work for all reasons, while 14.7 per cent of the total were unable to find work. Lack of work was, of course, the outstanding reason for unemployment, sickness and old age being relatively less important than in most other districts. Nearly one-fourth of the negroes enumerated were unable to find jobs, as compared with 11.8 per cent of the city as a whole. Moreover, idleness was pronounced in all parts of the district. In none of the blocks enumerated were less than 10 per cent of the workers unemployed, while in one populous block, 30 per cent were idle, and in over half of the blocks 20 per cent or more were out of work.

Despite the heavy unemployment indicated by the survey the average duration of unemployment appeared to be somewhat shorter than in other sections. Thus, although 82.9 per cent of the unemployed in this district had been without regular work for more than

a month, as compared with 77 per cent for the entire city, only 6.8 per cent had been idle for more than a year, as compared with an average of 11.6 per cent for Philadelphia. Of those unemployed because they were unable to find jobs, only 3 per cent had been without regular work for more than a year.

The great majority of the unemployed were men normally engaged in manufacturing and building trades. More than a third of the unemployed manufacturing workers were ordinarily engaged in the clothing and millinery trades, with food-products and metal-working industries of secondary importance.

District 4

EXTENDING north from Market Street and west from the Schuylkill River to the city limits, this district includes the northern part of West Philadelphia and Overbrook. The upper part of this district, to the north of Lancaster and Girard Avenues, is one of the best residential sections of the city, inhabited chiefly by professional and executive people with large family incomes. In the southern part of the district, the residential character is poor, the economic and occupational status showing gradual improvement from the Schuylkill River to the city limits. Average family incomes naturally show a great variation in different parts of the district, much higher incomes prevailing in the western and northern sections. The general average family income of \$2,496 and the per capita income of \$558 are close to the averages for the entire city.

Unemployment was slightly less in this district than in the city as a whole. Of the 5,833 workers enumerated in the survey, 9.9 per cent were reported as idle and 7.2 per cent as unable to find jobs. Only 9.1 per cent of the negro workers in this district were unable to find work, as compared with 11.8 per cent for Philadelphia. Unemployment was noticeably less severe in the more prosperous blocks, in a few cases being as small as 3 to 4 per cent.

The average duration of unemployment in district 4 was about the same as for the city as a whole, as indicated in Table 27 (p. 51) in which percentages of workers without regular work for varying periods of time are given.

It is significant from an examination of the reasons given by the unemployed for their idleness in this comparatively prosperous district that inability to find work is of less importance and sickness of considerably more importance than in the city as a whole. Only 3.9 per cent of the number of workers who could not find work had been without regular employment for more than a year.

This district is noticeably less industrial in character than the densely populated districts of South Philadelphia. Only 146 of the 580 unemployed persons were ordinarily engaged in manufacturing, as compared with 46.7 per cent for the city as a whole, while 20.2 per cent and 17 per cent, respectively, of the workers reported their usual occupations as "trade and transportation" and "personal and professional." Almost a fourth of the persons unable to find work were women, but girls under 21 constituted a much smaller proportion of the total than was true in South Philadelphia.

District 5

THIS DISTRICT, extending north from Market Street to Allegheny Avenue and west from Broad Street to the Schuylkill River, is of only fair to medium residential character. The population is chiefly native and foreign-born white, with some negroes in certain sections. There is some industrial development within the district and the population is engaged chiefly in industrial and mercantile occupations. Parts of this district show a per capita income somewhat lower than the average of \$453 for the entire district, while in the extreme southern part and in a few limited areas, the income reported by the Cawl survey is considerably above the average.

Unemployment was lighter in this district than in the city as a whole, 9.5 per cent of the workers usually employed being out of work at the time the survey was made. Among both white persons and negroes, the proportion of workers unable to find jobs—6 per cent and 8.5 per cent, respectively—was smaller than in the city as a whole. The severity of unemployment varied widely among the separate blocks in the district, one block showing as little as 5.2 per cent unemployed, while 7 of the 20 blocks covered in the enumeration each had more than 12 per cent of their workers unemployed.

