

# PUBLIC HEALTH REPORTS

VOL. 52

JULY 23, 1937

NO. 30

## SOME FACTORS WHICH AFFECT THE RELATIONSHIP BETWEEN HOUSING AND HEALTH

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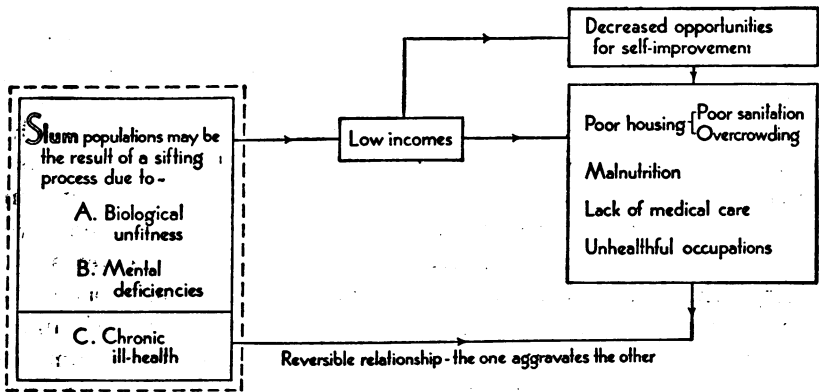
The reduction of sickness and mortality rates, the basic objective of all health organizations, is obviously related to sanitary and healthful environments. The accumulated evidence of the past few years tends to emphasize this fact, and in a large measure it has helped to accelerate the movement toward better housing in this country.

In discussing the relationship between housing and health, Britten (1) has pointed out that the coexistence of a low level of public health and bad housing conditions does not necessarily prove that the one is caused by the other. Causal relationships must be traced through specific factors easily identified as having a bearing upon health. These, as Britten has stated, include impure water supply, insanitary toilets, lack of sewer connections, overcrowding, inadequate lighting, poor ventilation, lack of heat, excessive dampness, dilapidation, and faulty screening against flies and mosquitoes. Even a consideration of these factors, however, does not always lead to a direct quantitative expression of the relationship between housing and health. The relationship is exceedingly complicated by many other factors which require that the data be subjected to close scrutiny and be used with great caution. Fortunately, the evidence accumulated during the past few years, even though spurious in many instances, is sufficiently conclusive in proving that health and housing are intimately related. It is the purpose of this paper to amplify the fundamental causal relationships between housing and health which have been given by Britten and to stress other considerations which are influencing factors. In addition, the activities of health departments with regard to housing are discussed.

The evidence which associates ill health with poor housing is based on numerous factors. The accompanying figure illustrates an attempt to coordinate several of the more important considerations. The arrangement shown in the figure is based on the fact that low incomes are responsible (1) for decreased opportunities for self-improvement, and (2) for environmental conditions in which low-income groups live. On the other hand, low incomes may be due in

part to fundamental weaknesses in the general population. The assumption made in this case is that there is a constant sifting action in the general population which tends to reduce to a low economic status those who cannot meet the forces of competitive existence. In this respect, technological progress has been such during recent years that it has imposed demands for increased abilities on the part of everyone. Technicological considerations are some of the causes for the inertia and inadaptability of many workers which prevent their adjustment to changing conditions.

The observation that slum populations are constituted of families with low income, engaged in pursuits which offer no advancement or are in themselves subject to frequent changes and lay-offs, would seem to demonstrate a de facto segregation of these groups.



Interrelationship of some important conditions regarding housing and health.

In discussing the effect of the sifting process with relation to sickness and income during the depression, Perrott and Collins (2) stated:

\* \* \* the men who kept their jobs during the depression were, on the average, the more vigorous, capable, and intelligent ones. Moreover, with many exceptions, those who lost their jobs were less efficient than those who remained employed. This inefficiency may have been exhibited in many ways distinct from inability to compete in the economic struggle—perhaps a diathesis or tendency toward sickliness existed among these families as a concomitant of the economic efficiency of the wage earner.

These remarks, while limited to the effects of change in income during the depression, nevertheless reveal a characteristic of slum wage earners. It may well be that ill health persists in slums not for economic or sanitary reasons only, but rather because slum populations are comprised of persons who have a tendency toward sickliness.

The sifting action previously mentioned may be said to be due to certain deficiencies lacking in the general population. These are (A) a biological unfitness—that is, unfitness arising from physical handicaps such as poor eyesight—which withholds many from under-

taking high speed precision work required in some industries; (B) mental or educational deficiencies; and (C) chronic ill health. These three factors contribute both to low incomes and to the associated environment. In turn, these factors accentuate the sifting process which, unless continually checked by aid from governmental and private sources, would reduce many families to a lower status than that in which they exist at the present time.

Because of the intricate nature of the problem, the following paragraphs are chiefly concerned with a discussion of the factors intimately associated with the housing problem, namely, (1) the causal factors (sanitation and overcrowding) cited by Britten, (2) malnutrition, (3) lack of medical care, and (4) unhealthful occupations.

#### CAUSAL FACTORS

*Lack of sanitary facilities.*—In both urban and rural housing, inadequate sanitary facilities foster the spread of disease. By inadequate sanitary facilities are meant all the items which affect the provision and maintenance of sanitary and hygienic conditions. One of these items common to slums and blighted areas is improper plumbing, which may constitute an added hazard with reference to epidemic disease. Amoebic dysentery and typhoid fever have been traced to cross-connections or syphonage of sewage into the water supply. Faulty plumbing is a potential risk which the community as a whole cannot afford. Drinking water contaminated as a result of faults in plumbing is not only a factor in the spread of disease in slum areas but is a risk to the whole community whose members may unwittingly come into contact with persons infected by such sources.

Associated with faulty plumbing in congested areas is the lack of sewer connections. An interesting result with regard to the absence of adequate toilet facilities is illustrated by a recent study of two slum areas, in one of which approximately 56 percent and in the other 92 percent of the houses were without private toilets (3). The study revealed, among other things, that the typhoid case rate in the first instance was 39 per 100,000 and in the other 52 per 100,000, an excess of 13 cases per 100,000 in the group having fewer private toilets. The use of a single toilet or privy for several families must be considered a definite menace to health. As in the case of faulty plumbing, not only do such conditions affect the blighted area where they are found, but also the immediate neighborhood, through the transmission of disease by flies and other insects.

Poor housing has other notable defects than lack of safe water supplies and sewage-disposal facilities. Structural considerations are equally important and have a bearing upon health. Thus, dilapidated or poorly maintained dwellings may lead to rat infestations. Dilapidation and a lack of window screening, especially in southern

communities, are also partly responsible for the spread of malaria. This fact can be deduced from the data collected by Moon (4), which is presented in the accompanying table.

Community	Percentage of blood specimens positive for malaria parasites		
	1928	1929	1930
A	Percent 40	Percent 32.8	Percent 15.8
B	18	9.8	4.3
C	15	9.7	10.5

The data presented in the table indicate the effect of extended screening programs in Lake County, Tenn., during the period 1927-30, and are based on the number of blood specimens taken from residents in the county which were positive for malaria parasites. The significance of these data with respect to unscreened dwellings in slums and blighted areas where malaria is endemic is apparent.<sup>1</sup> Furthermore, the lack of screens also offers some danger in spreading diarrheal diseases by permitting access to flies carrying infection from privies and other sources of pollution.

Another characteristic of slum dwellings is the insufficiency of natural lighting. Lack of sunlight is considered one of the factors causing rickets. For example, Heydecker found in Detroit that the average amount of light within rooms in which rickets occurred was less than one-half of 1 percent of the outside daylight intensity at the same time, whereas studies of numerous other rooms of the same kind in which an excess of the average illumination was found, revealed an absence of rickets (5).<sup>2</sup> A similar finding was noted earlier by Ferguson (6) and by Dick (7). In addition to these conclusions with respect to rickets, slums frequently do not permit children to receive a sufficient amount of outdoor sunshine and exercise. Such areas are generally associated with a lack of playgrounds, narrow streets, and tall buildings which reduce essential factors in the normal development of the child.

Finally, the lack of ventilation and heat and the presence of excessive dampness must also have a part in promoting ill health. Lack of ventilation is thought to have some relation to the incidence of tuberculosis, while dampness and the lack of heat are believed to be associated with pneumonia, rheumatic attacks, and other diseases.

*Overcrowding.*—Overcrowding constitutes the second important causal factor affecting the relation between housing and health. Con-

<sup>1</sup> The severe drought of 1930 may have influenced the data given in the last column. The downward trend in 1929 is, however, significant.

<sup>2</sup> These conclusions (implied or otherwise) of the investigators cited are open to serious criticism, since it is assumed that a relation exists between illumination and antirachitic radiation. This may not necessarily be the case.

gestion is due to a number of conditions, some of which cannot be said to be limited to slums alone, but which, none the less, are associated with them. They are (1) low incomes, which compel families to double up in order to pay rents, (2) the tendency toward large families among slum tenants, (3) lengthening of the life span, which, in turn, has increased the number of families requiring dwellings, and (4) the inability to secure quarters which fit the size of the family. Depression years also aggravate already congested conditions; but, as will be discussed later, they apparently do not materially affect the incidence of sickness in slum areas.

Congested dwellings create a maximum opportunity for the spread of disease. It follows, therefore, that if the lack of sanitary facilities is one of the primary causes of disease, then overcrowding is the vehicle by which it is spread. This is particularly true of the contagious diseases and especially the diseases of childhood. Overcrowding permits numerous contacts to be made with infected persons, and these contacts conduce to increase the incidence of disease, which may often reach epidemic proportions. The influence of overcrowding on the spread of such infectious diseases as measles, whooping cough, tuberculosis, cerebrospinal fever, and similar diseases, cannot be overestimated.

Congestion and health are not always susceptible of quantitative measurements. While other causal factors, such as economic and social status, may have a bearing upon the incidence of disease, nevertheless, the evidence is unmistakable that congestion assists in its spread. This is illustrated in an analysis of figures based on the results of a study of disease and mortality rates during 10 months in 1920 in Detroit (8). The results of this study indicated that tuberculosis in districts with more than one person per room is from two to three times greater than in districts with 0.6 person per room. Overcrowding was also directly related to high infant mortality. Where more than one person per room was found, the infant mortality was more than 50 percent greater than in the area with 0.6 person per room. Likewise, it was noted that influenza and pneumonia in the months of January and February 1920 played the greatest havoc in crowded areas. Infant mortality, as an index of overcrowding, has been verified in the recent study of housing problems by Graves and Fletcher (9) and the U. S. Children's Bureau (9). The latter investigation showed that, when the factors of activity and earnings were eliminated, there was in every case a higher mortality rate in the more congested quarters.

#### MALNUTRITION

The second important factor contributing to ill health in slums and blighted areas is malnutrition. The investigations of poverty, nutrition, and growth by Paton and Findlay (10) are revealing. These

investigations indicate that, although by far the largest portion of the income received by slum tenants is spent for food, slum children were generally lower in weight than children who lived in better circumstances. Nutritional factors also appeared to be modified by impaired digestion, amount of sleep, and the lack of essential vitamins. Paton and Findlay also point out that an increased income among slum tenants is not expended toward better nutrition, but rather for luxuries.

Palmer's study (11) of height and weight among the depression poor is likewise significant. This study indicated that no great change in relative weights occurred in children in the low-income groups which maintained the same status prior to and during the depression, but that children who were in comfortable circumstances prior to the depression and were subsequently made poor failed by approximately 2 percent to attain the weight of children in the group as a whole. That children whose families were subjected to the violent economic changes during the depression must have been deprived of proper food cannot be denied; and since their relative weights tended to approximate those of the perpetually poor, it must be concluded that nutrition has an important bearing upon physical characteristics and ability to resist illness.

