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SOCIAL CHANGES IN 1928

Edited by
WILLIAM F. OGBURN



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SOCIAL CHANGES IN 1928

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INTRODUCTION

IN JULY, 1928, the editors of the *American Journal of Sociology* published a record of social changes in recent years, particularly in 1927. The success of the venture was attested by the demand for the issue and the many expressions of approval. It was accordingly decided to publish in May of 1929 a similar record for 1928.

These records, while published annually, are not designed to be a yearbook of the conventional type. Most yearbooks are either mere collections of facts or symposiums of opinions, set forth with a great deal of uniformity and regularity. The method pursued in constructing these annual analyses of social change is in the main neither a mere presentation of fact nor a group of opinions, but it is rather scientific analyses, in which materials are selected, on the basis of the judgment of experts in these fields, arranged, classified, and such deductions and interpretations drawn therefrom as the data warrant.

The aim is to have a volume of research articles which will attempt to measure and assess the various social changes that are occurring. It is not desired to sacrifice this standard in the interest of symmetry or uniformity or regularity. Hence, there is variation in topics and in treatment. Contributors are all, however, addressing themselves to the problem of trying to make a periodic inventory or accounting of the various trends of cultural evolution. Therefore, researches on social change that help us to know the course of our

movements, that aid us to evaluate them, and that point with reasonable probability the direction in which we are likely to go, are welcome.

Never in the history of the world have there been so many changes nor such rapid changes nor such significant changes as are occurring in the present century. It seems very probable that these changes will continue. Nearly all our so-called modern social problems are due to social change. The changes make for a good deal of uncertainty. Occasionally eloquent and ambitious statesmen speak of guiding social change. But it would seem that knowledge is the prerequisite of control, if guidance is ever to be achieved, even in a small measure. But prediction in social science is not so sure as in some of the natural sciences. Science has not advanced so far in the social as in the natural sciences. One of the most satisfactory and reliable methods of prediction in the social field now in practice is the use of accurate measurement of past trends and their projection relatively short distances into the future. Students should find these articles useful in measuring these trends of our time.

POPULATION

WARREN S. THOMPSON
Miami University

ABSTRACT

There are three types of countries in the world today as regards their population growth *Group A*—These countries have a very rapidly declining birth-rate, and although their death-rates are low their rates of natural increase are declining and they are rapidly approaching a stationary or decreasing population because of the general practice of conception control. *Group B*—Birth-rates are coming under control in these countries, but rather slowly. Death-rates are declining more rapidly than birth-rates, however, so that natural increase is rising or at least is not declining to any great extent. *Group C*—In these countries both birth-rates and death-rates are subject to little voluntary control as yet and the positive checks determine the growth of population. *Land for expansion*—The land needed for the expansion of the peoples now entering upon a period of rapid population growth (practically all of those in Group B and some of those in Group C) is practically all being held by the peoples in Group A, who no longer have an expanding population to settle these lands. One of the most urgent problems of the next few decades is going to be the readjustment in land holdings demanded by this shift in the expanding peoples from northwestern Europe to eastern and southern Europe and to certain parts of Asia

A little more than ten years have now elapsed since the close of the World War. They have been momentous years in many respects, but probably the changes of greatest moment, those which will most influence the future history of mankind, are those that are taking place in population growth. We can now discern quite clearly tendencies about whose existence there was much uncertainty before the war. And because they can now be seen so distinctly we may assess their significance more certainly than we have been able to do hitherto.

In Table I, we have brought together data on births, deaths, and natural increase for a number of countries. Our aim here has been to present typical data rather than complete data. We are interested in pointing out what appear to us to be the most significant tendencies in the population movements of different countries rather than in stating with precision the total growth in the world or in any given part of it.

An examination of this table will show that the different coun-

TABLE I

BIRTH-RATES, DEATH-RATES, AND RATES OF NATURAL INCREASE FOR CERTAIN
COUNTRIES 1908-13, 1920-23, 1924, 1925, 1926, AND 1927

	1908-13	1920-23	1924	1925	1926	1927
Australia:						
Births.....	27.3	24.8	23.2	22.9	22.0	21.7
Deaths.....	10.8	9.9	9.5	9.2	9.4	9.5
Natural increase	16.5	14.9	13.7	13.7	12.6	12.2
Austria:						
Births.....	.....	22.8	21.7	20.6	19.2	17.8
Deaths ..	.....	17.2	15.0	14.4	14.9	14.9
Natural increase	..	5.6	6.7	6.2	4.3	2.9
Belgium:						
Births ..	23.4	21.2	20.1	19.8	19.0	18.2
Deaths ..	15.7	13.6	13.0	13.1	13.3	13.0
Natural increase ..	7.7	7.6	7.1	6.7	5.7	5.2
Canada:						
Births.....	..	28.4	25.7	25.8	24.8	24.6
Deaths.....	..	11.9	10.8	10.6	11.4	11.1
Natural increase ..	..	16.5	14.9	15.2	13.4	13.5
England and Wales:						
Births.....	24.9	22.0	18.8	18.3	17.8	16.7
Deaths.....	14.1	12.2	12.2	12.2	11.6	12.3
Natural increase ..	10.8	9.8	6.6	6.1	6.2	4.4
France:						
Births.....	19.5	20.1	18.7	18.9	18.8	18.1
Deaths.....	18.6	17.3	16.9	17.5	17.4	16.5
Natural increase ..	0.9	2.8	1.8	1.4	1.4	1.6
Germany:						
Births.....	20.5	23.8	20.2	20.4	19.5	18.3
Deaths.....	16.5	14.3	12.1	11.8	11.7	12.0
Natural increase ..	13.0	9.5	8.1	8.6	7.8	6.3
Netherlands:						
Births ..	29.1	26.9	25.1	24.3	23.8	23.1
Deaths.....	13.9	11.1	9.8	9.8	9.8	10.3
Natural increase ..	15.2	15.8	15.3	14.5	14.0	12.8
New Zealand:						
Births.....	26.2	23.4	21.6	21.2	21.1	20.3
Deaths.....	9.4	9.2	8.3	8.3	8.7	8.5
Natural increase	17.0	14.2	13.3	12.9	12.4	11.8
Sweden:						
Births ..	24.4	20.8	18.1	17.5	16.9	...
Deaths ..	14.0	12.5	12.0	11.7	11.8	...
Natural increase ..	10.4	8.3	6.1	5.8	5.1	..
Switzerland:						
Births ..	24.7	20.2	18.8	18.4	18.2	..
Deaths ..	15.2	13.0	12.5	12.2	11.7	...
Natural increase ..	9.5	7.2	6.3	6.2	6.5	.....
United States:						
Births ..	24.8	23.2	22.6	21.4	20.6	20.4
Deaths.....	15.9	12.3	11.8	11.8	12.1	11.4
Natural increase ..	8.9	10.9	10.8	9.6	8.5	9.0
Bulgaria:						
Births.....	41.0	39.9	39.7	37.0	..	..
Deaths.....	22.4	21.5	20.7	19.2	..	..
Natural increase ..	18.6	18.4	19.0	17.8	..	..

TABLE I—*Continued*

	1908-13	1920-23	1924	1925	1926	1927
Czechoslovakia:						
Births	31 1	27 7	25 6	25 0	24 4	23 3
Deaths	21 0	17 3	15 2	15 2	15 5	16 0
Natural increase.	10 1	10 4	10.4	9 8	8 9	7.3
Hungary:						
Births . . . . .	.. ..	29 5	26 8	27.7	26 7	25 2
Deaths . . . . .	.. ..	20 2	20 3	16 9	16 5	17 6
Natural increase . . . . .	.. ..	9 3	6 5	10 8	10 2	7 6
Italy:						
Births	32 4	30 4	28 2	27 5	27.2	26 4
Deaths	20 4	17 6	16 6	16 6	16 8	15 5
Natural increase	12 0	12.8	11 6	10 9	10.4	10 9
Poland:						
Births . . . . .	.. ..	33.9	34 6	35 2	33 0	31 6
Deaths . . . . .	.. ..	21 0	17 9	16 7	17 8	17 4
Natural increase . . . . .	.. ..	12.9	16 7	18 5	15 2	14 2
Roumania:						
Births	43 1	36 5	36 7	35.2	.. ..	.. ..
Deaths	24 7	23.5	23 3	21 0	.. ..	.. ..
Natural increase	18 4	13.0	13 4	14 2	.. ..	.. ..
Spain:						
Births	32 1	30 4	29 9	29 4	29 9	28 6
Deaths	22.8	21 6	19 8	19 7	19 0	18.9
Natural increase	9 3	8 8	10.1	9 7	10 9	9 7
India:						
Births	38 5	33 0	34 5	33 6	.. ..	.. ..
Deaths	32 1	27 6	28 5	24 7	.. ..	.. ..
Natural increase	6 4	5 4	6 0	8 9	.. ..	.. ..
Japan:						
Births.	32 9	35 1	33 8	34 9	34 8	.. ..
Deaths	20 5	23 3	21 2	20 3	19 2	.. ..
Natural increase	12 1	11 8	12 6	14 6	15.6	.. ..
Russia:						
Births	45.6	41 0	42 7	.. ..	.. ..	43 4
Deaths	28 9	22 0	23 2	.. ..	.. ..	23 0
Natural increase	16 7	19 0	19 5	.. ..	.. ..	20 4