Nearly three-fourths of the unemployed workers in the district had been without a regular job for more than a month, almost half for more than three months, and 11.5 per cent—about the same proportion as for the city as a whole—had been out of work over a year. Inability to find work accounted for 72.2 per cent of the unemployment and sickness was given as the cause of 16.5 per cent. The great majority—95 per cent—of those unable to find work had held regular jobs at some time during the previous year, however. Less than a fourth of the unemployed were women, of whom more than a third were under 21 years of age.

Manufacturing industries ordinarily employ nearly half of the total number unemployed, machinist and metal worker being the most important occupations among this group. The textile trade occupations were second in importance, while most of the unemployed workers in trade and transportation were classified as salespeople, shipping and stock clerks, and office help.

District 6

A CONSIDERABLE part of the central business section in Philadelphia is included in district 6, which extends between Girard and Washington Avenues, east from Broad Street to the Delaware River. Residential development is found chiefly in the northern and southern parts of the district and is generally poor in character. Foreign-born predominate in the population, with a considerable number of negroes in the southern part of the district. In the extreme northern part there is intensive industrial development, and throughout the district the predominating occupations of the people are industrial. An average per capita income of \$588 in the families interviewed throughout the district is indicated by the Cawl survey, but family incomes are noticeably lower in the northern mill section.

In this district 14.8 per cent of the workers were out of work, a larger proportion than in any other district except district 3 in South Philadelphia. Of the total number of white workers, 8.9 per cent, as compared with 6.8 per cent for the city, were unable to find work, and 13.9 per cent of the negroes were out of work for the same reason. Unemployment was heavy in nearly all parts of the district, but particularly severe in the densely populated blocks. In one block, 22.5 per cent were out of work, and in each of six blocks, which included in the aggregate two-thirds of the people in the district covered in the survey, more than 15 per cent of the workers were unemployed.

The average duration of unemployment in this district was slightly less than in the city as a whole. Approximately a fourth of the unemployed had been without regular work for more than six months and 9.7 per cent for more than a year, as compared with 28.5 per cent and 11.6 per cent, respectively, for the entire city. Only 3.6 per cent of the workers unable to find work had lost more than a year's time since their last regular jobs.

Of the 763 unemployed enumerated in this district, the largest single group, amounting to about a fifth of the total, were casual laborers. A third of the unemployed were engaged in building trades and manufacturing; of the latter, clothing and millinery and metal manufacture were the most important industries.

District 7

INCLUDING a large part of the Kensington mill section and the shipbuilding district along the Delaware, district 7 is one of the most densely populated in Philadelphia. The district lies east of Broad Street and extends from Girard Avenue on the south to Lehigh, Kensington, and Allegheny Avenues on the north and east. With the exception of a small section along Broad Street in the northwestern corner, the residential character is only fair and the economic status of the population lower than in most other parts of the city. The residents generally are native white, engaged in industrial occupations, most of them being employed by the textile mills and other factories of this section. The average per capita income of the families in this district was \$418, less than for any of the other nine school districts.

Only in districts 3 and 6 was unemployment more severe than in this district, in which 900 persons, or 14.6 per cent of the 6,147 workers covered in the survey, were out of work. That this condition is fairly widespread in this section is apparent from the fact that, in 18 of the 22 blocks canvassed in the survey, unemployment was above the average of 10.4 per cent for the entire city. In one block 26 per cent were out of work and in five blocks 20 per cent or more.

The duration of unemployment here appears to have been about the same as for the city as a whole, but of those unable to find jobs, 6.9 per cent, as compared with only 5.8 per cent for the entire city, had been without regular work for more than a year. This figure is particularly important in view of the fact that 80.9 per cent of the idle workers, a larger proportion than in any other district,

were unemployed because of lack of work. Only 10.1 per cent, as compared with 14.2 per cent for the city, reported sickness as the cause of unemployment.

The district is predominantly industrial in character, 428 of the 900 unemployed being usually employed in manufacturing and 87 in building. A third of the manufacturing workers were engaged in the various branches of the textile industry; machinist and metal worker were second in importance among the industrial occupations.