#### LACK OF MEDICAL CARE

The lack of medical care may be considered as the third important factor affecting the relation between housing and health. Private medical attention is not generally available to slum families. It is both probable and possible that the type of medical care received by slum populations colors all data which have thus far been collected and published. In fact, it is one of the complicating factors which prohibits a clear-cut analysis of any interrelated condition of housing and health.

The medical needs of a slum community may be supplied by municipal public health and welfare departments or by private charities. However, medical care for slum tenants is often limited by such factors as infrequency of visits, failures of families to report illnesses until they have reached serious proportions, or ignorance of the facilities available.

In passing, it may be remarked that the housing problem cannot be dissociated from public health. Better housing may diminish the causal factors of disease, but so long as medical care is inadequate, morbidity and mortality rates for people with low incomes will continue to be above the average for the general population. For example, an index of poor housing as sensitive as infant mortality is directly affected by the supply or lack of medical care. The availability of prenatal and postnatal attention must, in this instance, be

regarded as one of the most effective methods of reducing the infant mortality rate. The case of tuberculosis is similar. The essential causal factors are contact through overcrowding and insanitary conditions. Nevertheless, tuberculosis continues to be a public health problem even in communities with excellent housing facilities. Constant medical care and education are necessary in order to prevent the spread of disease. The type of medical care provided in the past and to be provided in the future is an essential consideration for a rational approach to a solution of the factors affecting the relation between housing and health.

#### INFLUENCE OF THE OCCUPATIONAL ENVIRONMENT

The low-income factor which compels families to live in over crowded slum areas, also compels them to seek types of employment which are not generally healthful. The industrial or other working environment must consequently play an important role. When it is considered that the life of the average industrial worker is from 5 to 7 years shorter than that of persons engaged in the more comfortable pursuits of life, it must be clear that investigations of housing and health cannot ignore the factor of occupation (12). Steel and foundry workers, for example, have a pneumonia rate which is more than twice that of the normal population. Similarly, slum studies in mining communities must consider that tuberculosis is exceedingly high among miners, and that such occupations are as important causal factors as insanitary facilities. There are many occupations in which slum inhabitants are engaged and which contribute to increased illness; foundry work, mining operations, stone cutting, exposure to lead and other chemicals, and "sweatshops" are but a few which raise the incidence of disease and death.

Aggravating the above condition is also the fact that efforts to increase income force upon slum families the necessity of sending children to seek employment when their proper mental and physical development require more normal activities.

#### SUGGESTED HOUSING PROBLEMS

While the factors pertaining to housing and health have as yet to be determined with a high degree of definiteness, it need not be concluded that better housing must await the establishment of quantitative relationships. Housing and public health are intimately associated; good housing conditions mean a better public health; and poor housing implies a low level of physical well being. The menace of slums and blighted areas is not restricted to the immediate residents but to the public at large. Nor must it be forgotten that moneys expended for the care of slum residents, without first improving their

environment, constitute a perennial burden with no assurance that the constant potential risk of epidemics has been eradicated from the community. In the long run, adequate housing implies a moral obligation on the part of any government interested in the welfare of its citizens.

The five studies outlined below are in part being undertaken by the Public Health Service. It will be noted that these studies are broad in scope and emphasize the basic factors presented earlier in this paper. Stress is placed upon a knowledge of the characteristics of slum populations on one hand, and in developing suitable yard-sticks for determining housing and health relationships on the other.

1. *How much does poor housing contribute to the cost of public health administration?*—This is a rather sordid approach to the housing problem. However, it may prove revealing and give necessary impetus to the housing movement. Funds which are spent yearly in checking disease might with greater advantage be spent in eliminating the causes.

A study of this question may also yield morbidity and mortality data according to economic status and housing conditions. The complete tabulations now being made on the Chronic Disease Survey and Health Facilities Survey<sup>3</sup> may afford some indication of the type of relationships to be expected.

2. *Studies among poorly housed groups with a view to determining the effect of environment on health.*—A suitable method for evaluating the effect of housing on health is difficult to formulate. It has been customary to use such criteria as malnutrition, incidence of tuberculosis, or infant mortality for this purpose. These criteria, however, do not yield an integrated effect of housing conditions upon slum dwellers. It is believed that an index such as the rate of growth of children would be more suitable. This index would take into account physical factors in the household such as lack of natural illumination, dampness, and poor sanitation.

3. *Repeating the depression studies of Perrott and Collins to check their theory of sifting forces in the general population now that economic rehabilitation is taking place.*—This would be a restudy of the population investigated in the original survey in order to test the hypothesis propounded.

4. *Studies of industrial housing.*—These studies are now being considered in the Division of Industrial Hygiene, particularly with regard to investigating how much home environment may contribute to morbidity and mortality among industrial workers.

<sup>3</sup> These studies are part of the National Health Inventory undertaken by the Public Health Service. They comprise surveys made in 95 cities and 22 rural counties in 19 States. The Chronic Disease Survey includes data on chronic diseases in relation to income, environment, and other factors among 865,000 families (about 3,500,000 individuals).



5. *Uniform municipal health and sanitation ordinances.*—In connection with housing surveys, measures of sanitary facilities, overcrowding, and medical care are essential. The terms "excellent", "good", "fair", or "bad" furnish no specific connotation of conditions unless they are first defined. In survey work it is desirable to class a given condition as surpassing, equalling, or falling short of a given criterion. Unfortunately, in this country there are no uniform sanitary standards. They are fixed by State laws, local ordinances, or by opinions of local boards of health. These differences, added to arbitrary standards often imposed by investigators in the analysis of collected data, have resulted in much confusion.

Some effort should be devoted to standardizing sanitary requirements for new housing. Uniform standards for the country as a whole, giving particular attention to minimum sanitary requirements and overcrowding, would undoubtedly accelerate the movement in building low-cost, low-rent homes. With regard to sanitary requirements, the Housing Act of 1935 for England surpasses anything which has been attempted in the United States. This act not only defines overcrowding, but empowers local authorities to define areas unfit for human habitation and requiring redevelopment or reconditioning. The recognition of the public health aspects of housing, as set forth in this act, indicates a conviction that housing and health are inseparable. This being the case, it devolves upon public health authorities to promulgate criteria by which dwellings in slums or blighted areas can be determined as unfit or detrimental to the public welfare. A similar procedure in this country would prove of inestimable value. Yet, here again, it must be emphasized that housing movements should not wait upon the development of sanitary standards.

#### HOUSING AND PUBLIC HEALTH ACTIVITIES

*Functions of health departments.*—Public health organizations perform three important duties with regard to housing matters: (1) By observing epidemiological trends they are enabled to focus attention on sources of disease; (2) they are constantly engaged in survey and inspection activities; and (3) they are frequently called upon to provide medical care for the indigent poor. The first duty is concerned with the reporting of diseases, preventing their spread, and tracing the factors of causation.

The second function relates to survey and inspection activities. Health surveys are usually made at periodic intervals for the purpose of checking upon the welfare of various communities and for research into the causes of illnesses. Inspections locate potential hazards to health and, through the enforcement of laws and ordinances, seek to remedy them. Finally, health departments furnish medical

care to families of the very poor. This function will undoubtedly persist even after better housing has been provided. Slum clearance, redevelopment, or reconditioning, as has been pointed out, may reduce the causal factors of disease; but families with low incomes will probably continue to require medical care if lower morbidity and mortality in a community are the objectives of public health organizations.

The importance of the public health aspect of the housing problem is recognized in legislation introduced both here and abroad. For example, the British Housing Acts are enforced by the National Ministry of Health. In this country, recent legislation creating a separate Housing Authority in the Department of the Interior contains the statement that “\* \* \* slums, blighted areas, or unsafe, insanitary or overcrowded dwellings, or a combination of these conditions \* \* \* are inimical to the general welfare of the Nation by encouraging the spread of disease and lowering the level of health, morale, and vitality of large portions of the American people.” The fundamental health aspect of the housing problem is thus realized by the lawmakers of the country. It will be incumbent upon health administrators to determine on the bases of local conditions what constitutes conditions inimical to the health of residents and to the community.

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# AGE OF GAINFUL WHITE AND NEGRO MALE WORKERS OF THE UNITED STATES, 1920 AND 1930<sup>1</sup>

## Studies on the Age of Gainful Workers No. 4

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### INTRODUCTION

The first paper of the series (1-3) dealt with the age of gainful male and female workers of the United States by occupational group for the census years 1920 and 1930, no differentiation being made with respect to the color of the workers. The percentage age distribution for each occupational group, specific for sex and census year, was compared with the percentage age distribution of all gainful workers by forming the ratios of corresponding percentages. This ratio of an observed percentage to its corresponding defined normal percentage gave an indication of whether there was an excess or dearth of workers in any particular age and occupational group. In the instance of the males it was found, among other things, that the child group, 10 to 17 years, had excesses of workers in agriculture, forestry and animal husbandry, and in the clerical occupations; that the middle-aged group, 45 to 64 years, had a dearth principally in the clerical occupations; and that the old-aged group, 65 years and over, had a dearth in extraction of minerals, manufacturing and mechanical industries, transportation and communication, trade, and the clerical occupations, with notable excesses in public service and in agriculture, forestry and animal husbandry. These observations held for both census years.

It is conceivable that the ratios for the white and for the Negro workers may show noteworthy differences. It is the purpose of the present paper, therefore, to investigate the age composition of gainful white and Negro male workers, and, in the paper immediately to follow, the same matter with respect to the females.

The term *gainful worker* is defined by the Bureau of the Census thus: "\* \* \* all persons 10 years old and over who usually follow a gainful occupation even though they may not have been actually employed at the time the census was taken. It does not include women doing housework in their own homes without wages and having no other employment, nor children working at home, merely on general household work, on chores, or at odd times on other work" (4).

The present inquiry, like the previous ones, makes use of basic data published by the Bureau of the Census in its reports of 1920 and 1930.

<sup>1</sup> From the Division of Industrial Hygiene, National Institute of Health, U. S. Public Health Service, Washington, D. C.

## WORKERS IN DIFFERENT OCCUPATIONAL GROUPS

The white and Negro male workers of 1920 and 1930, respectively, are shown distributed among nine important occupational groups in table 1. In 1920 there were approximately 30 million white male workers and 3 million Negroes; in 1930 the figures for both races showed an increase of about 13 percent. In both races the largest increase occurred in professional service, 78 percent for the Negroes and 52 percent for the white workers. Second and third places with

TABLE 1.—*Gainful white and Negro male workers in the United States, 10 years of age and over, specific for occupational group, 1920 and 1930*

Occupational group	1920		1930	
	White	Negro	White	Negro
	Number		Number	
All groups.....	29, 653, 677	3, 252, 862	33, 766, 933	3, 662, 893
Agriculture, forestry, animal husbandry.....	8, 230, 805	1, 566, 627	8, 010, 260	1, 524, 207
Extraction of minerals.....	1, 012, 560	72, 892	889, 696	74, 919
Manufacturing and mechanical industries.....	10, 087, 911	781, 827	11, 164, 291	922, 586
Transportation and communication.....	2, 533, 746	308, 896	3, 086, 449	395, 437
Trade.....	3, 432, 790	129, 309	4, 907, 600	169, 241
Public service (n. e. c.) <sup>1</sup> .....	696, 934	49, 586	732, 769	49, 273
Professional service.....	1, 083, 988	41, 056	1, 644, 460	72, 898
Domestic and personal service.....	905, 166	273, 959	1, 279, 245	423, 645
Clerical occupations.....	1, 669, 777	28, 710	2, 002, 163	29, 687
	Percent		Percent	
All groups.....	100. 0	100. 0	100. 0	100. 0
Agriculture, forestry, animal husbandry.....	27. 8	48. 2	23. 7	41. 6
Extraction of minerals.....	3. 4	2. 2	2. 6	2. 1
Manufacturing and mechanical industries.....	34. 0	24. 0	33. 1	25. 2
Transportation and communication.....	8. 5	9. 5	9. 2	10. 8
Trade.....	11. 6	4. 0	14. 5	4. 6
Public service (n. e. c.) <sup>1</sup> .....	2. 4	1. 5	2. 3	1. 3
Professional service.....	3. 7	1. 3	4. 9	2. 0
Domestic and personal service.....	3. 0	8. 4	3. 8	11. 6
Clerical occupations.....	5. 6	. 9	5. 9	. 8