tries fall into three main groups: (A) This includes practically all of Europe west of a line drawn from Trieste to Danzig, north of Italy and Spain, and the countries largely settled by peoples emigrating from this area within the last three hundred years. (B) This includes Italy, Spain, and the Slavic peoples of Central Europe. (C) This group includes Russia, Japan, and India for which data are given here and we shall make no great mistake if we include with them most of the peoples of Asia, Africa, and South America not included in Group I.

Briefly stated, the characteristics of these groups from the standpoint of their vital statistics are: Group A: Very rapidly

declining birth-rate and death-rate with the former declining more rapidly than the latter so that the rate of natural increase is also declining. Group B: Evidence that decline in both birth-rates and death-rates is under way in certain classes, but that the death-rate is declining as rapidly or even more rapidly than the birth-rate with the result that the rate of natural increase will probably for some time remain as great as now, or even become larger in the near future. Group C: Both birth-rates and death-rates are less controlled than in either A or B. But in some of these countries, e.g., Japan, there is some indication that death-rates are coming under control faster than birth-rates. In such of these lands as are developing modern industry and sanitation, there is likely to be a very rapid increase in numbers during the next few decades. In many of these lands, however, both birth-rates and death-rates are quite uncontrolled and we may expect either a rapid increase or almost a stationary population dependent upon the harshness of the "positive" checks to population growth, viz., disease, hunger, war, etc.

For a number of years it has been well known that the birth-rate was declining in Group A. About the beginning of the last quarter of the nineteenth century, it became apparent that a decided change was taking place in the birth-rate in England and Wales. The same phenomenon had been observed in France practically since the close of the Napoleonic Wars, and in Sweden the same movement was apparent as early as 1865, although it has not been continuous since that time. Near the end of the nineteenth century and in the early years of the twentieth a number of other countries showed a decline in their birth-rate, and that this was a general movement among the peoples in Group A was quite generally recognized before the war.

Not a great deal of significance was attached to this movement, however, because up to that time the death-rate had fallen as fast as or even faster than the birth-rate in most countries and the growth of population was greater than it had ever been. An examination of the rates of natural increase in Table I will show that in 1908-13 very few countries in this group had a rate of less than ten and that rates of twelve and more were by no means un-

common. The population of the Group A countries was expanding at an unprecedented rate in the latter part of the nineteenth century and in the early years of this century.

The war did not introduce any change in the tendencies of either the birth-rates or the death-rates in these countries. But it did hasten the decline in the birth-rate in most of them, as can be seen in Table II.

TABLE II

DECLINE OF THE BIRTH-RATE IN CERTAIN COUNTRIES 1896-1905 TO 1908-13
AND ESTIMATED AND ACTUAL BIRTH-RATES 1923-27

Country	Birth-Rate in 1900 as an Average of the Birth-Rate 1896-1905	Birth-Rate in 1910 as an Average of the Birth Rate 1908-13	Average Annual Decline of the Birth-Rate 1900-1910	Estimated Birth Rate in 1923-27	Actual Birth Rate in 1923-27
Germany	35.2	29.5	57	21.0	19.9
France	21.8	19.5	23	16.1	18.7
England and Wales	28.6	24.9	37	19.4	18.3
Italy	33.2	32.4	0.8	31.2	27.3
Sweden	26.4	24.4	20	21.4	17.8
Australia	27.0	27.3	+ 0.3*	27.7	22.7

* Increase

Of the six countries given here France is the only one in which the birth-rate is higher today than one would have expected if he had estimated it for 1923-27 from data available at the outbreak of the war, on the assumption that the downward tendency would continue at the same absolute rate as it had shown from the beginning of the century to 1913. Of course, one cannot say that the war was the causal factor in increasing the absolute decline in the birth-rate which has taken place in the last fifteen years, but certainly it may be regarded as a turning point of very great significance.

Furthermore, in the Group A countries engaged in, or greatly affected by, the war there was no compensation for the deaths suffered in and the lack of births resulting from the war, such as is commonly supposed to take place. The average birth-rate for the years 1920-23, the years of highest birth-rates following the war, was lower in every case, except in France and Holland, than the average for pre-war years. Not only did this compensation fail of achievement, but, after this brief period of a fairly high

birth-rate, the decline became more marked than ever in almost all of these countries. It became so rapid that it overhauled the death-rate and, for the first time since vital statistics became fairly reliable, the rate of natural increase began to decline in practically all of these countries.¹ The net result of these recent movements in Group A countries is that the rate of natural increase is far less than it was in 1908-13. In England and Wales in 1927 it was only 40.7 per cent of what it was in 1908-13, in Germany only 48.7 per cent, in Australia only 73.9 per cent, in New Zealand only 69.1 per cent, in Sweden only 49.0 per cent, and in France, though it is a trifle higher, it is so low absolutely that it is negligible. Clearly the Group A countries have entered upon a new era in their population growth which is worthy of the most careful consideration.

Dublin and Lotka have shown that, with the specific birth-rates and death-rates of 1920, our own rate of natural increase was really only 5.47 instead of 10.99 as the crude rate indicated.² This comes about by reason of the changes which are taking place in the age constitution of our population as a consequence of our declining birth-rate. Since the same sort of change is taking place in all the countries in Group A, it may be worth our while to pause for a moment to notice the effects of a declining birth-rate upon the age constitution.

In Table III, we have given the proportion of the population in certain age groups at different periods for several countries. The general tendency of Group A countries is to have fewer children (0-19), fewer reproductive adults (20-39), and more in middle life and over (40 and above), as time goes on. For France³ and

¹ In several countries the birth-rate had declined faster than the death-rate at a somewhat earlier period. In France there is clear evidence that this happened at about twenty year intervals during the nineteenth century, 1830, 1850, 1870, and 1890. In this country the marked changes in increase of population shown in the censuses of 1870 and 1900 undoubtedly reflect a marked decline in the birth-rate without a similar decline in the death-rate.

² L. I. Dublin and A. J. Lotka, "On the True Rate of Natural Increase," *Journal of the American Statistical Association*, September, 1925, pp. 305-39.

³ Alfred Sauvy, "La Population française jusqu'en 1956," *Journal de la Société de Statistique de Paris*, December, 1928, pp. 321-27.

the United States⁴ in addition to current data, we have estimates for a considerable period in the future. They show clearly the inevitable result of the tendencies now at work in all of these Group A

TABLE III
SHOWING AGE GROUPS IN VARIOUS COUNTRIES AT
DIFFERENT TIMES

COUNTRY and DATE	PROPORTION OF TOTAL POPULATION IN GIVEN AGE GROUPS AT SPECIFIED DATES			
	0-19	20-39	40-59	60 and over
England and Wales.				
1901 ..	42 40	32 35	17 85	7 40
1911 .	39 89	32 56	19 52	8 04
1921 .	36 9	30 7	22 8	9 6
Germany:				
1900 . .	44 23	30 10	17 86	7 80
1910 . .	43 73	30 28	18 11	7 88
1925 .	36 2	32 5	22 1	9 2
France:				
1901	34 62	30 33	22 59	12 45
1911	33 89	30 50	23 04	12 57
1921	31 2	29 7	25 3	13 8
1956*	29 1	28 3	26 7	15 9
Sweden:				
1900. . .	41 89	27 12	19 07	11 92
1910 . .	40 99	28 07	18 98	11 95
1920	38 8	29 5	19 5	12 2
United States:				
1900	44 3	32 1	16 9	6 4
1920.	40 7	32 4	19 4	7 4
1975*	30 9	30 6	21 9	16 6
Australia				
1901 .	45 1	32 7	15 7	6 2
1911	41 7	32 7	18 7	6 4
1921	40 2	32 1	19 9	7 4
Spain				
1900	43 6	29 4	19 5	7 3
1920	43 9	28 7	19 1	7 9
Italy				
1901. . .	43 45	27 26	19 60	9 69
1911	43 17	27 32	19 01	10 15

* Estimated

countries. It is just because of these changes in the proportions of people in the various age groups, approximately one-half of whom are women, that Dublin and Lotka find that the true birth-rate in

⁴ Estimated from data prepared by my colleague, P. K. Whelpton, in working out his estimates of our future population, *American Journal of Sociology*, September, 1928, pp. 253-73.