District 8

THIS DISTRICT, including the northwestern part of Philadelphia, north of Allegheny Avenue and west of Broad Street, is one of the largest in area in the city. It displays a great diversity in the residential character of various sections, ranging from the mill section of Manayunk to the high-grade residences of Germantown and Chestnut Hill. The Manayunk section, in which there are numerous factories and mills and a dense population of industrial workers, mostly foreign born, is a poor residential section with comparatively small family incomes. Adjacent to and north of Manayunk is Roxborough, which is of a somewhat better residential character, with considerable vacant land. To the west and north of Roxborough and Manayunk are the fine residential districts of Germantown and Chestnut Hill. In these districts the bulk of the population is native born; professional and better-class clerical occupations predominate, and the average family income is far above that in nearly all other parts of the city. The portion of the district directly west of Broad Street is undergoing rapid development at the present time, and is generally of a good residential character, with family incomes above the average for the entire city, but lower than in Germantown and Chestnut Hill.

Generally speaking, district 8, with an average per capita income of \$649 among the families included in the survey, together with districts 1 and 4, contains the largest proportion of the higher income groups and better-grade residences in the city.

Average unemployment in this district, amounting to 6.9 per cent as compared with 10.4 per cent for the city as a whole, somewhat conceals the striking disparity between various parts of the district. In one block in Chestnut Hill, for instance, populated by native-white families with 371 workers engaged chiefly in professional and executive work, only five persons, or 1.3 per cent, were reported as unemployed. In one of the densely populated blocks in Manayunk, on the other hand, 17.7 per cent of the people usually employed were out of work. Generally speaking, the same situation prevailed throughout the district, the poorer sections with a preponderance of foreign-born industrial workers having the greatest unemployment, although even in these blocks, unemployment was less severe than in Kensington or South Philadelphia.

The average duration of unemployment, however, was noticeably greater here than in other parts of the city. In Philadelphia, as a whole, 77 per cent of the unemployed had been without regular work for more than a month, 28.5 per cent for more than six months,

and 11.6 per cent for more than a year, while in this district the percentages were 80.8, 38.1, and 20.8, respectively.

Moreover, among the 71 per cent of the unemployed who were unable to find work, 15 per cent—a much larger proportion than in any other district—had been without a regular job for more than a year. Sickness accounted for an unusually large proportion of the unemployment, 17.4 per cent, as compared with 14.2 per cent for the entire city.

Most of the unemployed were ordinarily engaged in manufacturing. Of these 329 workers, 125 reported their regular occupations in various branches of the textile industry, which is concentrated to a great extent in the Manayunk and the Kensington sections. The metal-trade occupations, reported by 76 of the idle workers, were second in importance.

District 9

EXTENDING EAST from Broad Street and north and west from Lehigh and Kensington Avenues, this district in the north-central part of the city is generally of a fair or medium residential character except in the Olney and Oak Lane sections, where the economic status of the population is considerably above that of the rest of the district. In these latter sections families are small and family incomes are among the highest in any section of the city, and a considerable proportion of the population is engaged in professional and mercantile pursuits. In the southern and eastern parts of the district, the residential character and economic status tend to decline, a majority of the people in this densely populated section being engaged in industrial occupations. Throughout the district native-born population predominates with some foreign born, however, and a few negroes in certain sections.

The average per capita income of \$658 in the district is considerably higher than for the city as a whole, but tends somewhat to obscure the fact that incomes in the northern part are above, and those in the southern part below, this figure.

Unemployment is noticeably less pronounced here than in most other parts of the city, with only 6.3 per cent idle for all causes, and 4.8 per cent unable to find work. Moreover, there are but a few blocks among the 18 covered in the survey which show much variation from the average for the district. In only one block, which showed 14.3 per cent idle, were more than 9 per cent of the workers out of work, while only three blocks reported less than 3 per cent unemployment. In most of the other blocks unemployment ranged from 4 to 8 per cent.

A fairly large proportion of the unemployed—15.4 per cent—however, had been without regular work for more than a year, while 9.9 per cent of those unable to find work had been out of a job for more than a year. Three-fourths of the idle workers reported inability to find work as the cause of their unemployment, while, as in other better-class districts, sickness was a more important cause of unemployment than in the city as a whole.