<sup>1</sup> N. e. c.—Not elsewhere classified.

respect to increases were held in both races by trade, and domestic and personal service. Both races showed a decrease of nearly 3 percent in agriculture, forestry, and animal husbandry. Public service showed a slight decrease for the Negroes, and extraction of minerals a decrease of 12 percent for the white workers. The following percentages calculated from table 1 refer to the increases or decreases in the number of workers in each occupational group during the 10-year period:

Occupational group	Percentage increase or decrease, 1920 to 1930	
	White	Negro
All groups.....	+13.9	+12.6
Agriculture, forestry, animal husbandry.....	-2.7	-2.7
Extraction of minerals.....	-12.1	+2.8
Manufacturing and mechanical industries.....	+10.7	+18.1
Transportation and communication.....	+21.8	+28.0
Trade.....	+43.0	+30.9
Public service (not elsewhere classified).....	+12.3	-.6
Professional service.....	+51.7	+77.6
Domestic and personal service.....	+41.3	+54.6
Clerical occupations.....	+19.9	+3.4

When the percentages of males in each occupational group, specific for color and census year, as shown in table 1, are arranged in decreasing order of magnitude, the manufacturing and mechanical industries and agriculture, forestry, and animal husbandry occupy the leading places in both years and for both colors. In each census year the agricultural group contained almost one-half of the Negro workers and the manufacturing and mechanical industries about one-fourth. The white workers, on the other hand, were represented in both census years by about one-third of their workers in the manufacturing and mechanical industries, and by approximately one-fourth in the agricultural group. In the instance of the white workers, public service ranked lowest with about 2 percent, while the clerical occupations ranked lowest among the Negroes with less than 1 percent: these observations hold for both census years. The most striking changes that the 10 years have wrought probably occurred among the Negroes in the agricultural group and in domestic and personal service; in the former there was a reduction from 48 to 42 percent, and in the latter an increase from 8 to 12 percent.

#### WORKERS IN DIFFERENT OCCUPATIONAL GROUPS BY AGE

The age distribution of the white and Negro male workers of 1920 and 1930 according to occupational group is shown in table 2. It will be observed that, regardless of occupation, the order of importance of the age groups of the white and Negro workers, respectively, is similar for both years. With respect to the white workers of both years, almost one-half appears in the age group 25-44 years, over one-fourth in the middle-aged group 45-64, and almost one-eighth in the age group 20-24; the remaining age groups are each represented by between 3 and 6 percent of the workers. It is noteworthy that during the 10 years there was a reduction in the percentage of child workers and a slight increase in the percentage of the old-aged group. With respect to the Negro workers, the order of importance of the age groups is the same in both years, and, with the exception of the child

TABLE 2.—Age distribution of gainful white and Negro male workers in the United States, specific for occupational group, 1920 and 1930

Occupational group	Age group, 1920						Age group, 1930							
	10 years old and over	10-17	18-19	20-24	25-44 <sup>1</sup>	45-64	65 and over	White			Negro			
								Number	Percent			Number	Percent	
<b>All groups.....</b>	29,653,677	4,994	4,276	12,309	47,777	28,103	4,541	33,786,933	3,248	4,073	12,361	46,901	28,142	5,270
Agriculture, forestry, animal husbandry.....	8,230,805	7,330	4,464	11,339	41,335	28,669	6,963	8,010,260	6,677	5,256	11,709	37,109	30,678	8,571
Extraction of minerals.....	1,012,560	4,634	4,928	12,997	53,578	21,777	2,096	8,889,606	1,992	4,176	13,151	50,904	27,165	2,612
Manufacturing and mechanical industries.....	10,087,911	4,303	4,304	12,544	50,354	24,958	3,537	11,184,291	2,140	3,940	13,520	49,293	27,990	4,109
Transportation and communication.....	2,533,746	2,597	4,126	13,884	53,025	23,595	3,273	3,094,440	1,371	2,580	10,568	53,297	25,571	2,099
Trade.....	3,432,790	3,401	2,847	10,317	50,503	28,743	4,099	4,997,600	2,570	2,690	10,568	50,792	28,583	2,611
Public services (n. e. c.) <sup>1</sup> .....	3,696,934	1,530	6,910	14,994	40,883	29,159	6,524	4,792,769	504	7,907	10,187	43,103	23,103	8,509
Professional services.....	1,063,988	1,679	1,594	8,899	54,095	28,828	3,204	1,647,460	957	1,907	10,999	52,603	31,164	5,218
Domestic and personal service.....	1,963,166	2,708	2,200	8,102	49,679	31,184	6,126	2,270,245	2,110	3,010	9,371	49,645	31,928	6,633
Clerical occupations.....	1,609,777	10,092	7,722	19,877	44,616	15,561	2,129	2,002,163	4,420	7,123	20,462	47,645	17,567	2,553
<b>All groups.....</b>	3,252,862	10,220	5,263	13,997	42,638	23,564	4,288	3,662,863	8,188	5,210	14,134	44,772	23,829	3,867
Agriculture, forestry, animal husbandry.....	1,566,627	15,922	5,604	12,399	34,292	25,820	5,963	1,524,207	15,017	6,619	13,642	32,674	26,103	5,855
Extraction of minerals.....	72,892	4,127	5,586	16,670	50,264	20,872	1,567	74,919	2,013	3,094	13,432	57,245	20,021	1,480
Manufacturing and mechanical industries.....	781,827	4,621	5,194	16,372	51,178	20,863	2,686	923,586	2,927	4,094	14,463	54,060	22,092	2,364
Transportation and communication.....	308,896	3,455	4,998	16,699	52,855	19,997	1,998	305,437	1,870	3,653	15,791	58,143	19,106	1,437
Trade.....	124,309	6,867	4,840	13,304	49,283	23,125	2,631	169,241	8,354	6,134	14,521	48,429	21,686	2,547
Public services (n. e. c.) <sup>1</sup> .....	49,586	2,501	5,225	19,699	47,302	21,423	3,850	49,273	1,368	2,354	10,827	52,463	28,832	4,136
Professional services.....	41,036	943	1,215	5,753	48,344	38,659	5,036	72,898	3,641	2,964	9,513	41,560	33,331	4,991
Domestic and personal service.....	273,959	5,603	4,460	13,222	50,294	22,770	3,646	423,645	3,653	4,645	14,872	51,059	22,646	3,125
Clerical occupations.....	28,710	25,528	6,047	13,145	39,812	14,265	1,233	29,637	6,474	4,733	12,894	53,636	21,356	1,907

<sup>1</sup> Includes a negligible number of persons of unknown age.  
<sup>2</sup> N. e. c.—Not elsewhere classified.

group, the percentages for both years are similar to the corresponding ones for the white workers. In both races the passage of 10 years effected decreases in the percentages of child workers, but the magnitude of these percentages for the Negroes of both years is considerably greater than that of the corresponding percentages for the white workers. Thus, for the white workers the decrease was from 5 to 3 percent, while for the Negroes the change was from 10 to 8 percent.

It is now pertinent to examine the age distribution of the workers in the different occupational groups. Particular attention will be directed to the contribution of each occupational group to the child, middle- and old-aged categories, respectively.

Further reference to table 2 discloses that the white child group of 1920 in clerical occupations was 10 percent of the total number of white workers so engaged. No other occupational group furnished a corresponding percentage so large; in fact the remaining occupational groups showed percentages less than 8 percent. The Negro child group for the same year showed a percentage in clerical occupations over two and one-half times as great as that for the white boys, and, as in the instance of the white workers, this particular occupational group ranked first. Only one other occupational group yielded a relatively high percentage, namely, agriculture, forestry, and animal husbandry (16 percent); the remaining groups were all less than 7 percent. In 1930 the clerical occupations showed reduced percentages, particularly the percentage for the Negroes. Indeed all of the occupational groups of the child group, with the exception of professional service and trade (Negroes only), showed decreases. In the instance of the white children, all occupational groups of 1930 yielded percentages less than 7 percent; in the corresponding Negro group, agriculture, forestry, and animal husbandry ranked first with 15 percent, followed by trade with 9 percent.

The year 1920 showed the percentages for the various occupational groups among the middle-aged white workers to fluctuate from 16 to 31 percent; the corresponding range among the Negro workers was 14 to 39. The minimum percentage of each range was given by the clerical occupations, and the highest by domestic and personal service among the white workers, and by professional service among the Negroes. In 1920 over 60 percent of the middle-aged white workers were in domestic and personal service and public service, and over 64 percent of the middle-aged Negro workers were in professional service and agriculture, forestry, and animal husbandry. In general, the lapse of 10 years effected increases in the percentages of both races; a decrease, however, occurred among the Negroes in professional service, the percentage changing from 39 to 33 percent.

With respect to the old-aged group, 65 years and over, the percentages, regardless of race, were all less than 7 percent in 1920. In

1930 all of the occupational groups showed increases among the white workers, noteworthy among which were agriculture, forestry, and animal husbandry, and public service, each 7 to 9 percent. Among the Negro workers the percentages generally decreased, the exceptions being slight increases in public service and the clerical occupations.

**RATIO OF OBSERVED PERCENTAGE OF WORKERS IN EACH OCCUPATIONAL GROUP TO THE EXPECTED OR NORMAL PERCENTAGE**

Of considerable interest is the question of whether the observed percentage of workers in a specific occupational and age group is relatively small, normal, or large. It may be assumed that the percentage age distribution of the workers regardless of occupation but specific for color and census year is the "expected" or "normal" percentage age distribution for each occupational group of the corresponding color and census year. The ratio of an observed percentage to its corresponding normal percentage would indicate, when less than one, a dearth of workers; when equal to one, a normal percentage of workers, and when greater than one, an excess of workers. The percentages constituting the four normal age distributions as defined, together with the observed percentages, specific for age, color, and census year, are given in table 2.

Reference to the normal age distributions has already been made in the previous section. The calculated ratios are shown in table 3, and figure 1 presents them graphically. The two broken lines in the figure drawn through 1.00 indicate that the observed percentage is identical with the normal percentage—in other words, that there is neither a dearth nor an excess of workers. The bars below or above a broken line indicate not only the presence of a dearth or an excess but also the magnitude of such dearth or excess. The interpretation of a ratio may be clarified by citing an example. Thus the white workers of 1930, aged 10–17 years, in agriculture, forestry, and animal husbandry constituted 6.7 percent of the total so engaged. Furthermore, the percentage of all white workers of 1930 in the age group 10–17, regardless of occupation, however, was 3.2 percent. It follows that the ratio of the two percentages is approximately two, which means that twice as many workers were observed as were expected, or an excess of 100 percent. In round numbers, 270,000 workers were expected while 540,000 were observed.