1920 was 20.9 instead of 23.4. It will, of course, still further decline as the proportion of women 20-39 becomes still smaller, even though every woman on the average bears as many children as at present.

Likewise the death-rate will increase as the proportion of the population over forty years of age increases. This statement needs little proof, for it is quite obvious that a population like Australia's in 1921, having only 27.3 per cent of its population over forty, will have a lower death-rate than France, which had 39.1 per cent of its population in this group. It may, however, be worth while to give some concrete examples of what these changes in age constitution means in terms of deaths.

The death-rates of 1921 for England and Wales show that approximately 15,200 children out of each 100,000 born will die before they reach twenty years of age. The wastage between birth and twenty years is then 15.2 per cent. In the next age group, 20-39, the wastage is only 8.3 per cent, in the third group, 40-59, it is 20.3 per cent, and in the first twenty years of the next group, i.e., 60-79, it is 69.9 per cent. Between 80 and 100 the wastage is approximately 100 per cent. Now it is easy to see that if we apply these wastage rates to 1,000,000 people divided into age groups as in England and Wales in 1901 and 1921, we shall get quite different results. Up to the eightieth year of age the total wastage would be greater in the 1921 population by about 8.7 per cent, owing entirely to differences in age constitution. If, instead of comparing the population of England and Wales in 1901 and 1921, we were to compare the population in England and Wales in 1921 with that in France in 1956 or in the United States in 1975, it is evident that the wastage would be very much greater in these latter populations.

In adjusting the age groups in the United States to the specific birth-rates and death-rates of 1920, i.e., by stabilizing our population with these rates, Dublin and Lotka found that a death-rate of 15.4 would result. It would be still higher in a population distributed as ours is likely to be in 1975, unless in the meantime considerably greater improvements in health take place than we now have reason to anticipate.

Even France, in which the stabilization of age groups to a low birth-rate has already been largely achieved, will suffer still further decline in its birth-rate and rise in its death-rate from future changes. These will not be as great as those that will be experienced by most of the other countries in Group A, but they will be sufficient to create a considerable deficit in births after 1935, as M. Alfred Sauvy has shown.⁵ Indeed, in 1945, with present specific birth-rates and death-rates there will be 102,000 fewer

TABLE IV

SHOWING DECLINE IN FECUNDITY OF MARRIED WOMEN 1910-11 TO 1924,
ALSO NUMBER OF CHILDREN SURVIVING THE FIRST
YEAR OF LIFE PER 1,000 WOMEN

COUNTRY	LIVING BORN LEGITIMATE CHILDREN PER 1,000 MARRIED WOMEN AGED 15-45			INFANTS LIVING TO ONE YEAR OF AGE PER 1,000 WOMEN AGED 15-45, 1924-25
	1910-11	1924	Per Cent of In- crease (+) and of Decrease (-) 1910-11 to 1924	
England	199	148	-26 6	70
Germany	277	146	-35 6	71
France	134	141	+ 5 2	74
Denmark	226	181	-19 9	76
Belgium	187	160	-14 4	77
Switzerland	220	175	-20 4	72
The Netherlands	269	239	-11 1	109
Italy	265	250	- 5 7	110
Spain	249	248	0 0	115

births than deaths in France. This will become somewhat less as the small group of females born during the war passes out of the more prolific ages, but by 1955 the birth-rate will be 17.0 and the death-rate 19.1 and the deficiency of births will amount to about 80,000.

It may be said that the condition in France is fairly well known and that it constitutes an exception among these Group A nations. This is not the case, however, as Table IV clearly shows.⁶ There has been a very marked decrease in the legitimate birth-rate in

⁵ Alfred Sauvy, *op. cit.*

⁶ The data in this table were taken from Henri Bunle, "Chronique de Démographie," *Journal de la Société de Statistique de Paris*, November, 1928, p. 310. He gives credit there to *Wirtschaft und Statistik* (April, 1928), p. 300.

practically all of these countries, save France. It varies from about 11.0 per cent in Holland to nearly 36.0 per cent in Germany. But the most significant fact shown here is that the number of children surviving to one year of age per 1,000 women aged 15-45 is even lower in some of these countries than in France and is notably higher only in Holland. (Spain and Italy do not belong in Group A.) There cannot be the least doubt that such a survival rate as shown here indicates a close approach to the time when all of these countries will have fewer births than deaths.

The countries settled by these northwestern Europeans have not proceeded as far in the direction of a stationary or a declining population as the mother-countries, but they are well launched on the same course. This has been clearly shown for the United States by the work of Dublin and Lotka already referred to. In order to see how Australia stood in this matter, we have applied Dublin's formula to its vital statistics with the result that its crude rate of natural increase is shown to be just twice as great as its true rate. There is every reason to believe that this same situation prevails in practically every country where there has been a rather rapid decline in the crude birth-rate during the last twenty-five to fifty years.

We may, then, very briefly sum up the situation in these Group A countries by saying that, since the last quarter of the nineteenth century, they have passed from the state of having a very high rate of natural increase into the state where they have quite low rates of increase and will shortly become stationary and start to decline in numbers.⁷ In this part of the world a new era in population movements has begun which cannot but exert a profound influence upon the future of mankind. We shall undertake to point out the significance of this change after we have discussed the growth of population in Groups B and C.

In Group B, we have placed those countries where there is clear evidence of a decline in both birth-rate and death-rate but where it appears probable that the death-rate will decline as rapidly or even more rapidly than the birth-rate for some time yet.

⁷ In this whole discussion we have assumed that there was no immigration into this group from other groups.

The condition in these Group B countries today is much the same as existed in the Group A countries thirty to fifty years ago.

Spain and Italy together have birth-rates and death-rates about the same as those in England and Wales thirty-five or forty years ago, but, since they have about twice as many people, they are of course adding to their numbers at about twice the rate of England at that time. The Slavic countries of Group B have higher rates than Spain and Italy. They have approximately the same birth-rates that prevailed in Germany forty years ago, but, since they have lower death-rates, they are increasing more rapidly than ever Germany did. Besides they have about twice the population of Germany in 1880, hence they are expanding more than twice as fast as Germany ever did. As a whole, then, this part of Europe is adding to its numbers at a rate never equaled on the continent by Group A peoples. These Group B peoples have also entered upon a new era of growth, but it is quite a different era from that of the Group A countries. The rate of natural increase will now average twelve or a little over for these Group B peoples as a whole. At this rate they will double in numbers in about fifty-eight to sixty years. Since there were about 157 millions of them in 1920, we can readily appreciate some of the territorial difficulties that are likely to arise in this part of the world within the next two generations.

It will, of course, be said that the birth-rate is likely to decline faster in these countries than it did in the Group A countries because the greater ease of communication makes the spread of contraceptive knowledge easier than it has been in the past. This may be true, but we should notice in this connection that these Group B countries are more rural today than the Group A countries were forty years ago. This is a fact of prime importance because everywhere in the Group A countries rural populations show a greater resistance to the spread of birth-control than the city populations, and there is no reason to believe that the same will not be true in Group B countries. As evidence that this is the case we may cite some birth-rates and death-rates in Hungary and Poland in 1927. In Hungary in the cities of over 10,000 the birth-rate was 23.4 and the death-rate 18.2, leaving a natural increase of 5.2. In the rural

districts the rates were 27.9, 16.4, and 11.5 respectively.⁸ The increase is more than twice as great in the rural districts as in the cities. In Poland apparently the same situation exists, for in cities of over 100,000 the birth-rate in 1927 was 20.8 while in the country as a whole it was 31.6. Clearly there is the same lag in the adoption of birth-control among the rural people in these B countries as there was in the A countries.