Industrial occupations predominate among the unemployed in this district, nearly a fourth of the total being usually employed

in the textile industries. Other important occupations and industries reported by the unemployed include metal trades, clothing and millinery, food products, and clerical and sales work.

District 10

BY FAR the largest of all the districts in area, district 10 comprises all of northeastern Philadelphia, extending northeast from Frankford Creek to the city limits. Despite its large area, the population is smaller than that of any other district, and the entire northern half, with the exception of Bustleton, consists almost entirely of farms and vacant land. The economic status of the population and the residential character are only fair or poor in the Tacony section close to the Delaware River, where there is considerable industrial development, but improves somewhat in the central part, which includes the "northeast section" and part of Frankford. Lawndale and Fox Chase, farther to the west, and Bustleton, to the north, have a fairly high-grade residential character and family incomes above the average for the district as a whole.

The population of this district consists chiefly of native-born white persons, but includes some foreign born and negroes. Industrial and clerical occupations predominate, but in the better sections considerable numbers are engaged in professional and executive work. The average income of \$498, based on the Cawl survey, is somewhat lower than might be expected, no doubt owing to the fact that the group of families canvassed in the survey included a large proportion from the poorer sections.

Variations in the economic character of different parts of this district are reflected in differences in the severity of unemployment. Average unemployment in the district amounted to 10.3 per cent—about the same as in the city as a whole—but there was a range from less than 6 per cent in 7 of the 26 blocks included in the survey to more than 20 per cent in 3 of the blocks.

Only 71.3 per cent of the unemployed had been without regular work for more than a month as compared with 77 per cent for the entire city, 43.9 per cent for more than three months, as compared with 50.6 per cent for the city, and 23.5 per cent for more than six months, as compared with 28.5 per cent for the city as a whole. These figures would seem to indicate that in this district a relatively large number of the idle workers had lost their jobs during the two or three months immediately preceding the time the survey was made.

A somewhat smaller proportion than in most other parts of the city—72.3 per cent—reported inability to find work as the cause of their idleness, while indifference was responsible for a relatively large amount of the total unemployment.

Manufacturing occupations were by far the most important among the unemployed in this district, 331 of the total of 531 unemployed being engaged in them. Nearly half of the unemployed manufacturing workers ordinarily worked in the textile and metal trades and a substantial proportion of the total were engaged in the building industry.

TABLE 27.—Unemployment statistics in Philadelphia, and by district, in April, 1929