*Variability of the ratios in the different age groups.*—Figure 1 reveals striking differences in the variability of the ratios in the various age groups. A study of table 3 shows that the most stable age group among the white workers in each census year is 25–44, followed by 45–64, 20–24, 65 and over, 18–19, and 10–17. The minimum and maximum values of the ratios for the age group 25–44 for 1920 are 0.86 (public service) and 1.11 (transportation and communication);



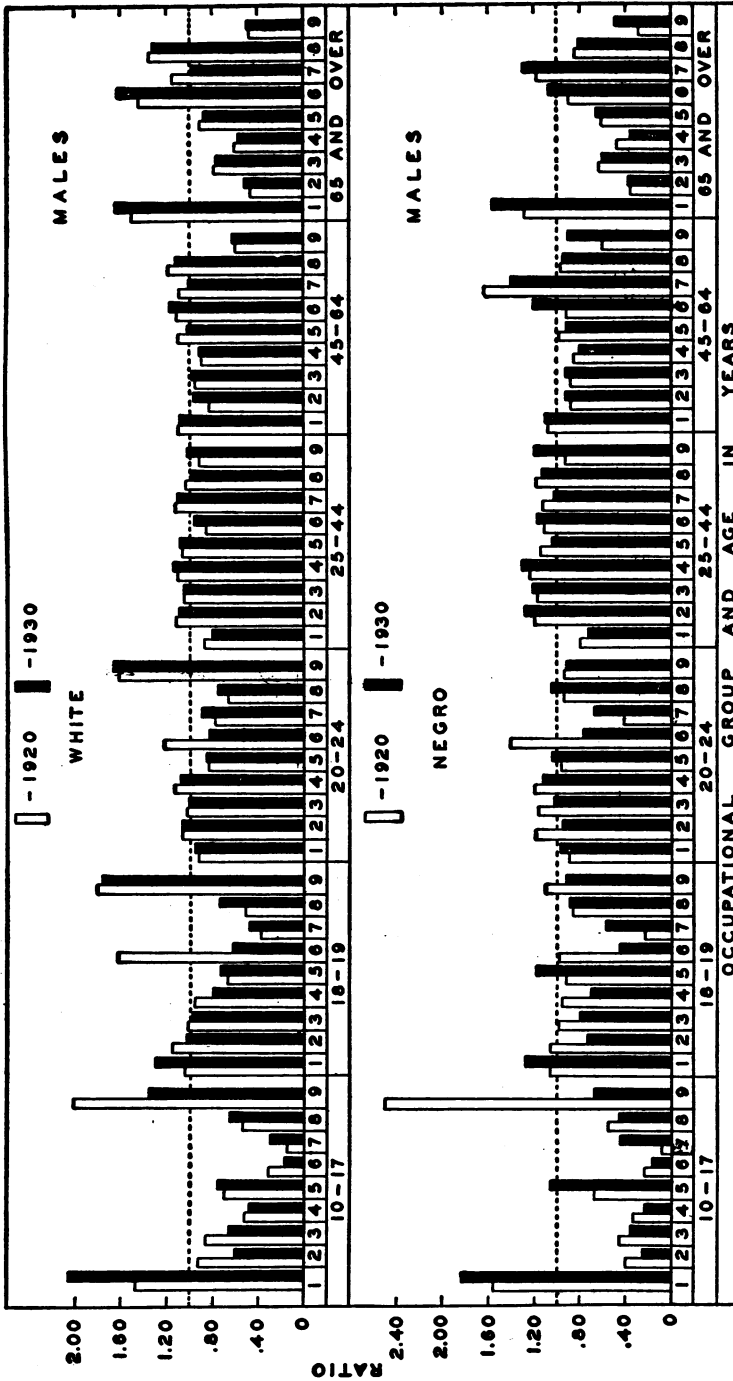


FIGURE 1.—Age-specific ratios of the percentages of gainful white and Negro male workers in different occupational groups to the percentages of all groups, 1920 and 1930. The numbers 1-9 are defined thus: 1, agriculture, forestry, and animal husbandry; 2, extraction of minerals; 3, manufacturing and mechanical industries; 4, transportation and communication; 5, trade; 6, public service (not elsewhere classified); 7, professional service; 8, domestic and personal service; and 9, clerical occupations.

the corresponding ratios for 1930 are 0.79 (agriculture, forestry, and animal husbandry) and 1.14 (transportation and communication). The age group 10-17, on the other hand, varies in 1920 from 0.14 (professional service) to 2.02 (clerical occupations); the corresponding ratios for 1930 are 0.16 (public service) and 2.06 (agriculture, forestry, and animal husbandry). The lowest minimum ratio occurring among the white workers is 0.14 (age group 10-17, professional service, 1920); the highest maximum is 2.06 (age group 10-17, agriculture, 1930).

TABLE 3.—Ratio by age and color of percentage of gainful male workers in a specified occupational group to the percentage for all groups, 1920 and 1930 (percentages shown in table 2)

Occupational group	Age group, 1920						Age group, 1930					
	10-17	18-19	20-24	25-44	45-64	65 and over	10-17	18-19	20-24	25-44	45-64	65 and over
	White						White					
Agriculture, forestry, animal husbandry.....	1.47	1.04	0.92	0.87	1.10	1.51	2.06	1.29	0.95	0.79	1.09	1.63
Extraction of minerals.....	.93	1.15	1.06	1.12	.83	.46	.61	1.02	1.06	1.09	.97	.50
Manufacturing and mechanical industries.....	.86	1.01	1.02	1.05	.96	.78	.66	.97	1.01	1.05	.99	.78
Transportation and communication.....	.52	.96	1.13	1.11	.90	.61	.48	.80	1.08	1.14	.91	.57
Trade.....	.70	.67	.84	1.06	1.10	.90	.76	.73	.85	1.08	1.02	.87
Public service (n. e. c.) <sup>1</sup> .....	.31	1.62	1.22	.86	1.12	1.44	.16	.62	.82	.96	1.18	1.61
Professional service.....	.14	.37	.78	1.13	1.10	1.15	.29	.47	.89	1.12	1.01	.99
Domestic and personal service.....	.54	.51	.66	1.04	1.19	1.35	.65	.74	.76	.99	1.13	1.32
Clerical occupations.....	2.02	1.81	1.61	.93	.60	.47	1.36	1.75	1.66	1.02	.62	.48
	Negro						Negro					
Agriculture, forestry, animal husbandry.....	1.56	1.06	0.89	0.80	1.09	1.39	1.83	1.27	0.97	0.73	1.10	1.51
Extraction of minerals.....	.40	1.06	1.19	1.20	.88	.37	.25	.73	.95	1.28	.92	.38
Manufacturing and mechanical industries.....	.45	.99	1.17	1.18	.88	.63	.36	.79	1.02	1.21	.93	.61
Transportation and communication.....	.34	.95	1.19	1.24	.85	.47	.23	.70	1.12	1.30	.80	.37
Trade.....	.67	.92	.95	1.15	.98	.61	1.06	1.18	1.03	1.04	.91	.66
Public service (n. e. c.) <sup>1</sup> .....	.24	.99	1.41	1.11	.91	.90	.17	.45	.77	1.17	1.21	1.07
Professional service.....	.09	.23	.41	1.13	1.64	1.19	.44	.57	.67	1.02	1.40	1.29
Domestic and personal service.....	.55	.85	.94	1.18	.97	.85	.45	.89	1.05	1.14	.95	.81
Clerical occupations.....	2.50	1.15	.94	.93	.60	.29	.67	.91	.91	1.20	.90	.49

<sup>1</sup> N. e. c. = Not elsewhere classified.

With respect to the Negro workers the order of the age groups as regards variability differs in the two census years, and in neither year is the order the same as that shown by the white workers. In each census year, however, as in the instance of the white workers, the age group 10-17 shows the greatest variability, the occupational groups yielding the minimum and maximum ratios in 1920 and 1930, respectively, being the same as those for the white workers. Thus in 1920 this particular age group among the Negro workers varied from 0.09 (professional service) to 2.50 (clerical occupations) and in

1930 from 0.17 (public service) to 1.83 (agriculture, forestry, and animal husbandry). Only in 1920 was the age group 25-44 least variable, the minimum and maximum values being 0.80 (agriculture, forestry, and animal husbandry) and 1.24 (transportation and communication), respectively. Ten years later the corresponding age group was 20-24, varying from 0.67 (professional service) to 1.12 (transportation and communication). The lowest minimum and the highest maximum among the Negroes were both furnished by the age group 10-17 in 1920.

This section dealing with the variability of the occupational ratios in the different age groups may be conveniently concluded as follows: (1) There is considerable variability among the occupational ratios in the age groups of each color. (2) The variability fluctuates from age group to age group, the order of the groups of the 2 colors differing from each other, and in the instance of the Negroes differing with respect to census year. (3) The age group 25-44 is least variable; however, this group assumes second place among the Negroes of 1930, the age group 20-44 being first. (4) The age group 10-17 is most variable in each color group and census year. (5) The magnitudes of the ratios are such that it is impossible to place the various age-distributed occupational groups in any definite order, the phenomenon holding in each color group and census year.

*Age changes in the ratios.*—Figures 2 and 3 show graphically for each census year how the age changes in the ratios of the different occupational groups compare with regard to color. In both figures the points corresponding to successive ratios have been joined to facilitate reading. The graphs reveal that, first, the ratios of no occupational group lie consistently above or below the normal level of workers, each occupational group showing dearths and excesses of workers varying with age; second, many age groups for the same census year yield similar ratios for the white and Negro workers of particular occupational groups; third, the trends of the ratios for 1930 are in many instances similar to the corresponding ratio trends of 1920; and, finally, no occupational group shows its graphs for the two races entirely separate, indicating that for particular age groups only may the ratios for a specific occupational group be ordered with respect to race.

As in the second and third papers of the series the trends of the age curves of the occupational groups (figures 2 and 3) may be classified with some exceptions into four categories, depending upon the appearance of dearths and excesses of workers. Thus, first, an excess may be early and late with a dearth intervening; second, a dearth may be early and late with an excess intervening; third, a dearth may be early and followed subsequently by an excess; or, fourth, an excess may appear early and be followed later by a dearth. These four categories

correspond to the following trends, respectively, U-shaped, inverted U-shaped, line with an ascending slope, and a line with a descending slope.

Agriculture, forestry, and animal husbandry, with its excesses appearing early and late, and a dearth intervening, is the only occupa-

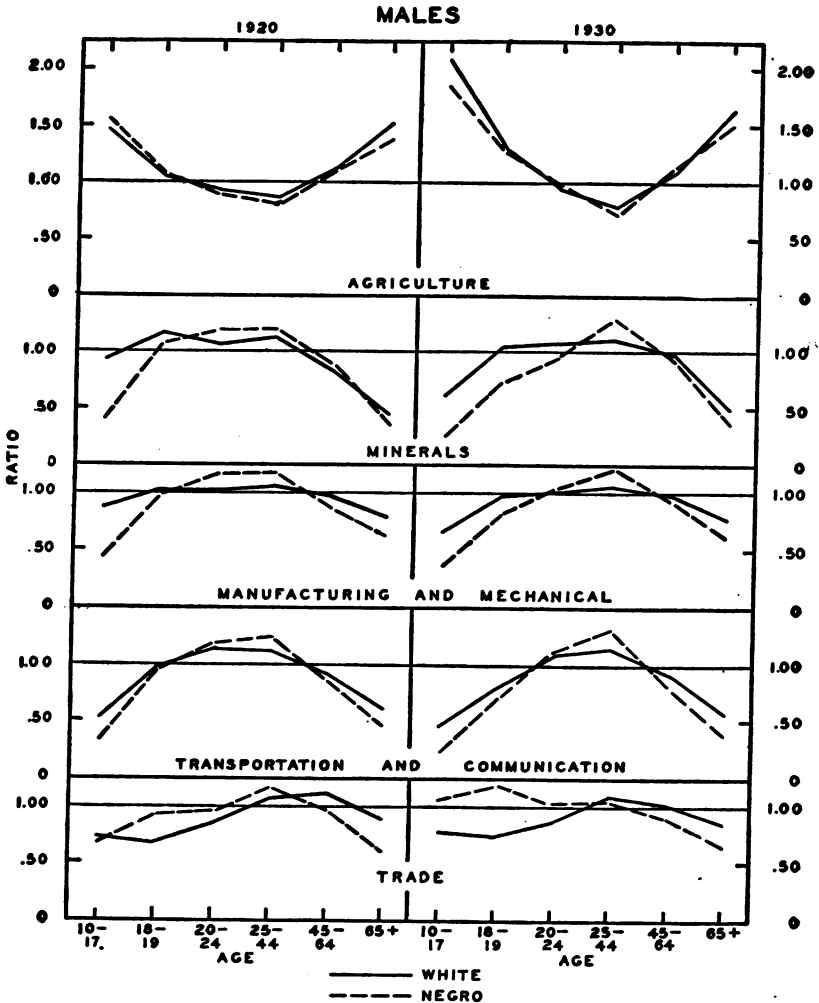


FIGURE 2.—Age-specific ratios of the percentages of gainful white and Negro male workers in different occupational groups to the percentages for all groups, 1920 and 1930; white and Negro male workers in specific occupational groups compared. (*Agriculture, forestry, and animal husbandry is abbreviated agriculture, while extraction of minerals reads minerals.* Points are joined by straight lines to facilitate reading.)

tional group assignable to the first category. It will be observed that the curves for the two races are similar in each year and that the excesses of 1930, particularly in the early ages, are greater than those of 1920.