The rapidity with which the birth-rate will fall in these B countries appears, then, to depend on the speed with which their industrialization takes place. That industry is growing in them is well known, but we may be permitted to doubt whether their urbanization will proceed as rapidly as did that of Germany after the Franco-Prussian War.

It should also be noted that the data relating to Spain and Italy in Table III show that the decline in the birth-rate, being altogether offset by the decline in the death-rate, has not yet produced any appreciable change in their age groups. If the decline in the birth-rate continues, as it undoubtedly will, it will affect the age groups in these countries in the same way as in the A countries, but it will take three or four decades for this to manifest itself in any rapid decline of the rate of natural increase from this cause.

The differences in the legitimate birth-rates between Spain and Italy and the A countries shown in Table IV are also clear proof that the former are in quite a different stage of their population growth than the latter, and that the rest of the B countries resemble Spain and Italy far more than they do the A countries can admit of no doubt. These B countries are entering upon a period of growth such as has never been manifested by any population of like size, 157 millions (1920-21), in the history of the world. The population of the A countries in Europe forty years ago was just about what that of these B countries is now, but France even then had almost no natural increase, so that in point of fact the population from which growth is taking place today in the B countries is considerably greater than that of the A countries in Europe in their

⁸ Emile Horn, "Annuaire Statistique de la Hongrie," *Journal de la Société de Statistique de Paris*, December, 1928, p. 328.

heyday of growth. This fact should be borne in mind, for it has great significance, as we shall see later.

It may well be questioned whether the three countries for which we have vital statistics in Group C should not rather be placed with Group B than with the countries for which there are no data. The reason for placing Russia, Japan, and India in another group is that we do not yet have any clear evidence in their vital statistics that the birth-rates or death-rates are declining in any considerable part of their populations. We do know, however, that in certain sections of the population the birth-rate is declining and we know from their present numbers that their present rates of growth cannot have prevailed for any great length of time. Hence, we can be reasonably certain that there has been some release of pressure on resources in rather recent years. But when these C countries are compared with A and B countries, we are fully justified in assuming that in the former neither births or deaths have come under voluntary control to anything like the same extent that they have in the latter.

As a consequence of this relative lack of voluntary control over births and deaths, it appears that the growth of these Group C peoples, who constitute about 70 to 75 per cent of the population of the world, will, in the near future, be determined largely by the opportunities they have to increase their means of subsistence. Malthus described their processes of growth quite accurately when he said "that population does invariably increase, where there are means of subsistence" The differences in the means of subsistence are undoubtedly at the base of the differences in the rates of growth of the three countries for which data are given. India has a relatively small rate of increase, Japan has a much higher rate, and, of late, Russia has shown one of the highest rates ever known. Can anyone doubt that the chance to increase the means of subsistence is least in India, that it has increased considerably in Japan with the growth of industrialism, and that it is very great in Russia both because of the new lands available for settlement and because of the possibilities of industrial development.

For the immediate future, then, we may expect that population will increase in these C countries in inverse ratio to the severity of

the positive checks, hunger, disease, war, and any customs calculated to enhance the death-rate.

In order to get any very clear idea of the way in which this 1,250 millions or more of men are likely to grow in the near future, it would be necessary to study the possibilities of increasing the means of subsistence in each group of any importance. Manifestly we could not do this here even if we were competent. But we will take time to call attention to some of the more important facts operative in determining the population growth of the three countries for which we have given birth-rates and death-rates.

Japan is a small, poor country that through modernization of its industry and some improvement in its agriculture has brought about some release of the positive checks (this seems clear even though we cannot prove this from the recorded death-rates) and now has a very great power of expansion. At the rate of natural increase it had in 1926, it would have an excess of births of about 930,000 annually. It is no wonder that Japanese statesmen feel that they must keep their economic footing in Manchuria. They have no adequate colonies and their mineral resources are too small to support any very great further increase in industry. Japan is coming to the end of the relief from positive checks which she found in modernizing and expanding her industries at home. That the Japanese are coming to realize this is indicated by the differential birth-rate of cities and rural districts in Japan.

The cities of Japan having over 50,000 inhabitants had a birth-rate of 27.87 in 1922, while the smaller cities, those having less than 50,000, had a birth-rate of 29.18. The birth-rate for the entire country (including cities) was 34.16. Since about 55 per cent of the entire population was in these cities, it is clear that something is acting to reduce the birth-rate in the industrial communities. Whether it is postponement of marriage, birth-control, or some distinctive trait of social organization in Japan, we cannot say positively, but the Japanese advocates of birth-control are disposed to attribute this difference largely to birth-control. If this is the case and if the fact that Japanese birth-rates do not show any clear downward trend is due largely to better registration of births, then Japan belongs with the B countries rather than with

the C group. But even if this is the case, there appears to be no reason to doubt that Japan's population will for some time to come expand as rapidly as new means of subsistence are opened to it.

India has done but little in developing modern industry and the possibilities of agricultural expansion have been small. Hence the population has not been given the relief from pressure on subsistence that it has enjoyed for a decade or two in Japan, and its growth has been relatively slow. Both birth-rates and death-rates in India appear to fluctuate rather violently, which is, perhaps, the best proof that the positive checks, hunger and disease particularly, are very active in India. Since this is clearly the case, the growth of India's population within its present boundaries can be pretty clearly foretold. It will grow but slowly, and from time to time the increase of population arising from temporary release of pressure will be wiped out by famines or by epidemics, like the influenza of 1918-19, which probably killed not less than ten millions.

Russia, on the other hand, in contrast to both Japan and India, is enjoying a period of relief from population pressure which only abundant new lands with great resources can give to a people. At its present rate of increase, it will add about three millions yearly to its numbers and will double in approximately thirty-five years. Russia's expansion during the remainder of this century bids fair to rival our own expansion from the adoption of the constitution to the Civil War. But, starting with a population thirty-five to forty times as great as ours, Russia may very well rival China and India in numbers by the year 2000.

Of course birth-control is abroad in the world and we cannot tell how soon it will begin to operate rather widely in Russia. It is reported that the Soviet government, unlike many governments, is not hostile to its practice. But a birth-rate of 43.4 in 1927 does not indicate that it is being very extensively practiced there, although in the Ukraine where the birth-rate is 31.5, in Leningrad where it is also 31.5, and in Moscow where it is 33.4, it appears that birth-control is gaining a foothold. But even so there is very good reason to believe that the growth of Russia during the next three or four decades will be one of the outstanding events of the

modern world. Russia is the one nation in the world today whose population appears to have great expansive power, that also possesses the territory to satisfy this expansive impulse.

With this very brief and sketchy outline of world population movements before us, we shall point out what seems to us to be the most important problem arising out of these new movements in world-population growth.

Accepting an estimate of approximately 1,730 millions as the population of the world in 1920,⁹ the numbers and proportions in the three groups of peoples into which we have divided the world's population is shown in Table V.

TABLE V
NUMBERS AND PERCENTAGE OF THE POPULATION OF
THE WORLD IN CERTAIN GROUPS (IN
MILLIONS) ABOUT 1920

	Number	Per Cent
The world	1,730	100
Group A	320	18.5
Group B	157	9.0
Group C	1,253	72.5

The Group A people may be divided into two sub-groups, (1) those living in Europe and (2) those living elsewhere. In the former group there are about 189 millions and in the latter about 131 millions. We have shown that the European part of this group is very rapidly approaching the stage of no increase and that this will soon be followed by its actual decline in numbers. The extra-European part of this group is still increasing considerably but not nearly as rapidly as formerly and within a decade or two it will, no doubt, be in the same position as the European part today. In other words, Group A has practically ceased to be an expanding group.

On the other hand, Group B is just entering on its heyday of expansion, as are also some of the peoples in Group C, notably Russia and Japan. Now, Group B with Russia and Japan have a population of about 360 millions, or 12.5 per cent greater than

⁹ This is less by about one hundred millions than many estimates because we do not believe that China's population is more than about 330 millions instead of the 436 millions often attributed to it.

Group A. But, except for Russia, none of these growing peoples has any territory into which it can freely expand, while some of the Group A peoples, particularly Great Britain, France, Holland, and Australia hold enormous land areas which they cannot settle and at present will allow no one else to settle. Here we have in its crudest form the most urgent population problem of the near future. Peoples who have ceased to expand in numbers (France) or almost ceased to expand (Great Britain and Australia) are now holding great areas of unused lands, while the peoples who are just coming into their great period of expansion are confined to rather narrow territories that in some cases are also almost destitute of mineral resources.