Item	Phila- delphia	District				
		No. 1	No. 2	No. 3	No. 4	No. 5
Number of families interviewed.....	31, 551	2, 445	2, 738	2, 114	3, 075	3, 248
Average size of family.....	4. 4	4. 2	4. 8	5. 3	4. 5	4. 9
Average family income.....	\$2, 440	\$3, 208	\$2, 035	\$2, 321	\$2, 496	\$2, 210
Average per capita income.....	\$550	\$769	\$420	\$441	\$558	\$453
<i>Unemployed persons</i>						
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Total unemployment.....	10. 4	5. 3	11. 6	18. 9	9. 9	9. 5
Unable to find work.....	7. 8	4. 1	8. 6	14. 7	7. 2	6. 9
White persons unable to find work.....	6. 8	4. 0	7. 9	14. 0	5. 5	6. 0
Negroes unable to find work.....	11. 8	6. 1	7. 4	24. 5	9. 1	8. 5
Time lost since last regular job:						
1 day or more.....	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0
More than 1 month.....	77. 0	75. 5	73. 1	82. 9	77. 1	74. 4
More than 3 months.....	50. 6	53. 7	49. 5	49. 5	51. 1	49. 5
More than 6 months.....	28. 5	32. 4	27. 8	24. 7	27. 5	28. 2
More than 1 year.....	11. 6	7. 9	11. 5	6. 8	11. 5	11. 5
Reasons for unemployment:						
All reasons.....	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0
Unable to find work.....	75. 2	78. 2	74. 5	78. 0	72. 3	72. 2
Sickness.....	14. 2	11. 6	13. 4	11. 9	17. 1	16. 5
Old age.....	5. 0	5. 1	5. 2	3. 7	5. 8	5. 2
Indifference.....	4. 3	4. 7	6. 6	5. 9	3. 0	5. 0
Other reasons.....	1. 3	. 4	. 3	. 5	1. 8	1. 1
Occupations:						
All occupations.....	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0
Manufacturing.....	46. 7	27. 2	50. 1	51. 8	25. 8	45. 8
Trade and transportation.....	20. 9	50. 2	21. 7	14. 5	20. 2	24. 4
Building trades.....	12. 5	15. 7	16. 3	21. 0	18. 0	9. 2
Personal and professional service.....	9. 5	4. 1	8. 9	3. 2	17. 0	10. 9
General.....	8. 9	2. 8	1. 2	8. 2	16. 5	7. 6
Agriculture.....	. 4	. 0	. 5	. 1	. 9	. 2
No regular occupation.....	1. 1	. 0	1. 3	1. 2	1. 6	1. 9
		No. 6	No. 7	No. 8	No. 9	No. 10
Number of families interviewed.....	31, 551	2, 657	3, 129	4, 922	4, 387	2, 836
Average size of family.....	4. 4	4. 0	4. 6	4. 3	3. 9	4. 4
Average family income.....	\$2, 440	\$2, 341	\$1, 939	\$2, 817	\$2, 587	\$2, 166
Average per capita income.....	\$550	\$588	\$418	\$649	\$658	\$498
<i>Unemployed persons</i>						
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Total unemployment.....	10. 4	14. 8	14. 6	6. 9	6. 3	10. 3
Unable to find work.....	7. 8	11. 2	11. 8	4. 9	4. 8	7. 4
White persons unable to find work.....	6. 8	8. 9	10. 6	4. 6	4. 0	6. 3
Negroes unable to find work.....	11. 8	13. 9	23. 0	5. 9	(¹)	29. 2
Time lost since last regular job:						
1 day or more.....	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0
More than 1 month.....	77. 0	76. 3	77. 4	80. 8	78. 7	71. 3
More than 3 months.....	50. 6	49. 4	50. 0	58. 0	55. 0	43. 9
More than 6 months.....	28. 5	24. 9	29. 4	38. 1	34. 5	23. 5
More than 1 year.....	11. 6	9. 7	11. 3	20. 8	15. 4	10. 7
Reasons for unemployment:						
All reasons.....	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0
Unable to find work.....	75. 2	75. 4	80. 9	71. 0	75. 5	72. 3
Sickness.....	14. 2	14. 9	10. 1	17. 4	16. 3	13. 9
Old age.....	5. 0	3. 6	6. 2	5. 8	5. 7	4. 6
Indifference.....	4. 3	4. 1	1. 9	3. 6	2. 3	6. 5
Other reasons.....	1. 3	2. 0	. 9	2. 2	. 2	2. 7
Occupations:						
All occupations.....	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0
Manufacturing.....	46. 7	29. 7	49. 3	57. 1	61. 2	63. 8
Trade and transportation.....	20. 9	23. 4	19. 1	24. 7	18. 3	11. 0
Building trades.....	12. 5	5. 1	10. 0	7. 5	9. 1	15. 4
Personal and professional service.....	9. 5	18. 4	8. 3	6. 9	4. 3	8. 3
General.....	8. 9	22. 6	12. 8	1. 4	3. 7	. 9
Agriculture.....	. 4	. 4	. 0	. 5	. 9	. 6
No regular occupation.....	1. 1	. 4	. 5	1. 9	2. 5	. 0

¹ Sample too small to be representative.

LIST OF BULLETINS OF THE BUREAU OF LABOR STATISTICS

The following is a list of all bulletins of the Bureau of Labor Statistics published since July, 1912, except that in the case of bulletins giving the results of periodic surveys of the bureau only the latest bulletin on any one subject is here listed.

A complete list of the reports and bulletins issued prior to July, 1912, as well as the bulletins published since that date, will be furnished on application. Bulletins marked thus () are out of print.*

Conciliation and Arbitration (including strikes and lockouts).