Extraction of minerals, manufacturing and mechanical industries, and transportation and communication belong definitely to the second class, indicating dearths early and late with an excess intervening. Color differences are shown in both census years in certain of the age groups. Thus in each year extraction of minerals and the manu-

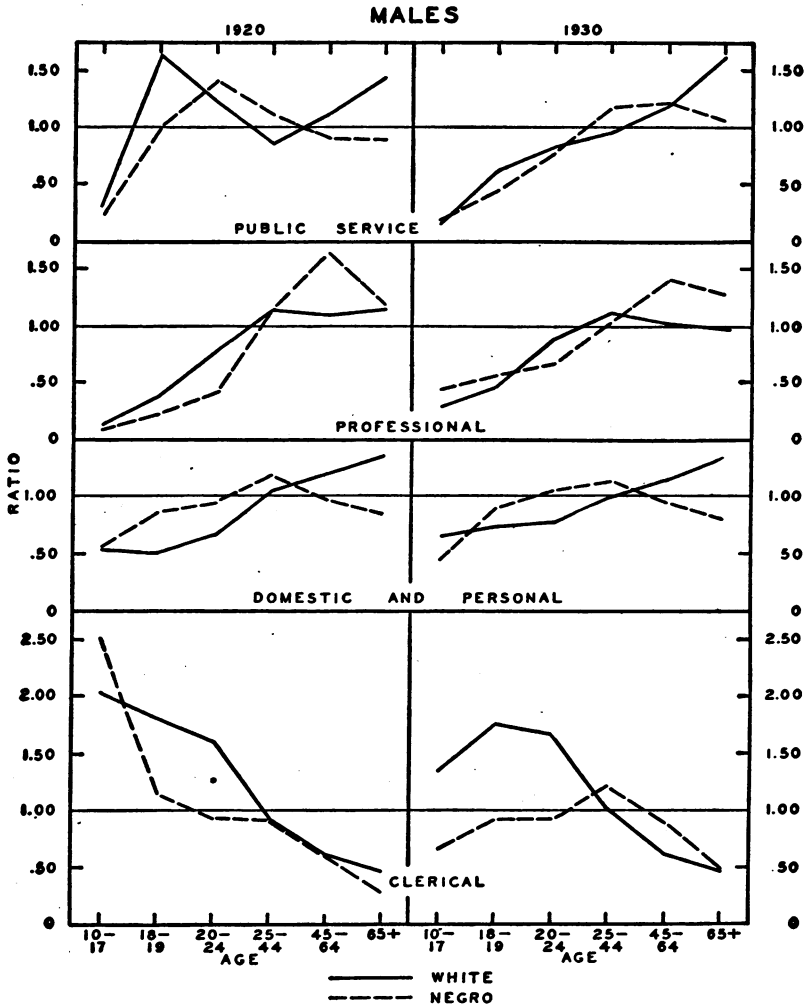


FIGURE 3.—Age-specific ratios of the percentages of gainful white and Negro male workers in different occupational groups to the percentages for all groups, 1920 and 1930; white and Negro male workers in specific occupational groups compared. (Points are joined by straight lines to facilitate reading.)

facturing and mechanical industries disclose larger dearths of child workers among the Negroes than among the white workers. In 1920 trade is also assignable to the second class; in 1930, however, the Negroes assume a descending trend, with excesses in the early ages and dearths in the later ones. Moreover, in 1920 the dearth among

the old-aged Negroes is greater than the dearth shown by the white workers of the corresponding age group.

The behavior of public service differs considerably in the two census years. In 1930 both races are on an ascending trend, with a greater excess in the old-aged group among the white workers. In 1920, while the trends are ascending with similar dearths in the child group, the old-aged group shows the white workers with a large excess and the Negroes with a slight dearth; noteworthy also is the large excess of white workers in the age group 18-19. Professional service shows ascending trends in both years, with dearths in the child group and excesses in the later ages. In both years the Negroes show larger excesses than the white workers in the older ages.

The curves of domestic and personal service behave similarly in both years, the white workers on an ascending trend and the Negroes on an inverted U. In each year both races show dearths in the child group, and in the later ages excesses among the white workers and dearths among the Negroes.

The clerical occupations present dissimilar pictures with respect to census year. With the exception of the Negroes of 1930 this occupational group discloses decreasing ratio trends with age. The excesses of the child group of 1920 are large, as are also the dearths of the later ages. The excess of the child group in the instance of the Negro workers, which is well above the excess for the white workers, rapidly declines to a dearth in the group 20-24, the decline continuing through the older ages; the white workers, on the other hand, show a similar but less rapid decline, reaching a dearth in the group 25-44 and continuing beyond through the older ages. Ten years later the excess of the white child group appears smaller, the excess of the Negro children becoming a dearth. In the older ages the lapse of 10 years effected a decrease in the dearth of Negro workers, while the dearth of white workers remains approximately the same.

#### SUMMARY

This fourth paper of a series investigates the age of gainful white and Negro male workers of the United States for the census years 1920 and 1930. The percentage age distribution for each occupational group is compared with the percentage age distribution of all gainful male workers by forming the ratios of corresponding percentages. The computed ratios, indicating excesses or dearths of workers, are specific for occupational group, age group, color, and census year. The results may be briefly summarized as follows:

1. Differences in the trends of the ratios for the white and Negro workers, respectively, were found among the occupational groups.

2. With some exceptions the ratio trends for 1920 for the white and Negro workers were similar in a given occupational group. Ten years later the picture remained much the same.

3. Differences with respect to color were found in each census year but only in certain of the age groups of specific occupational groups. Chief among these differences were:

(a) The larger dearth among the Negroes of both census years in the child group of extraction of minerals, and the manufacturing and mechanical industries.

(b) The larger dearth among the Negroes of 1920 in the old-aged group of trade. Also in trade there was in 1930 a dearth of white workers in the younger ages while the Negroes showed an excess.

(c) The large excesses among the white workers of 1920 and 1930 in the old-aged group of public service. In 1920 the Negroes showed a dearth in this age group which became a slight excess 10 years later.

(d) The larger excesses among the Negroes of both years in the older ages of professional service.

(e) The excesses of white workers and the dearths of Negro workers of both years in the older ages of domestic and personal service.

(f) The larger excess of Negroes in 1920 in the child group of clerical occupations. In 1930 the excesses of both white and Negro workers decreased, the excess of the latter becoming a dearth.

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### THREE OUTBREAKS OF FOOD POISONING TRACED TO CREAM-FILLED PASTRY

Since the notes on a typhoid outbreak traced to a carrier engaged in filling cream puffs and "Preventing Typhoid and Bacterial Food Poisoning From Cream-filled Pastry" were published in the Public Health Reports,<sup>1</sup> the Health News for June 28, 1937, issued by the New York State Department of Health, has appeared with a report

<sup>1</sup> July 9, 1937, pp. 929-932. For California State Board of Health regulations regarding cream and custard fillings, see the Public Health Reports for June 11, 1937, pp. 765-772.

of three outbreaks of food poisoning, from which the following is taken:

Three outbreaks of food poisoning ascribed to the eating of cream-filled pastry purchased either directly or indirectly from one bakery in Troy have been reported since April 1936.

The first occurred among employees of a factory in North Albany in April 1936, and was ascribed to the consumption of chocolate eclairs. There were six cases but no fatalities.

The second outbreak occurred in May 1937, and comprised five cases in two families residing in the same house and a case in a third family in Troy. There were no fatalities. The illness was ascribed to the consumption of strawberry cream pie. All members of these families who had not eaten of the pie remained well. No portion of the suspected strawberry cream pie was available for laboratory examination.

Concurrent with the outbreak in Troy, four cases of gastroenteritis in one household were reported from Rensselaer and ascribed to the eating of a coconut cream pie, obtained from the bakery in Troy from which the strawberry cream pies before mentioned had been obtained. Another case of similar illness occurred at the same time in another home in Rensselaer, also ascribed to eating coconut cream pie from this same bakery.

The third outbreak, also in Troy, occurred on June 1, 1937, and comprised 12 cases with no fatalities. Eleven of the cases occurred in 3 households, having a total membership of 15. The illness was attributed to the eating of strawberry cream pie purchased from the bakery involved in the previously mentioned outbreaks. The four members of the household who remained well had not partaken of the pie. There also was reported at this time a case of gastroenteritis in a resident of North Troy who had eaten a portion of a coconut cream pie from this bakery. Other members of the family who had not eaten of the pie remained well.

The onset of illness in these outbreaks followed within one-half to 4 hours after ingestion of the cream-filled pastry. The symptoms were nausea, vomiting, abdominal cramps, diarrhea, and in some instances considerable prostration.

Investigation disclosed that the cream-filled pastries supplied by the bakery in question were not subjected to refrigeration at the bakery. In connection with each outbreak all food-handler employees of the bakery were examined but no evidence of illness or of skin lesions was discovered. The bakery was carefully inspected and found to be in satisfactory sanitary condition.



## A MILK-BORNE EPIDEMIC OF SCARLET FEVER <sup>1</sup>

According to a preliminary report, a scarlet-fever outbreak, comprising 11 cases, with no fatalities, recently occurred in the town of Chautauqua in Chautauqua County, N. Y. It began on May 27 and ended on June 4. All but two of the patients had drunk raw milk sold without a permit by a local dairyman. The two exceptions used milk from their own cow exclusively. The cases were limited to nine families. Three of the nine patients who drank the suspected milk were under 15 years of age and six were over that age. Four of the eleven patients were males and seven were females. The outbreak subsided with the prohibition of further sale of milk from the suspected dairy.

The first patient, whose onset of illness was reported as May 27, was a student boarder in the dairyman's home and is said to have been in no way connected with the milking, milk handling, or the washing of milk utensils, nor to have entered the barn or the milk house. She left for her own home, in another city, on May 27 and developed a scarlet rash on the following day.

The dairyman's household consisted of himself, his wife, and this student boarder. The dairyman and his wife denied any history of recently having had sore throat. The dairyman, however, had an infection on the dorsum of his left thumb, which is said to have begun on May 28. On the same day, he received a kick on his right leg from a cow and in 2 days developed a small discharging ulcer with a surrounding cellulitis.

Obviously, the dairyman could not have been the source of infection of the first patient. Through the medium of his infectious thumb he may, however, have contaminated the milk, and so have been the source of infection of the other eight patients, since their onsets of illness occurred between May 31 and June 4. The dairyman himself did all the milking, bottling, and capping. The bottling was done by hand and the capping by thumb. His wife washed the milk utensils. There was no history of mastitis or of injury to the udders of any of his cows according to the dairyman.