Furthermore, in a little time we may see the Chinese and the Indians added to the peoples who now feel the impulse to expand. This would mean that, in the expanding group needing larger resources, we would have over 1,000 millions of people. These peoples are almost certain to feel that they are being badly used if they are not allowed to expand into the unused lands held by the peoples in Group A. Is it probable that the peoples in Groups B and C will sit quietly by and starve while the Group A peoples enjoy the lion's share of the good things of the earth? We shall not try to answer this question here. But we must not forget that the lands these thousand millions of people will want are actually being held largely by the British, the French, and the Dutch, and that together these three peoples number only a little over a hundred millions. The redistribution of the lands of the earth is the problem of problems that we must face in the world today as a consequence of the new population movements that are now taking place. Can it be effected peaceably or must it be achieved by war?

NATURAL RESOURCES

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ABSTRACT

America's industrial primacy depends upon its use of power. One-third of the world's developed water power, one-half of the coal mined, and more than two-thirds of the oil produced explains the degree of prosperity enjoyed. Progress in electrification continues. An increase of 10 per cent in electric output and in water-power development, in 1928, keeps the United States far in the van of other nations. Industry is speeded up by this larger use of power. In wheat-raising, brick-making, coal-mining, and manufacturing generally, machines are taking the place of men. Coal remains the chief source of energy. The arrested demand for coal is due to competition of oil and water power and to noteworthy increase in fuel efficiency. Petroleum production in 1928 was more nearly balanced with consumption. Conservation policies are more popular with oil industry, and self-control is more effective. Control of production for all branches of raw-material extraction is a topic of general discussion. Efficiency in use and prevention of waste are not effected by unrestricted competition. The interest of producer and consumer alike may be promoted by avoiding overdevelopment and excess production.

In its happy recovery from the world-disaster the United States stands in marked contrast with other countries, and a significant index of our advance in prosperity during the last ten years is found in our unique use of nature-given energy. Few other nations possess a fraction of our share of energy resources; no other nation has harnessed its water powers or drawn upon its fuel supplies to anything like the same extent as the United States. America's industrial primacy depends upon its use of power.

The simple mathematics of adding together one-third of the developed water power of the world, one-half of the coal mined, and more than two-thirds of the oil produced in both hemispheres during 1928 gives a grand total of energy consumption that explains the degree of prosperity enjoyed by our citizens. Rapidly revolving wheels, whether automotive or driven from some distant source of power, have come to be the symbol of modern America, whether those wheels are doing man's work or serving his pleasure. It is because the workman of today has at his command the energy

of the waterfall, the coal mine, and the oil well that he can accomplish more in a short day than scores if not hundreds of his ancestors could do working from dawn to dark. These social consequences give significance to the record of 1928 in the harnessing of power for the use of man.

The central power stations in 1928 put on their wires nearly 88 billion kilowatt-hours of electric current, an increase of 10 per cent over their output in 1927. This increase in the consumption of electricity is not at all exceptional, for the annual output of electric current in the United States has more than doubled since the end of the war, and there has been an even greater increase in number of customers.

Typical comparisons with other countries in the use of electricity are the facts that a month's output of the electric public utilities of the United States now equals a year's output for England, Scotland, and Wales, and that the annual output for the United States equals the annual output for the rest of the world. Even at that, the power users of the United States had to import in 1928 more than $1\frac{1}{2}$ billion kilowatt-hours from Canada.

This rapidly growing demand for electric service called for an increased generating capacity during 1928 of about 2 million kilowatts, requiring nearly a billion dollars of new capital. At a single center like New York City the last year's expansion in generating capacity was measured in terms of 160,000-kilowatt generators, and in 1927 the investment "in the streets" for additions to the distribution system amounted to \$30,000,000. The need of financial and engineering vision in planning for the future is illustrated by the fact that the newest generating station in New York City, when finished, will have more than double the capacity of the original plans, drawn up only four years ago. In 1940 the capacity of this single station will be $1\frac{1}{4}$ million kilowatts, larger than the whole present development at Niagara and nearly as large as the capacity of the whole country at the beginning of this century.

There has been, this past year, a revival of activity in planning for railway electrification, projects being renewed that had been interrupted by the war. The electrification of industrial plants and their connection with central power stations continues apace, and

so does the extension of electric lines to reach the farms of the country. About 350,000 farms now have electric service, and the use of automotive power on the farm is steadily increasing. There is far less man and more machine in the bushel of wheat from the United States than in that from any other country in the world.

All along the line industry is being speeded up by its larger use of power. Increased productivity for the individual workman has become the rule of progress. For example, the commissioner of labor statistics has shown that if all the brick-making establishments in the United States used machines of the type now used by a few, eight out of ten men now employed in making bricks could take up other work, though possibly the result would be that bricks would become so cheap as to require most of these workers back at their old jobs with the new methods.

In one branch of the manufacture of electrical equipment the engineers at a Chicago plant have so changed methods and improved machinery that 90 operators now produce what 330 formerly produced, and the quality of their product has increased many fold. It is by reason of such increases in efficiency that this and other industrial organizations do not have to increase their plants or working-forces at all proportionately with their increase in business. More and better machines take the place of more men. So, too, in the coal mines mechanical loaders are being installed without attracting much notice from the public, whose interest in coal-mining is aroused only in times of fuel shortage.

Since the war, while coal consumption has fallen off notably, gas and water power have doubled, and oil has increased more than 150 per cent. Nevertheless, the coal mines keep their place as the chief source of energy for industry and transportation, as well as for general heating and illumination. Competition by oil and water is specialized rather than general, and coal must be the mainstay of the future. In the generation of electricity at the 3,826 public-utility power stations in operation in 1928, coal furnished 53 per cent of the energy, water 40 per cent, natural gas 4 per cent, oil $2\frac{1}{2}$ per cent, and wood about $\frac{1}{2}$ per cent. In the total energy budget of the country, however, coal would have a more dominant position than is indicated by these figures for central stations,

where water power makes its chief showing. Mr. Tryon's latest estimate¹ places coal as the leading source of energy, furnishing over 63 per cent; oil and gas, nearly 30 per cent; and water power, nearly 7 per cent. It is interesting to note that the total consumption of energy from these natural sources in 1927 is believed to have increased about 40 per cent over the consumption in the pre-war year 1913.

The total capacity of water wheels in water-power plants of the United States is now more than 13,500,000 horse-power, of which over 9 per cent was installed during 1928. The chief increase was in the South, as North Carolina took third place among the states away from Washington; California and New York retained first and second places respectively.

A drop in the mining of coal does not seem to accord with the universal advance in the use of power. However, the estimated production of coal for 1928 was the lowest for any year since 1922 and indeed reached the pre-war figure of 1913. This unexpected halt in the progress of the coal industry is most simply explained by the fact of arrested demand. Periodic shortages and high prices for coal have stimulated not only the substitution of other fuels and the development of water power but also a noteworthy increase in fuel efficiency. In the home heating plant, on the locomotive, in the steel plant, in the boiler-room of the factory—everywhere “save coal” has been a compelling slogan, and the coal user has had the advantage of good engineering advice.

Perhaps the best example of the widespread economy in the use of mineral fuels is furnished by the public-utility companies. The rapid growth in the electric industry and in the consumption of its product by the citizens of the United States is paralleled by the remarkable engineering record set up by the power-plant operators from one side of the country to the other. Each year the coal consumption per kilowatt-hour is slightly reduced. Last year this reduction was only eight-hundredths of a pound, or about $1\frac{1}{4}$ ounces of coal. Yet this small saving when applied to the 53 billion kilowatt-hours of fuel-generated electricity for the whole country

¹“Coal in 1927,” preliminary statement in *Mineral Resources of the United States*, Bureau of Mines.

amounts to more than 2 million tons, or a saving of about 8 million dollars in the country's fuel bill. In 1928 the average rate of coal consumption in generating electricity was 1.76 pounds per kilowatt-hour. In 1919, when the United States Geological Survey began its compilation of monthly power reports, the average rate of coal consumption was 3.2 pounds, so that in ten years the practical economists of the electric public utilities have succeeded in almost doubling their efficiency in the utilization of fuel. What this means to the public is suggested by the simple calculation that had coal last year been consumed in the central power stations at the average rate prevailing in 1919, the fuel bill, and consequently the charges for current, would have been about 150 million dollars larger, representing the additional 38 million tons of coal necessary under the old methods.