- *No. 124. Conciliation and arbitration in the building trades of Greater New York. [1913.]
- *No. 133. Report of the industrial council of the British Board of Trade on its inquiry into industrial agreements. [1913.]
- No. 139. Michigan copper district strike. [1914.]
- *No. 144. Industrial court of the cloak, suit, and skirt industry of New York City. [1914.]
- *No. 145. Conciliation, arbitration, and sanitation in the dress and waist industry of New York City. [1914.]
- *No. 191. Collective bargaining in the anthracite-coal industry. [1916.]
- *No. 198. Collective agreements in the men's clothing industry. [1916.]
- No. 233. Operation of the industrial disputes investigation act of Canada. [1918.]
- No. 255. Joint industrial councils in Great Britain. [1919.]
- No. 283. History of the Shipbuilding Labor Adjustment Board, 1917 to 1919.
- No. 287. National War Labor Board: History of its formation, activities, etc. [1921.]
- *No. 303. Use of Federal power in settlement of railway labor disputes. [1922.]
- No. 341. Trade agreement in the silk-ribbon industry of New York City. [1923.]
- No. 402. Collective bargaining by actors. [1926.]
- No. 468. Trade agreements, 1927.
- No. 481. Joint industrial control in the book and job printing industry. [1928.]

Cooperation.

- No. 313. Consumers' cooperative societies in the United States in 1920.
- No. 314. Cooperative credit societies (credit unions) in America and in foreign countries. [1922.]
- No. 437. Cooperative movement in the United States in 1925 (other than agricultural).

Employment and Unemployment.

- *No. 109. Statistics of unemployment and the work of employment offices in the United States. [1913.]
- No. 172. Unemployment in New York City, N. Y. [1915.]
- *No. 183. Regularity of employment in the women's ready-to-wear garment industries. [1915.]
- *No. 195. Unemployment in the United States. [1916.]
- No. 196. Proceedings of the Employment Managers' Conference held at Minneapolis, Minn., January 19 and 20, 1916.
- *No. 202. Proceedings of the conference of Employment Managers' Association of Boston, Mass., held May 10, 1916.
- No. 206. The British system of labor exchanges. [1916.]
- *No. 227. Proceedings of the Employment Managers' Conference, Philadelphia, Pa., April 2 and 3, 1917.
- No. 235. Employment system of the Lake Carriers' Association. [1918.]
- *No. 241. Public employment offices in the United States. [1918.]
- No. 247. Proceedings of Employment Managers' Conference, Rochester, N. Y., May 9-11, 1918.
- *No. 310. Industrial unemployment: A statistical study of its extent and causes. [1922.]
- No. 409. Unemployment in Columbus, Ohio, 1921 to 1925.

Foreign Labor Laws.

- *No. 142. Administration of labor laws and factory inspection in certain European countries. [1914.]
- No. 494. Labor legislation of Uruguay. [1929.]
- No. 510. Labor legislation of Argentina. [1930.]

Housing.

- *No. 158. Government aid to home owning and housing of working people in foreign countries. [1914.]
- No. 263. Housing by employers in the United States. [1920.]
- No. 295. Building operations in representative cities in 1920.
- No. 500. Building permits in the principal cities of the United States in [1921 to] 1928.

Industrial Accidents and Hygiene.