Throat cultures from the dairyman and his wife and from all patients were sent to the laboratory of the State department of health, as well as cultures from the wound on the right leg of the dairyman. No cultures were obtained from the infected thumb of the dairyman, since the infection had healed at the time when the investigation of the outbreak was begun. Milk samples from each quarter of the four milk cows were also submitted to the laboratory.

<sup>1</sup> Health News, June 28, 1937, issued by the New York State Department of Health.

From the foregoing, it would seem that milk from the suspected dairy was probably responsible for the outbreak. The source of contamination of the milk has not yet been determined, but further investigations are being made.

### DEATHS DURING WEEK ENDED JULY 3, 1937

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended July 3, 1937	Correspond- ing week, 1936
<b>Data from 86 large cities in the United States:</b>		
Total deaths.....	7,473	7,543
Average for 3 prior years.....	7,704	-----
Total deaths, first 26 weeks of year.....	241,493	238,327
Deaths under 1 year of age.....	543	477
Average for 3 prior years.....	553	-----
Deaths under 1 year of age, first 26 weeks of year.....	15,017	14,916
<b>Data from industrial insurance companies:</b>		
Policies in force.....	70,021,076	68,517,742
Number of death claims.....	11,729	12,007
Death claims per 1,000 policies in force, annual rate.....	8.7	9.2
Death claims per 1,000 policies, first 26 weeks of year, annual rate.....	10.7	10.6

# PREVALENCE OF DISEASE

*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring*

## UNITED STATES

### CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 10, 1937, and July 11, 1936*

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended July 10, 1937	Week ended July 11, 1936	Week ended July 10, 1937	Week ended July 11, 1936	Week ended July 10, 1937	Week ended July 11, 1936	Week ended July 10, 1937	Week ended July 11, 1936
<b>New England States:</b>								
Maine.....	1	-----	-----	-----	21	131	0	0
New Hampshire.....	1	-----	-----	-----	47	3	0	0
Vermont.....	1	-----	-----	-----	6	12	0	0
Massachusetts.....	6	12	-----	-----	215	377	3	0
Rhode Island.....	-----	1	-----	-----	20	17	0	0
Connecticut.....	4	1	-----	-----	43	53	0	1
<b>Middle Atlantic States:</b>								
New York <sup>1</sup> .....	39	40	-----	12	637	1,066	15	11
New Jersey.....	10	7	2	9	517	321	2	3
Pennsylvania.....	18	15	-----	-----	630	287	6	3
<b>East North Central States:</b>								
Ohio.....	6	13	2	7	483	54	2	3
Indiana.....	15	3	8	6	152	3	1	0
Illinois.....	35	41	10	24	326	21	3	5
Michigan.....	20	15	-----	1	260	34	1	2
Wisconsin.....	8	3	18	4	51	91	0	2
<b>West North Central States:</b>								
Minnesota.....	1	2	-----	11	2	53	0	0
Iowa <sup>2</sup> .....	2	5	-----	-----	6	2	0	0
Missouri.....	3	6	24	27	16	16	1	3
North Dakota.....	-----	-----	-----	-----	-----	-----	1	0
South Dakota.....	-----	2	-----	-----	-----	3	0	0
Nebraska.....	2	6	-----	-----	7	3	1	1
Kansas.....	5	12	-----	4	4	10	0	1
<b>South Atlantic States:</b>								
Delaware <sup>3</sup> .....	-----	1	-----	-----	2	-----	0	0
Maryland <sup>3,4</sup> .....	3	3	-----	1	16	124	0	3
District of Columbia.....	3	2	-----	-----	34	51	0	2
Virginia <sup>3</sup> .....	6	7	-----	-----	78	60	3	2
West Virginia.....	2	1	4	4	34	26	6	5
North Carolina <sup>3,5</sup> .....	6	13	-----	1	127	12	2	7
South Carolina.....	1	3	53	36	18	5	0	0
Georgia <sup>5</sup> .....	7	5	-----	-----	-----	-----	0	2
Florida <sup>6</sup> .....	6	2	2	-----	1	4	3	4
<b>East South Central States:</b>								
Kentucky.....	5	4	1	1	96	7	3	4
Tennessee.....	3	2	14	9	69	8	3	3
Alabama <sup>5</sup> .....	6	11	2	2	25	2	4	2
Mississippi <sup>4</sup> .....	4	8	-----	-----	-----	-----	4	0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 10, 1937, and July 11, 1936—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended July 10, 1937	Week ended July 11, 1936	Week ended July 10, 1937	Week ended July 11, 1936	Week ended July 10, 1937	Week ended July 11, 1936	Week ended July 10, 1937	Week ended July 11, 1936
<b>West South Central States:</b>								
Arkansas.....	4	6	3	4	9	-----	5	1
Louisiana.....	9	7	43	18	5	9	2	0
Oklahoma <sup>1</sup> .....	3	1	4	7	17	-----	1	1
Texas <sup>1</sup> .....	14	11	60	67	147	76	4	3
<b>Mountain States:</b>								
Montana <sup>1</sup> .....	-----	-----	-----	1	8	2	0	0
Idaho <sup>1</sup> .....	-----	1	2	1	3	5	1	0
Wyoming <sup>1</sup> .....	-----	-----	-----	-----	-----	3	0	6
Colorado.....	2	1	-----	-----	36	12	0	0
New Mexico.....	1	-----	1	2	14	5	0	0
Arizona.....	1	1	6	8	15	37	1	0
Utah <sup>1</sup> .....	-----	1	-----	-----	41	22	0	0
<b>Pacific States:</b>								
Washington.....	2	-----	-----	-----	60	92	0	0
Oregon <sup>1</sup> .....	1	-----	6	1	3	15	0	1
California.....	22	25	10	116	84	323	5	4
<b>Total.....</b>	<b>288</b>	<b>300</b>	<b>275</b>	<b>374</b>	<b>4,385</b>	<b>3,451</b>	<b>83</b>	<b>79</b>
<b>First 27 weeks of year.....</b>	<b>11,937</b>	<b>12,985</b>	<b>273,110</b>	<b>138,957</b>	<b>229,118</b>	<b>259,740</b>	<b>3,792</b>	<b>5,485</b>

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended July 10, 1937	Week ended July 11, 1936	Week ended July 10, 1937	Week ended July 11, 1936	Week ended July 10, 1937	Week ended July 11, 1936	Week ended July 10, 1937	Week ended July 11, 1936
<b>New England States:</b>								
Maine.....	2	1	3	17	0	0	0	1
New Hampshire.....	0	0	6	3	0	0	0	0
Vermont.....	0	3	2	7	0	0	0	1
Massachusetts.....	3	1	73	66	0	0	1	0
Rhode Island.....	0	0	16	10	0	0	0	0
Connecticut.....	2	0	25	10	0	0	2	4
<b>Middle Atlantic States:</b>								
New York <sup>1</sup> .....	6	4	212	225	0	0	19	8
New Jersey.....	1	1	43	90	0	0	3	6
Pennsylvania.....	0	0	131	121	0	0	13	3
<b>East North Central States:</b>								
Ohio.....	9	1	100	40	1	0	10	12
Indiana.....	1	0	28	28	3	1	17	3
Illinois.....	2	8	149	183	4	13	6	12
Michigan.....	1	1	237	129	0	0	3	3
Wisconsin.....	1	0	83	115	1	21	0	4
<b>West North Central States:</b>								
Minnesota.....	0	0	39	58	2	4	0	0
Iowa <sup>1</sup> .....	0	0	23	46	19	5	1	2
Missouri.....	22	0	19	37	4	11	14	11
North Dakota.....	0	1	8	3	11	1	0	0
South Dakota.....	0	0	9	2	0	5	0	0
Nebraska.....	0	0	13	14	1	3	2	1
Kansas.....	3	2	40	63	0	5	6	5
<b>South Atlantic States:</b>								
Delaware <sup>1</sup> .....	1	0	2	2	0	0	0	0
Maryland <sup>1</sup> .....	0	1	12	18	0	0	6	4
District of Columbia.....	0	0	2	1	0	0	4	0
Virginia <sup>1</sup> .....	3	0	6	14	0	0	16	14
West Virginia.....	0	2	11	17	0	0	10	5
North Carolina <sup>1</sup> .....	4	2	15	25	0	0	19	18
South Carolina.....	0	1	3	4	0	0	21	16
Georgia <sup>1</sup> .....	6	1	10	5	0	0	38	39
Florida <sup>1</sup> .....	0	0	0	0	0	0	1	0
<b>East South Central States:</b>								
Kentucky.....	7	1	15	10	2	0	26	17
Tennessee.....	11	12	7	4	0	0	24	20
Alabama <sup>1</sup> .....	4	82	5	14	2	0	19	26
Mississippi <sup>1</sup> .....	20	0	1	5	0	0	20	30

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 10, 1937, and July 11, 1936—Continued*

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended July 10, 1937	Week ended July 11, 1936	Week ended July 10, 1937	Week ended July 11, 1936	Week ended July 10, 1937	Week ended July 11, 1936	Week ended July 10, 1937	Week ended July 11, 1936
<b>West South Central States:</b>								
Arkansas.....	36	0	4	1	0	0	34	22
Louisiana.....	8	1	4	6	0	0	21	19
Oklahoma <sup>4</sup> .....	55	0	8	5	0	0	16	13
Texas <sup>5</sup> .....	36	0	26	8	6	0	61	29
<b>Mountain States:</b>								
Montana <sup>3</sup> .....	1	0	12	31	18	12	1	2
Idaho <sup>3</sup> .....	0	0	15	3	4	2	0	0
Wyoming <sup>3</sup> .....	0	0	5	11	0	14	0	0
Colorado.....	0	0	11	21	3	0	2	0
New Mexico.....	1	0	3	10	0	0	2	5
Arizona.....	2	0	12	6	0	0	4	0
Utah <sup>4</sup> .....	0	0	6	12	1	1	0	0
<b>Pacific States:</b>								
Washington.....	0	1	10	14	2	4	1	9
Oregon <sup>3</sup> .....	0	0	5	9	10	1	0	4
California.....	8	8	81	125	2	0	11	11
<b>Total.....</b>	<b>256</b>	<b>135</b>	<b>1,550</b>	<b>1,648</b>	<b>96</b>	<b>103</b>	<b>454</b>	<b>379</b>
<b>First 27 weeks of year.....</b>	<b>1,071</b>	<b>658</b>	<b>158,823</b>	<b>172,491</b>	<b>7,466</b>	<b>5,625</b>	<b>4,245</b>	<b>4,089</b>

<sup>1</sup> Psittacosis, week ended July 10, 1937, 3 suspected cases in New York.

<sup>2</sup> New York City only.

<sup>3</sup> Rocky Mountain spotted fever, week ended July 10, 1937, 12 cases, as follows: Iowa, 1; Delaware, 1; Maryland, 1; Virginia, 3; North Carolina, 1; Montana, 1; Idaho, 1; Wyoming, 1; Oregon, 2.

<sup>4</sup> Week ended earlier than Saturday.

<sup>5</sup> Typhus fever, week ended July 10, 1937, 58 cases, as follows: North Carolina, 1; Georgia, 27; Florida, 6; Alabama, 11; Texas, 13.

<sup>6</sup> Figures for 1936 are exclusive of Oklahoma City and Tulsa.

<sup>7</sup> 1 nonparalytic case included.

### SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week:

State	Menin- gococ- menin- gitis	Diph- theria	Influa- enza	Malari- a	Meas- les	Pel- lagra	Polio- mye- litis	Scarlet fever	Small- pox	Ty- phoid fever
<i>May 1937</i>										
Massachusetts.....	33	21			2,953	2	1	977	0	4
<i>June 1937</i>										
Connecticut.....	2	37	6	2	472		0	379	0	6
Delaware.....	2	1			66		0	14	0	2
District of Columbia.....	9	54	1		358		0	27	0	10
Georgia.....		10	26	538	13	71	8	24	0	85
Idaho.....	2	6	12		165		0	55	13	5
Iowa.....	1	9	3	2	43		0	357	108	13
Maine.....		3			81		0	50	0	2
North Carolina.....	13	46	17	32	1,169	119	14	67	1	30
Vermont.....		3			15		0	10	0	1
West Virginia.....	9	25	60	1	187	3	1	108	1	15
Wyoming.....		2			20		0	46	9	2



## CASES OF VENEREAL DISEASES REPORTED FOR MAY 1937

These reports are published monthly for the information of health officers in order to furnish current data as to the prevalence of the venereal diseases. The figures are taken from reports received from State and city health officers. They are preliminary and are therefore subject to correction. It is hoped that the publication of these reports will stimulate more complete reporting of these diseases.

*Reports from States*

	Syphilis		Gonorrhea	
	Cases reported during month	Monthly case rates per 10,000 population	Cases reported during month	Monthly case rates per 10,000 population
Alabama.....	1,366	4.77	438	1.53
Arizona <sup>1</sup> .....				
Arkansas.....	614	3.04	325	1.61
California.....	1,631	2.64	1,573	2.63
Colorado.....	214	2.01	151	1.42
Connecticut <sup>1</sup> .....	211	1.22	79	.46
Delaware.....	225	8.69	37	1.43
District of Columbia.....	162	2.62	144	2.33
Florida.....	71	.43	22	.13
Georgia.....	1,935	6.23	458	1.53
Idaho.....	54	1.11	46	.95
Illinois.....	2,604	3.32	1,409	1.80
Indiana.....	229	.66	74	.21
Iowa <sup>2</sup> .....	329	1.29	190	.75
Kansas.....	205	1.09	53	.23
Kentucky <sup>1</sup> .....				
Louisiana.....	179	.84	72	.34
Maine <sup>2</sup> .....	50	.59	40	.47
Maryland.....	811	4.84	254	1.52
Massachusetts.....	534	1.21	496	1.10
Michigan.....	542	1.13	429	.90
Minnesota.....	303	1.15	252	.96
Mississippi.....	2,139	10.65	2,696	13.43
Missouri.....	331	.84	228	.58
Montana <sup>1</sup> .....				
Nebraska.....	122	.89	77	.56
Nevada <sup>2</sup> .....				
New Hampshire.....	12	.24	6	.12
New Jersey.....	664	1.53	223	.52
New Mexico.....	135	3.20	23	.55
New York.....	7,965	6.16	1,657	1.28
North Carolina.....	2,585	7.48	555	1.61
North Dakota.....	22	.31	71	1.01
Ohio <sup>1</sup> .....	1,272	1.89	324	.48
Oklahoma <sup>2</sup> .....	521	2.06	399	1.58
Oregon <sup>1</sup> .....				
Pennsylvania <sup>1</sup> .....	2,065	2.04	186	.18
Rhode Island.....	102	1.50	38	.56
South Carolina <sup>1</sup> .....	481	2.59	438	2.35
South Dakota.....	17	.25	27	.39
Tennessee.....	920	3.21	351	1.23
Texas.....	1,374	2.25	228	.37
Utah <sup>2</sup> .....				
Vermont.....	19	.50	27	.71
Virginia.....	1,186	4.44	98	.37
Washington.....	275	1.67	362	2.20
West Virginia <sup>1</sup> .....	390	2.13	163	.89
Wisconsin <sup>1</sup> .....	51	.11	89	.31
Wyoming <sup>2</sup> .....				
Total.....	34,839	2.84	14,798	1.21

See footnotes at end of table.

## Reports from cities of 200,000 population or over

	Syphilis		Gonorrhea	
	Cases reported during month	Monthly case rates per 10,000 population	Cases reported during month	Monthly case rates per 10,000 population
Akron, Ohio.....				
Atlanta, Ga.....	140	4.88	118	4.11
Baltimore, Md.....	438	5.31	133	1.61
Birmingham, Ala. <sup>1</sup> .....				
Boston, Mass.....	221	2.79	173	2.19
Buffalo, N. Y.....	225	3.80	80	1.35
Chicago, Ill.....	1,347	3.78	950	2.66
Cincinnati, Ohio <sup>1</sup> .....				
Cleveland, Ohio.....	280	2.79	59	.63
Columbus, Ohio.....	59	1.93	16	.52
Dallas, Tex.....	236	8.15	68	2.35
Dayton, Ohio.....	69	3.28	17	.81
Denver, Colo.....	95	3.20	65	2.19
Detroit, Mich.....	259	1.67	233	1.35
Houston, Tex. <sup>1</sup> .....	205	6.12	51	1.52
Indianapolis, Ind.....	18	.48	28	.74
Jersey City, N. J. <sup>1</sup> .....				
Kansas City, Mo.....	48	1.14	9	.21
Los Angeles, Calif. <sup>1</sup> .....				
Louisville, Ky. <sup>1</sup> .....				
Memphis, Tenn.....	227	8.50	42	1.57
Milwaukee, Wis. <sup>1</sup> .....				
Minneapolis, Minn.....	92	1.89	73	1.50
Newark, N. J.....	193	4.16	85	1.83
New Orleans, La. <sup>1</sup> .....				
New York, N. Y.....	6,397	8.76	1,078	1.48
Oakland, Calif.....	69	2.28	64	2.11
Omaha, Nebr.....	79	4.59	23	1.04
Philadelphia, Pa. <sup>1</sup> .....	65	.33	15	.08
Pittsburgh, Pa. <sup>1</sup> .....				
Portland, Oreg. <sup>2</sup> .....				
Providence, R. I.....	55	2.12	21	.81
Rochester, N. Y.....	49	1.45	38	1.13
St. Louis, Mo.....	232	3.13	223	2.67
St. Paul, Minn.....	37	1.31	40	1.42
San Antonio, Tex.....	81	3.22	89	3.54
San Francisco, Calif.....	105	1.57	140	2.09
Seattle, Wash.....	110	2.90	133	3.50
Syracuse, N. Y.....	88	4.04	30	1.38
Toledo, Ohio.....	83	2.73	35	1.15
Washington, D. C. <sup>4</sup> .....	162	2.73	144	2.42

<sup>1</sup> No report for current month.

<sup>2</sup> Incomplete.

<sup>3</sup> Not reporting.

<sup>4</sup> Only cases of syphilis in the infectious stage are reported.

<sup>5</sup> Reported by Jefferson Davis Hospital; physicians are not required to report venereal diseases.

<sup>6</sup> Reported by the Social Hygiene Clinic.



## WEEKLY REPORTS FROM CITIES

City reports for week ended July 3, 1937

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Data for 90 cities:											
5-year average	163	52	18	2,869	361	898	10	391	61	1,261	-----
Current week <sup>1</sup>	110	21	13	2,044	313	668	8	372	44	1,419	-----
Maine:											
Portland.....	0	-----	0	1	1	2	0	0	0	7	20
New Hampshire:											
Concord.....	1	-----	0	0	0	0	0	0	0	0	12
Manchester.....	0	-----	0	0	0	0	0	2	0	0	14
Nashua.....	0	-----	0	0	0	1	0	0	0	0	8
Vermont:											
Barre.....	1	-----	0	0	0	0	0	0	0	0	4
Burlington.....	1	-----	0	0	0	0	0	0	0	0	12
Rutland.....	0	-----	0	0	1	0	0	0	0	4	9
Massachusetts:											
Boston.....	1	-----	0	24	12	32	0	16	0	34	176
Fall River.....	0	-----	0	22	1	1	0	2	0	4	32
Springfield.....	0	-----	0	1	0	0	0	1	0	1	37
Worcester.....	0	-----	0	2	6	4	0	2	0	11	47
Rhode Island:											
Pawtucket.....	0	-----	0	0	0	0	0	0	0	0	14
Providence.....	0	-----	0	32	3	8	0	1	0	17	61
Connecticut:											
Bridgeport.....	0	-----	0	0	1	14	0	1	0	0	36
Hartford.....	0	-----	0	17	1	0	0	8	0	2	39
New Haven.....	0	-----	0	0	1	1	0	0	0	3	23
New York:											
Buffalo.....	0	-----	1	30	7	4	0	10	0	35	146
New York.....	29	5	2	331	48	68	0	78	7	84	1,237
Rochester.....	0	-----	0	8	2	4	0	0	0	13	60
Syracuse.....	0	-----	0	24	2	6	0	0	0	37	51
New Jersey:											
Camden.....	0	-----	0	6	0	3	0	0	0	2	23
Newark.....	0	-----	0	14	4	6	0	9	0	11	82
Trenton.....	0	-----	0	20	1	4	0	3	0	0	29
Pennsylvania:											
Philadelphia.....	4	-----	0	19	12	41	0	16	4	82	374
Pittsburgh.....	1	2	0	180	9	18	0	9	1	50	127
Reading.....	0	-----	0	15	0	3	0	0	0	2	21
Scranton.....	0	-----	0	0	-----	2	0	-----	0	0	-----
Ohio:											
Cincinnati.....	1	-----	0	17	8	6	0	10	0	41	129
Cleveland.....	3	-----	0	288	3	27	0	12	0	34	151
Columbus.....	0	1	1	10	4	2	0	2	0	30	84
Toledo.....	1	1	1	123	1	3	1	2	0	42	66
Indiana:											
Anderson.....	0	-----	0	12	0	2	0	0	0	3	9
Fort Wayne.....	0	-----	0	1	0	1	0	1	0	1	22
Indianapolis.....	1	-----	0	67	9	3	0	3	0	29	110
Muncie.....	0	-----	0	0	0	0	0	1	0	0	13
South Bend.....	0	-----	0	0	0	1	0	0	0	0	13
Terre Haute.....	1	-----	0	0	0	0	0	0	0	0	19
Illinois:											
Alton.....	0	-----	0	1	0	0	0	0	0	0	12
Chicago.....	9	2	2	326	28	97	0	28	1	69	598
Elgin.....	0	-----	0	0	1	1	0	0	0	3	13
Moline.....	0	-----	0	0	0	0	1	0	0	10	8
Springfield.....	1	-----	0	8	1	2	0	0	0	7	22
Michigan:											
Detroit.....	14	-----	0	98	10	130	0	10	2	46	240
Flint.....	1	-----	0	2	3	6	0	3	0	5	30
Grand Rapids.....	0	-----	0	32	0	4	0	0	0	28	28
Wisconsin:											
Kenosha.....	0	-----	0	1	0	0	0	0	0	0	9
Madison.....	0	-----	0	0	0	1	0	0	0	5	25
Milwaukee.....	1	-----	0	20	2	26	0	1	0	58	102
Racine.....	0	-----	0	0	0	4	0	1	0	0	9
Superior.....	0	-----	0	0	1	0	0	0	0	0	6

<sup>1</sup> Figures for Topeka, Kans., estimated; report not received.