The outstanding competitor of coal as a source of energy has been petroleum. This lusty contender in the fuel market has far more than doubled its contribution of energy since the war. At present oil and natural gas together supply almost half as much energy to the citizens of the United States as coal does, whereas in 1913 the coal mines, with approximately the same output as in 1928, furnished nearly seven times as much energy for the country's use as the oil and gas wells. In short, the increase in annual supply of energy since 1913 can be credited mostly to oil and gas and water power.

The production of petroleum in 1928 was almost exactly the same as in 1927, about 900,000,000 barrels. Only twice in the present century, in 1906 and 1924, has there been a halt in this country's increase, year by year, in the output of oil. Holding the figure for 1928 down almost to that for 1927 expresses some degree of control of output rather than any insufficiency at the source of supply. Some approach toward balancing production and consumption was accomplished by reason of the demand for crude oil increasing more than 6 per cent, so that with a stationary production less than 20 million barrels was added to the country's already large stocks of crude oil.

The present stock of half a billion barrels of crude oil above ground is only a fraction of the known reserves below ground which

are ready when needed. The past year has been notable for the increase in shut-in production, which furnishes a measure of self-restraint by the oil industry, but the large volume of this potential production which would be immediately available is also a real menace to the industry. The campaign for conservation waged for several years has now reached a high point, and enlightened self-interest has a stronger following in the oil industry than ever before.

In its recent report to the President, the Federal Oil Conservation Board comments on the disquieting fact that the petroleum resources of the United States do not bear anything like the same ratio to the world's resources as the production ratio, which was nearly 72 per cent in 1927 and 68 per cent in 1928. The report continues:

The obvious inference is that the United States is exhausting its petroleum reserves at a dangerous rate. If the international comparison is made, this country is depleting its supply several times faster than the rest of the world. How real is the danger expressed in this fact and what remedy can be devised are questions confronting the American people as they plan for the future. At least, the effort should be made to propose measures that will minimize and delay the undesirable future outcome of this excessive drain upon a limited though admittedly large reserve. In this planning for the future the principal units of the oil industry itself, with their large refinery capacity and distribution systems, both domestic and foreign, have a stake second only to that of the Nation and may well be counted on to join forces in the common interest. The depletion rate of our own resources can be brought more into accord with that of foreign resources only in one way—by importing a greater quantity of crude petroleum. The present imports of Mexican and South American crude oil come largely from American operators, and, while not obtained from United States oil sands, they are the product of American engineering and enterprise. Co-operation in the development of foreign oil fields, through technical assistance and the further investment of American capital, would seem to be a logical conservation measure.

Control of production in the raw-material branches of industry has been a topic of current discussion the past year. The American Bar Association in July devoted a special session of its section of mineral law to this subject and brought out the fact that the instability due to the ever-present shadow of excess production is affecting not only the oil business but other branches of the mineral industry. Control of production was recognized as truly a national

issue—not simply the problem of the mining companies. The public interest is far greater than that of the industry and will continue over a longer period than the interest of even the largest corporations. However, there is more of a community of interest between the great mining companies with large reserves of untouched mineral wealth, whose operating officials must plan ahead for many decades, and the public, whose representatives should look ahead for many centuries. This is why the far-sighted executives of big business and the earnest public officials are found standing on the same platform of practical conservation. The representatives of mining companies and of the public alike understand what are the sources of our present wealth and of our future security.

In these proposals for more control of production constant reference is made to the need of removing, at least in part, the obstacles imposed by federal and state anti-trust laws, which are described as out of accord with the present magnitude of business and trend of industry. Not only has the United States doubled its population since the Sherman anti-trust law was passed, but it is a different country. Far less than a quarter of its inhabitants of today figured in the census of 1890; since then most of the great industrial units that contribute so much to our present prosperity have come into being. Yet the prohibitions against collective or co-operative action in industries other than agriculture stand unamended on the statute books. Thirty-eight years is a long time in the growing period of American industry.

We may easily agree that the underlying purpose of exercising some control over a productive industry like the utilization of natural resources is to promote efficiency, to prevent waste, and thus to lower costs. Unrestricted competition, with its stimulative effect on production, has been found too expensive a policy because in practice too commonly it is wasteful of material, of labor, and of capital. Both coal and oil, as they have been handled, light up a path that should not be traveled much longer.

To be effective the control for the common good must be of such nature as to protect the natural resource against waste and to protect both the producer—a collective term for labor and capital—and the consumer against loss from prices that are too low or

too high. Plainly control of production must start with the extractive branches of the mineral industry, where raw materials are won from the ground and where costs can be affected, and not with the market end, where control would be directed at prices only. Legislative committees far too often confine their investigations to the retail prices of gasoline or anthracite or some metal, with not even a glance at the economic conditions attending activities in the distant oil field or mining district. Undoubtedly there exists the widest field for improvement in the distribution of mineral products, as of most other commodities, but surplus production begins with premature or too extended development, with the drilling of the unneeded well or the opening of the unneeded mine. It is at that end of the long journey from the mineral underground to the consumer of the refined or fabricated mineral product, then, that control would seem most needed and most effective.

It is conceded that popular support is not volunteered to any legislative proposal whose avowed purpose is to put brakes on the development of natural resources. This general opposition to control of development and production seems to be based primarily upon a feeling that unrestricted competition is a privilege of the producer and a right of the consumer; the one seeks profits, and the other hopes for lower prices.

Market price is the acid test that the consuming public applies, but unfortunately only the market price of today is considered of much moment. Competition has too long been looked upon as the life of trade, whereas bitter experience has shown that competition is also the death of trade. A low price that is born in the death struggles of some producer is of only temporary benefit and is not a sign of health in a developing industry. The bankrupt route to low prices is not a safe highway.

The exercise of some control over production need not be feared, nor should it be opposed simply because it is primarily in the interest of the producer. It can well be sought as a step toward that ultimate goal in human economics—the greatest good to the greatest number over the longest time.

INVENTIONS AND DISCOVERIES

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ABSTRACT

Technological inventions and discoveries in applied science are the causes of most of our social changes. The following list contains fifteen such discoveries and inventions from the field of medical progress and health; eleven from the study of vitamins and ultra-violet; three from biology; thirteen from agriculture; ten from commercial chemistry; ten from engineering; six from radio and television; seven from other fields of electricity, and seven from miscellaneous fields.

The presentation of the compilation of the following inventions and discoveries is based upon the assumption that social changes are occasioned largely by inventions in our material culture and discoveries in the field of science. There must have been vast social consequences of the invention of the automobile and its subsequent wide diffusion. The utilization of steam has affected the divorce rate, and the invention and wide use of the tin can and glass preserving-jar have had an effect on the movement for woman suffrage.

Not all inventions are so significant for social change as these above illustrations. An aeroplane is, of course, a collection of inventions, of thousands that were invented for the particular object, the aeroplane. Inventions are then generally steps in a process of the evolution of an object, and any widely useful object usually embodies many inventions. Inventions and discoveries usually appear as small bits of new knowledge and fragments of useful appliances. These accumulate and make possible the larger objects whose uses have greater social consequences.

The following list comprises less than one hundred carefully selected cases. They were selected because of their possible social significance. They were chosen from the compilations of the National Geographical Society, of Science Service, the register of patents, the records of the *Scientific American*, the *Scientific Monthly*, *Popular Science Monthly*, and the *Literary Digest*. These sources do not, of course, record all the inventions and dis-

coveries. There were 42,376 patents granted in 1928. Reporting of scientific discoveries is poorly developed. Discoveries in education, statistics, psychology, and in the social sciences generally are not reported at all in the usual sources and compilations.

MEDICAL PROGRESS AND HEALTH

Succinchlorimide was found by Major Wood, of the United States Army Medical School, to be a positive disinfectant of germ-laden water without boiling.

Eleven lepers were released from the National Leper Home at Corville, Louisiana, by the United States Public Health Service apparently cured and no longer a menace to the community.

Synthetic ephedrine was developed by Dr. Chen, Johns Hopkins University. The drug is used to relieve hay fever and asthma, to dilate the pupils of the eyes for examination, and to contract congested membranes of the nose.

From Chicago and from Leningrad come independent discoveries that nitroglycerin is effective in the treatment of seasickness and in whirling experiences of applicants for aviation study.

Epilepsy was produced artificially in dogs by a brain operation performed by Dr. O. Morgan, of the University of Illinois.