- *No. 104. Lead poisoning in potteries, tile works, and porcelain enameled sanitary ware factories. [1912.]
- No. 120. Hygiene of painters' trade. [1913.]
- *No. 127. Dangers to workers from dust and fumes, and methods of protection. [1913.]
- *No. 141. Lead poisoning in the smelting and refining of lead. [1914.]
- *No. 157. Industrial accident statistics. [1915.]
- *No. 165. Lead poisoning in the manufacture of storage batteries. [1914.]
- *No. 179. Industrial poisons used in the rubber industry. [1915.]
- No. 188. Report of British departmental committee on the danger in the use of lead in the painting of buildings. [1916.]
- *No. 201. Report of the committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions. [1916.]
- *No. 209. Hygiene of the printing trades. [1917.]
- *No. 219. Industrial poisons used or produced in the manufacture of explosives. [1917.]
- No. 221. Hours, fatigue, and health in British munition factories. [1917.]
- No. 230. Industrial efficiency and fatigue in British munition factories. [1917.]
- *No. 231. Mortality from respiratory diseases in dusty trades (inorganic dusts). [1918.]
- *No. 234. Safety movement in the iron and steel industry, 1907 to 1917.
- No. 236. Effects of the air hammer on the hands of stonecutters. [1918.]
- No. 249. Industrial health and efficiency. Final report of British Health of Munition Workers' Committee. [1919.]
- No. 251. Preventable death in the cotton-manufacturing industry. [1919.]
- No. 256. Accidents and accident prevention in machine building. [1919.]
- No. 267. Anthrax as an occupational disease. [1920.]
- No. 276. Standardization of industrial accident statistics. [1920.]
- No. 280. Industrial poisoning in making coal-tar dyes and dye-intermediates. [1921.]
- *No. 291. Carbon-monoxide poisoning. [1921.]
- No. 293. The problem of dust phthisis in the granite-stone industry. [1922.]
- No. 298. Causes and prevention of accidents in the iron and steel industry, 1910-1919.
- No. 306. Occupational hazard and diagnostic signs: A guide to impairments to be looked for in hazardous occupations. [1922.]
- No. 392. Survey of hygienic conditions in the printing trades. [1925.]
- No. 405. Phosphorus necrosis in the manufacture of fireworks and in the preparation of phosphorus. [1926.]
- No. 427. Health survey of the printing trades, 1922 to 1925.
- No. 428. Proceedings of the Industrial Accident Prevention Conference, held at Washington, D. C., July 14-16, 1926.
- No. 460. A new test for industrial lead poisoning. [1928.]
- No. 466. Settlement for accidents to American seamen. [1928.]
- No. 488. Deaths from lead poisoning, 1925-1927.
- No. 490. Statistics of industrial accidents in the United States to the end of 1927.
- No. 507. Causes of death by occupation. [1929.]

Industrial Relations and Labor Conditions.

- No. 237. Industrial unrest in Great Britain. [1917.]
- No. 340. Chinese migrations, with special reference to labor conditions. [1923.]
- No. 349. Industrial relations in the West Coast lumber industry. [1923.]
- No. 361. Labor relations in the Fairmont (W. Va.) bituminous-coal field. [1924.]
- No. 380. Postwar labor conditions in Germany. [1925.]
- No. 383. Works council movement in Germany. [1925.]

Industrial Relations and Labor Conditions—Continued.

- No. 384. Labor conditions in the shoe industry in Massachusetts, 1920-1924.
- No. 399. Labor relations in the lace and lace-curtain industries in the United States. [1925.]

Labor Laws of the United States (including decisions of courts relating to labor).

- No. 211. Labor laws and their administration in the Pacific States. [1917.]
- No. 229. Wage-payment legislation in the United States. [1917.]
- No. 285. Minimum wage laws of the United States: Construction and operation. [1921.]
- No. 321. Labor laws that have been declared unconstitutional. [1922.]
- No. 322. Kansas Court of Industrial Relations. [1923.]
- No. 343. Laws providing for bureaus of labor statistics, etc. [1923.]
- No. 370. Labor laws of the United States, with decisions of courts relating thereto. [1925.]
- No. 408. Laws relating to payment of wages. [1926.]
- No. 486. Labor legislation of 1928.
- No. 517. Decisions of courts and opinions affecting labor, 1927-1928.

Proceedings of Annual Conventions of the Association of Governmental Labor Officials of the United States and Canada. (Name changed in 1928 to Association of Governmental Officials in Industry of the United States and Canada.)

- No. 266. Seventh, Seattle, Wash., July 12-15, 1920.
- No. 307. Eighth, New Orleans, La., May 2-6, 1921.
- No. 323. Ninth, Harrisburg, Pa., May 22-26, 1922.
- *No. 352. Tenth, Richmond, Va., May 1-4, 1923.
- *No. 389. Eleventh, Chicago, Ill., May 19-23, 1924.
- *No. 411. Twelfth, Salt Lake City, Utah, August 13-15, 1925.
- No. 429. Thirteenth, Columbus, Ohio, June 7-10, 1926.
- *No. 455. Fourteenth, Paterson, N. J., May 31 to June 3, 1927.
- No. 480. Fifteenth, New Orleans, La., May 21-24, 1928.
- No. 508. Sixteenth, Toronto, Canada, June 4-7, 1929.