City reports for week ended July 3, 1937—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
<b>Minnesota:</b>											
Duluth	0		0	0	1	11	0	1	0	2	16
Minneapolis	0		0	0	6	14	0	3	0	8	73
St. Paul	0		0	0	5	3	0	1	0	71	61
<b>Iowa:</b>											
Cedar Rapids	0		1	0		0	0		0	0	
Davenport	0		0	0		2	0		0	0	
Des Moines	1		0	0		11	3		0	0	21
Sioux City	0		0	0		1	1		0	0	
Waterloo	0		0	0		4	0		0	5	
<b>Missouri:</b>											
Kansas City	2		0	1	3	7	2	3	0	6	84
St. Joseph	0		0	0	0	1	0	1	0	1	26
St. Louis	3		0	55	7	18	0	12	5	55	249
<b>North Dakota:</b>											
Fargo	0		0	0	1	0	2	0	0	33	7
Grand Forks	0		0	0	0	0	0	0	0	13	
Minot	0		0	0	0	0	0	0	0	0	7
<b>South Dakota:</b>											
Aberdeen	0		0	0		2	0		0	0	
<b>Nebraska:</b>											
Omaha	0		0	1	0	2	2	4	0	12	68
<b>Kansas:</b>											
Lawrence	0		0	0	1	0	0	0	0	3	5
Topeka											
Wichita	0		0	4	0	2	0	1	0	16	23
<b>Delaware:</b>											
Wilmington	0		0	0	1	0	0	1	0	1	24
<b>Maryland:</b>											
Baltimore	6		1	47	8	9	0	11	0	73	183
Cumberland	0		0	0	1	0	0	0	0	1	10
Frederick	0		0	0	1	0	0	0	0	0	5
<b>Dist. of Col.:</b>											
Washington	8		0	42	5	4	0	11	7	14	124
<b>Virginia:</b>											
Lynchburg	1		0	5	1	0	0	0	0	15	15
Norfolk	0		0	4	0	0	0	1	0	3	21
Richmond	1		0	9	2	0	0	1	1	0	47
Roanoke	1		0	8	0	0	0	0	0	0	13
<b>West Virginia:</b>											
Charleston	0		0	0	0	0	0	1	1	0	4
Huntington	0		0	1	0	0	0	0	0	0	
Wheeling	0		0	0	0	0	0	0	1	15	10
<b>North Carolina:</b>											
Gastonia	1		0	0		0	0		0	1	
Raleigh	0		0	1	0	0	0	1	0	2	25
Wilmington	0		0	0	1	0	0	0	0	10	17
Winston-Salem	0		0	0	3	1	0	0	3	5	11
<b>South Carolina:</b>											
Charleston	0		0	1	2	0	0	2	1	0	24
Florence	0		0	0	1	0	0	0	0	0	15
Greenville	0		0	0	1	0	0	2	1	0	25
<b>Georgia:</b>											
Atlanta	0		1	0	0	5	0	4	1	18	81
Brunswick	0	1	1	0	1	0	0	1	0	0	6
Savannah	0	1	0	0	0	0	0	4	2	6	39
<b>Florida:</b>											
Miami	0	1	0	0	3	2	0	5	1	0	29
Tampa	0	1	1	15	1	1	0	1	1	0	22
<b>Kentucky:</b>											
Ashland	0		0	2		0	0		0	3	0
Covington	0		0	4	0	0	0	1	0	9	12
Lexington	0		0	0	0	0	0	2	0	5	22
Louisville	0		1	31	8	4	0	4	0	79	75
<b>Tennessee:</b>											
Knoxville	0		0	0	4	0	0	2	3	0	39
Memphis	0		0	27	1	0	0	7	0	43	96
Nashville	0		0	2	4	0	0	1	0	0	54
<b>Alabama:</b>											
Birmingham	1		0	12	3	1	0	7	2	9	74
Mobile	0		0	0	2	0	0	2	0	1	27
Montgomery	0		0	1		1	0		0	0	
<b>Arkansas:</b>											
Fert Smith	0		0	0		1	0		0	0	
Little Rock	0		0	0	1	0	0	1	0	0	2

## City reports for week ended July 3, 1937—Continued

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
<b>Louisiana:</b>											
Lake Charles.....	0		0	2	1	0	0	0	0	1	5
New Orleans.....	2	3	2	1	15	5	0	16	0	12	153
Shreveport.....	0		0	1	6	0	0	1	1	0	68
<b>Oklahoma:</b>											
Muskogee.....	0		0	0		1	0		0	0	
Oklahoma City.....	0		0	0	2	3	0	0	0	0	41
Tulsa.....	0			5		1	0		0	22	
<b>Texas:</b>											
Dallas.....	3		0	11	3	2	0	2	0	33	68
Fort Worth.....	0		0	0	1	0	0	2	0	0	40
Galveston.....	0		0	0	3	0	0	2	0	0	22
Houston.....	2	1	0	2	5	1	0	1	1	29	78
San Antonio.....	0		0	0	6	0	0	3	0	0	78
<b>Montana:</b>											
Billings.....	0		0	0	2	0	0	0	0	0	6
Great Falls.....	0		0	0	0	1	1	0	0	6	4
Helena.....	0		0	0	0	0	0	0	0	0	8
Missoula.....	0		0	0	0	0	0	0	0	0	12
<b>Idaho:</b>											
Boise.....	0		0	0	2	0	0	0	0	0	14
<b>Colorado:</b>											
Colorado Springs.....	0		0	0	1	1	0	2	0	1	15
Denver.....	2		0	48	6	6	0	4	0	24	83
Pueblo.....	0		0	0	0	1	0	0	1	0	5
<b>New Mexico:</b>											
Albuquerque.....	0		0	0	1	2	0	2	0	1	7
<b>Utah:</b>											
Salt Lake City.....	0		0	58	1	6	0	2	0	8	40
<b>Washington:</b>											
Seattle.....	0		0	15	2	2	0	4	0	17	77
Spokane.....	0		0	34	2	0	0	0	0	6	20
Tacoma.....	0		0	0	0	0	0	1	0	4	22
<b>Oregon:</b>											
Portland.....	2		0	3	4	6	0	2	0	4	80
Salem.....	0			1		0	1		0	3	
<b>California:</b>											
Los Angeles.....	6	2	0	10	16	19	1	18	0	55	332
Sacramento.....	1		0	11	0	9	0	1	0	10	27
San Francisco.....	2	2	1	7	1	6	0	8	1	44	171

State and city	Meningococcus meningitis		Poli- omye- litis cases	State and city	Meningococcus men- ingitis		Poli- omye- litis cases
	Cases	Deaths			Cases	Deaths	
<b>New York:</b>				<b>Kentucky:</b>			
New York.....	1	0	1	Louisville.....	1	0	1
<b>Pennsylvania:</b>				<b>Tennessee:</b>			
Pittsburgh.....	3	0	0	Knoxville.....	0	1	0
<b>Ohio:</b>				Memphis.....			
Cincinnati.....	0	0	1	Nashville.....	0	0	1
<b>Indiana:</b>				<b>Alabama:</b>			
Indianapolis.....	1	0	0	Birmingham.....	3	0	0
<b>Illinois:</b>				Montgomery.....			
Chicago.....	1	1	0	0	0	0	1
<b>Minnesota:</b>				<b>Arkansas:</b>			
Minneapolis.....	1	0	0	Little Rock.....	0	0	2
St. Paul.....	1	0	0	<b>Oklahoma:</b>			
<b>Iowa:</b>				Muskogee.....			
Des Moines.....	1	0	0	Oklahoma City.....	0	0	2
<b>Nebraska:</b>				<b>Texas:</b>			
Omaha.....	0	0	1	Houston.....	1	0	0
<b>Maryland:</b>				San Antonio.....			
Baltimore.....	1	1	0	0	0	0	1
<b>District of Columbia:</b>				<b>Colorado:</b>			
Washington.....	1	2	0	Denver.....	0	1	1
<b>North Carolina:</b>				<b>California:</b>			
Wilmington.....	1	0	0	Los Angeles.....	1	0	2

*Encephalitis, epidemic or lethargic.*—Cases: Worcester, 1; New York, 2; St. Louis, 1; Spokane, 1.  
*Pellagra.*—Cases: Philadelphia, 2; Winston-Salem, 1; Savannah, 4; Nashville, 2; Montgomery, 1.  
*Typhus fever.*—Cases: New York, 1; Atlanta, 1; Savannah, 1; Birmingham, 1.

# FOREIGN AND INSULAR

## GREAT BRITAIN

*England and Wales—Infectious diseases—13 weeks ended April 3, 1937.*—During the 13 weeks ended April 3, 1937, certain infectious diseases were reported in England and Wales as follows:

Disease	Cases	Disease	Cases
Diphtheria.....	14,849	Puerperal pyrexia.....	1,687
Ophthalmia neonatorum.....	1,107	Scarlet fever.....	20,878
Pneumonia.....	27,181	Smallpox.....	3
Puerperal fever.....	539	Typhoid fever.....	525

*England and Wales—Vital statistics—First quarter 1937.*—During the quarter ended March 31, 1937, 145,490 live births and 163,700 deaths were registered in England and Wales. The following vital statistics are taken from the Quarterly Return of Births, Deaths, and Marriages, issued by the Registrar General of England and Wales and are provisional:

### *Birth and death rates in England and Wales, quarter ended Mar. 31, 1937*

<b>Annual rates per 1,000 population:</b> Live births..... 14.4 Stillbirths..... 62 Deaths, all causes..... 16.3 Deaths under 1 year of age..... 173 Deaths from: Diarrhea and enteritis (under 2 years of age)..... 15.4	<b>Annual rates per 1,000 population—Con.</b> Diphtheria..... .09 Influenza..... 1.55 Measles..... .02 Scarlet fever..... .01 Typhoid fever and paratyphoid fever..... .00 Violence..... .55 Whooping cough..... .07
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1 Per 1,000 live births.

*England and Wales—Vital statistics—Year 1936.*—The following birth and death rates for England and Wales for the year 1936 have been published in the Quarterly Return of Births, Deaths, and Marriages issued by the Registrar General and are provisional:

	Rates per 1,000 population		Rates per 1,000 population
Live births.....	14.8	Deaths from—Continued.	
Stillbirths.....	61	Influenza.....	0.15
Deaths, all causes.....	12.1	Measles.....	.07
Deaths under 1 year of age.....	159.00	Scarlet fever.....	.01
Deaths from:		Typhoid fever and paratyphoid fever.....	.01
Diarrhea and enteritis (under 2 years).....	15.7	Violence.....	.55
Diphtheria.....	.08	Whooping cough.....	.05

1 Per 1,000 live births.

## IRISH FREE STATE

*Vital statistics—First quarter 1937.*—The following vital statistics for the Irish Free State for the quarter ended March 31, 1937, are taken from the Quarterly Return of Marriages, Births, and Deaths, issued by the Registrar General, and are provisional:

	Number	Rate per 1,000 population		Number	Rate per 1,000 population
Marriages.....	3,357	4.5	Deaths from—Continued.		
Births.....	13,569	18.4	Influenza.....	1,953	2.65
Total deaths.....	15,368	20.8	Measles.....	53	-----
Deaths under 1 year of age.....	1,240	1.91	Puerperal septicemia.....	22	1.62
Deaths from:			Scarlet fever.....	43	-----
Cancer.....	899	1.22	Tuberculosis (all forms).....	1,024	1.39
Diarrhea and enteritis (under 2 years).....	121	-----	Typhoid fever.....	13	-----
Diphtheria.....	86	-----	Whooping cough.....	125	-----

<sup>1</sup> Per 1,000 births.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for June 25, 1937, pp. 858-871. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued July 30, 1937, and thereafter, at least for the time being, in the issue published on the last Friday of each month.

## Plague

*Algeria—Algiers.*—On July 7, 1937, one suspected case of plague was reported in Algiers, Algeria.

*Hawaii Territory—Island of Hawaii—Hamakua District—Paauhau Sector.*—A plague-infected rat was reported on July 8, 1937, in Paauhau Sector, Hamakua District, Island of Hawaii, Hawaii Territory.

*United States.*—A report of plague infection in Idaho and Oregon appears on page 1018 of this issue of PUBLIC HEALTH REPORTS.

## Yellow Fever

*Gold Coast.*—On July 3, 1937, one case of yellow fever was reported in Accra and two fatal cases of the same disease were reported in Mepom, Gold Coast.

*Nigeria—Oyu Province—Ogbomsho.*—On June 30, 1937, three cases of yellow fever with one death were reported in Ogbomsho, Oyu Province, Nigeria.