By lifting a patient's scalp with keen-edged instruments, breaking skull bones with forceps, and then cutting away certain brain tissues, a case of epilepsy was recently cured by Dr. Foerster, professor of surgery at Breslau, Germany.

Highly purified inorganic salts or iron did not improve the blood of anemic animals, but they were improved by diets of liver, lettuce, and corn. The ash of these foods was effective and they all contain copper. Other researches show copper to be a most important mineral for our blood.

A diet low in sugar and starch reduces susceptibility to colds, Frederick Hoelzel, of the University of Chicago, announced.

Dr. Helen Hosmer studied the effects on animals of short radio waves of from 12 to 30 meters length. Considerable and rapid increases of temperature were noted. It may be possible to kill the germs of many diseases by electrically induced fevers.

High-frequency electric currents were found to be beneficial in checking cancerous growths in mice and chickens.

A motion picture of certain types of microbes was made by Jean Painleve.

A pneumatic drill, designed for use in difficult bone operations, was invented by Dr. Ogilvie, of London.

The use of respirators with cotton, paper, or fabric filters removes at least nine-tenths of the lead in air containing paint mist, is the announcement of Surgeon-General Cummings, of the United States Public Health Service.

A method of investigating the brain by means of X-ray photographs was perfected by Dr. Max Ludin, director of the Roentgen Institute of the Citizens Hospital of Basel, Switzerland.

Methods of storing ether so that it may be preserved for eight months without deterioration were announced by S. Palkin and H. R. Watkins. Pyragallol and permanganate are the preservatives.

VITAMINES AND ULTRA-VIOLET

Beeskow, University of Chicago, found that soy beans increased their calcium and phosphorus content when treated with ultra-violet rays.

An ultra-violet irradiated food was placed on the market, a commercial application of the discovery that ordinary foods exposed to ultra-violet rays promote the formation of healthy bones and teeth in children and young animals.

Irradiated ergosterol, the new rickets remedy which is so powerful that 1 ounce will do the work of 6 tons of cod liver oil, came into wide use, but was withdrawn from the market later until further study is made of its dosage, use, and effect.

The smoke screen over New York City cuts off 42 per cent of the morning sunlight and 18 per cent of the noon rays, as shown by tests of the United States Public Health Service.

The human teeth give off various types of fluorescence under ultra-violet radiation, according to the findings of Dr. Benedict, of Northwestern Dental School. The white spot that marks the beginnings of cavity-forming troubles does not fluoresce.

Dr. Joseph Goldberger, of the United States Hygienic Laboratory, announced the splitting off of a factor P-P from vitamine B that has the distinct property of preventing pellagra. His four-

teen years of research showed that the disease was not infectious but was due to a faulty and unbalanced diet.

That foxglove plants treated with ultra-violet rays will produce 35 per cent more digitalis than untreated plants was discovered by Miss Adelia McCrea.

A practicable device for measuring the dosage in ultra-violet ray treatment was developed by Drs. Pohle and Huxford, of the University of Michigan.

Tests upon students at the Kansas State Agricultural College suffering from nutritional anemia showed that a teaspoonful of cod liver oil daily resulted in every case in an increase in red cells in the blood and a corresponding improvement in physical condition.

Owls and hawks fed on a diet of sparrows and chicken heads with feathers were cured of artificially induced rickets, in experiments by Dr. Rowan, University of Alberta, Canada. The preen gland of the domestic fowl is a rich source of cholesterol, one of the parent substances of vitamine D.

The discovery of a new vitamine, known as vitamine F, was announced by Professor Evans, of the University of California, the discoverer also of vitamine E.

BIOLOGY

A new foot was grown on an unmutilated leg of a triton by Dr. Nassenow, of Russia.

Insects that are neither male nor female but combine certain characteristics of both sexes were produced by Professor James W. Mavor, Union College, Schenectady, New York, through the exposure of fruit flies to the action of X-rays. These changes were brought about by the shift of the positions of the chromosomes.

A moving-picture record of the living rabbit's egg which discloses many new phenomena hitherto unknown was obtained by Drs. W. H. Lewis and P. W. Gregory.

AGRICULTURE

A heavy waterproof paper carpet spread over a garden crop increases the yield as much as 500 per cent. Such was shown by the three years' experiments of Dr. Flint, of the United States Department of Agriculture.

Experiments with enormous cages, constructed of copper wire screening under the supervision of Dr. W. H. Larrimer on a farm maintained by the United States Bureau of Entomology near Toledo, Ohio, indicated that while it will be impossible to eradicate the corn borer, it can be controlled sufficiently to reduce commercial losses to a negligible amount.

By exposing potted plants to ethyl dichloride or ethylene chlorhydrin in a tightly closed room, Dr. Denny, of the Boyce Thompson Institute for Plant Research, was able to arouse to activity many species that usually demand several months of dormancy before resuming growth.

Cassaba and honeydew melons were added to the list of fruits susceptible to artificial ripening under ethylene gas treatment, though this treatment does not increase their sugar content.

That oats thrive best and ripen earliest when sprouted at a low temperature was the announcement of Dr. Maximow, Russian plant physiologist.

Six cabbage heads from one plant were produced by Miller, of Cornell, in studies of the relationship between temperature and plant growth.

The growing of healthy apple trees from seeds produced in apples developed from unpollinated blossoms was achieved by Dr. S. Wingle, National Research Council fellow in botany.

The Missouri Botanical Garden announced the successful grafting of a tomato vine on a potato stalk, on which tomatoes were produced above and potatoes below the ground.

Dr. George D. Karpechenko, Botanical Institute, Detskoe Selo, Russia, succeeded in making a cross between a radish and a cabbage, the most distant cousins of the plant world whose hybridization has yet been achieved.

By storing apples in chambers containing about 11 per cent of oxygen and 10 per cent carbon dioxide, the apple disease known as brown heart is checked in storage, as demonstrated by Drs. West and Kidd, of the Low Temperature Research Station at Cambridge, England.

Compressed air has been found to assist a tree in overcoming the disturbance due to transplantation when forced in among the

roots. It has also been found to stimulate trees in lawns in which the densely matted grass prevents the terminal roots of the tree from getting their needed supply of oxygen.

German chemists announced the development of a serum against hoof-and-mouth disease in cattle.

Zinc and boron, in minute quantities, are as essential to plant growth as are the vitamins to animal growth, as shown by the demonstrations of Professor Lippman and Miss Sommer, of the University of California.

COMMERCIAL CHEMISTRY

The manufacture of seventy thousand tons of synthetic gasoline from soft coal was achieved by the German Dye Trust.

The process for converting wood waste into an edible carbohydrate suitable for hog food devised by Dr. Friedrich Bergins, German chemist, was improved to the point of semicommercial production.

Coal was made out of wood, cabbages, and cornstalks, by Dr. Bergins, of Heidelberg, Germany.

Rubber was produced from coal by Dr. Hoffman, of Germany.

F. X. Zur Nedden, secretary of the Fuel Committee of the National Council, of Berlin, announced the use of coal liquefied by a process of distillation. The method not only tends to diminish the importance of the earth's slowly vanishing coal supply, but it does away with the weight of ash and humidity.

The invention of a method of extracting fertilizer invaluable in the raising of corn, winter wheat, and cotton was announced by the Armour Fertilizer Company, of Chicago. It is a by-product in the manufacture of illuminating gas.

Two new processes involving the purification of anthracene that will give the dye industry a wide wealth of raw material from coke and coal tar were discovered by Dr. Jaeger, an American chemist.

Methods of curing rubber which extend its life to thirty-five years were announced by the United States War Department.

That it is possible with modern dyes to make more than two million separate distinguishable colors is the statement of G. B. Welsh, of Cornell University.

Greater deadliness to parasitic insects and kindred pests and less danger to human beings are claimed for two new spraying chemicals by Dr. Marcovitch, of the Tennessee Agricultural Experiment Station at Nashville. Sodium fluoride and sodium fluosilicate are the two new chemicals suggested as substitutes for arsenic.

ENGINEERING

Wind motors developed electricity in Coachella Valley, California. Powerful cones turn a draft of air into a ten- or twenty-mile wind. In certain places they may operate 90 per cent of the time. Continuous power may be had by connection in chains.

The development of the use of automatic sorting of freight cars from a central control board occurred during 1928 and replaced yardmen formerly employed in the freight terminals.