Proceedings of Annual Meetings of the International Association of Industrial Accident Boards and Commissions.

- No. 210. Third, Columbus, Ohio, April 25-28, 1916.
- No. 248. Fourth, Boston, Mass., August 21-25, 1917.
- No. 264. Fifth, Madison, Wis., September 24-27, 1918.
- *No. 273. Sixth, Toronto, Canada, September 23-26, 1919.
- No. 281. Seventh, San Francisco, Calif., September 20-24, 1920.
- No. 304. Eighth, Chicago, Ill., September 19-23, 1921.
- No. 333. Ninth, Baltimore, Md., October 9-13, 1922.
- *No. 359. Tenth, St. Paul, Minn., September 24-26, 1923.
- No. 385. Eleventh, Halifax, Nova Scotia, August 26-28, 1924.
- No. 395. Index to proceedings, 1914-1924.
- No. 406. Twelfth, Salt Lake City, Utah, August 17-20, 1925.
- No. 432. Thirteenth, Hartford, Conn., September 14-17, 1926.
- *No. 456. Fourteenth, Atlanta, Ga., September 27-29, 1927.
- No. 485. Fifteenth, Paterson, N. J., September 11-14, 1928.
- No. 511. Sixteenth, Buffalo, N. Y., October 8-11, 1929.

Proceedings of Annual Meetings of the International Association of Public Employment Services.

- No. 192. First, Chicago, December 19 and 20, 1913; second, Indianapolis, September 24 and 25, 1914; third, Detroit, July 1 and 2, 1915.
- No. 220. Fourth, Buffalo, N. Y., July 20 and 21, 1916.
- No. 311. Ninth, Buffalo, N. Y., September 7-9, 1921.
- No. 337. Tenth, Washington, D. C., September 11-13, 1922.
- No. 355. Eleventh, Toronto, Canada, September 4-7, 1923.
- No. 400. Twelfth, Chicago, Ill., May 19-23, 1924.
- No. 414. Thirteenth, Rochester, N. Y., September 15-17, 1925.
- No. 478. Fifteenth, Detroit, Mich., October 25-28, 1927.
- No. 501. Sixteenth, Cleveland, Ohio, September 18-21, 1928.

Productivity of Labor.

- No. 356. Productivity costs in the common-brick industry. [1924.]
- No. 360. Time and labor costs in manufacturing 100 pairs of shoes, 1923.
- No. 407. Labor cost of production and wages and hours of labor in the paper box-board industry. [1926.]

Productivity of Labor—Continued.

- No. 412. Wages, hours, and productivity in the pottery industry, 1925.
- No. 441. Productivity of labor in the glass industry. [1927.]
- No. 474. Productivity of labor in merchant blast furnaces. [1928.]
- No. 475. Productivity of labor in newspaper printing. [1929.]

Retail Prices and Cost of Living.

- *No. 121. Sugar prices, from refiner to consumer. [1913.]
- *No. 130. Wheat and flour prices, from farmer to consumer. [1913.]
- *No. 164. Butter prices, from producer to consumer. [1914.]
- No. 170. Foreign food prices as affected by the war. [1915.]
- No. 357. Cost of living in the United States. [1924.]
- No. 369. The use of cost-of-living figures in wage adjustments. [1925.]
- No. 495. Retail prices, 1899 to 1928.

Safety Codes.

- *No. 331. Code of lighting: Factories, mills, and other work places.
- No. 336. Safety code for the protection of industrial workers in foundries.
- No. 350. Specifications of laboratory tests for approval of electric headlighting devices for motor vehicles.
- *No. 351. Safety code for the construction, care, and use of ladders.
- No. 375. Safety code for laundry machinery and operations.
- No. 378. Safety code for woodworking plants.
- No. 382. Code of lighting school buildings.
- No. 410. Safety code for paper and pulp mills.
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