Under the auspices of the American Institute of Steel Construction, New York City, a single type steel house frame was erected in three hours. Standard size bolts were used to "button together" the steel sills, plates, and rafters.

A machine for utilizing the power derived from bringing water from the cold depths of the tropical seas into contact with the warm water of the surface was further developed by George Claude, of Paris. He was able to develop 40 kilowatts in addition to the power necessary to operate the machine.

Pulverized coal was applied to the propulsion of seagoing vessels, the initial installation being the United States Shipping Board vessel "Mercer."

A new battery of boilers installed at the Siemens-Schuchert Works, Germany, develops steam at a pressure of 3,375 pounds a square inch.

Wallboard is being manufactured from corn stalks in a special semicommercial plant at Ames, Iowa, by the United States Bureau of Standards in co-operation with the Iowa State College.

A commercial plant for making paper out of cornstalks was built in Illinois, the first of its kind.

Professor D. B. Keyes, of the University of Illinois, announces the discovery of a method of coating metals with aluminum by electroplating. Pure aluminum will withstand the most corrosive

action, most concentrated acids, and all common sulphur compounds that today cost industry billions of dollars.

A thirteen-compartment motor bus sleeper for twenty-six persons was built in Los Angeles, to run on the San Diego-San Francisco route.

RADIO AND TELEVISION

Drs. Ives and Gray, of the Bell Telephone Laboratories, have further developed the television apparatus to show motions of objects out-of-doors, suggesting possibilities of viewing athletic contests in the open.

In London a method has been developed for sending fingerprints by wireless to all parts of the world.

The Bell Telephone Company transmitted motion-picture scenes by wire from Chicago to New York.

John L. Baird succeeded in transmitting radio vision pictures from his London laboratory to Hartsdale, New York.

The Bell Telephone Company engineers announced the development of a radio-dialing device for the linking of radio and land-wire telephone systems by which it may become possible to dial ships at sea, aeroplanes, and inaccessible places by radio.

The world's first newspaper radio-vision broadcast program was published.

OTHER ELECTRICAL DEVELOPMENT

Professor H. Plauson, Hamburg, Germany, announced the development of a new cathode-ray tube by which the rays are brought into the open and made applicable to industrial progress on a large scale, and stated that with it the waste products of petroleum stills and coke ovens may be transformed quickly into rubber, alcohol, acetic acid, and valuable drugs and perfumes; moist air into nitric acids; a mixture of nitrogen and hydrogen into ammonia, and isoprene into synthetic rubber.

Arthur C. Pillsbury developed a new X-ray movie camera by which he has been able to penetrate the inner secrets of the growth of a rosebud, and to study the processes of generation in plants.

X-rays of unprecedentedly short wave-lengths were produced in a million volt tube by C. C. Lauritsen and R. D. Bennett, California Institute of Technology. They are less than one twenty-

billionth of an inch long, so short that they were observable through steel doors more than one hundred feet away.

Alfred V. de Forest developed a galvanometer with which a flaw no bigger than a pinhead can be detected in the center of a steel wheel without cutting or marring the surface of the wheel.

An inverted vacuum tube by which it is possible to reduce voltage and increase power was produced by F. E. Terman, of Stanford University.

Dr. W. R. Whitney, General Electric Company, demonstrated a 15,000-watt vacuum tube. With it he lit electric lamps without wires or sockets, warmed nearby spectators, and cooked sausage without fire.

The televox, or mechanical man, invented by R. I. Wensley, was further perfected during the year and many new fields for his activities demonstrated.

MISCELLANEOUS

The Army Air Corps developed an aerial camera with a range of more than 5 miles. Areas of 4 square miles may be photographed at a single exposure.

The director of Eastman Kodak Research Laboratory made the announcement of a perfected process by which amateur cinematographers could make films in natural color instead of in monochrome.

A new explosive, many times more powerful than T.N.T. or nitroglycerine, was invented by Captain H. R. Zimmer, of Los Angeles. Radiumatomite is safer to handle because it requires a spark to set it off.

It was announced that Hungarian investigators had succeeded in developing a printing process that eliminates the use of metal type. It reproduces letters on reels by photography as its keys are struck.

A practicable method of distributing and marketing small cuts of frozen meats has been worked out which makes it possible for the grocery store to drive the butcher-shop out of business.

An instrument defined as a "breathing device" which experts believe will save the lives of men submerged in sunken submarines has been devised by Lieutenant C. B. Momsev, Chief Gunner C.

L. Tibbals, both diving experts, and F. M. Hobson, engineer in the Naval Bureau of Construction and Repairs.

Teletypesetters eventually may permit one man to set in type the stories of the world's events in the composing room of a thousand widely scattered newspaper plants. The operator, punching the keys of his electric typewriter, perforates a tape seven-eighths of an inch wide, each group of perforations corresponding to a number or numeral. The tape operates the telegraph by sending electrical impulses. This "receiving tape" takes the place of the linotype operator, as it is fed mechanically into the typesetting machine.

PRODUCTION

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ABSTRACT

Compared with 1927, production per capita increased in 1928. *Period preceding 1928.*—Most of the major lines of production made substantial gains from the post-war depression within two or three years, and continued to grow at a relatively even pace thereafter, with mild recessions in 1924 and 1927. Per capita production in a few major lines, however, has been declining in recent years. *Agriculture and animal husbandry.*—Both the estimated crop yields and the volume of agricultural marketings increased in 1928. *Mining.*—Despite a continued high output of crude petroleum, the volume of mining as a whole declined slightly in 1928. *Manufacturing.*—Eight of the twelve major manufacturing groups, including those associated with building and automobiles, registered gains in 1928, and manufacturing as a whole regained the 1926 high level. *Construction.*—The volume of building per capita reached a new high level.

Even when reduced to a per capita basis to allow for such increase as is necessary to keep pace with the growth of population, production, on the whole, exhibited in 1928 substantial improvement over 1927, and for several industries reached new high levels. The 1927 level was exceeded for manufactures, building, and the marketing of crop and animal products, but the production of minerals declined 2 per cent owing to the failure of the coal industry to make rapid recovery from the 1927 slump. Crops were, on the whole, above the 1927 level and also better than the average for the preceding ten years. Freight-car loadings stood at almost the same level in 1928 as in 1927, declines occurring in the loading of coal and coke, livestock, forest products, and merchandise in less-than-car-lot shipments. Gains were registered in the loading of grain and grain products, ore, and miscellaneous freight.

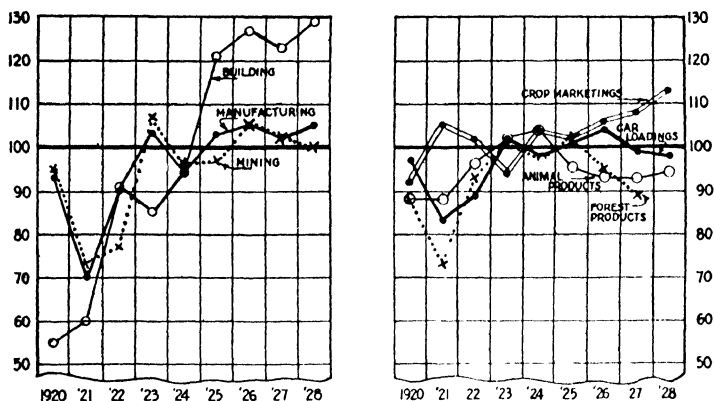
THE PERIOD PRECEDING 1928

A brief consideration of the movement of production in the few years prior to 1928 affords a convenient starting point from which to study the development of the last year. The major movements in production from 1920 to 1928, inclusive, are tabulated

in Table I, and presented graphically in Charts I and II. Chart I shows, in the left-hand section, the movements in composite indices of the physical volume of production for manufacturing, mining, and building, and, in the right-hand section, the fluctuations in crop marketings, forest products, marketings of animal products, and freight-car loadings. Chart II portrays the fluctuations from 1923 to 1928 in the production of twelve principal manufacturing groups.

CHART I

INDICES OF PRODUCTION PER CAPITA, 1920-28*
Average 1923-25 = 100



* For the numerical data from which these indices are plotted see the first seven series in Table I

For convenience of comparison, the series shown on these charts are expressed as index numbers with the average for 1923-25 as 100 per cent. Also, the data have been reduced to a per capita basis, by dividing the indices of production by an index of population at the middle of each year as estimated by the Bureau of the Census. The significant growth of an industry is thus made more obvious. An industry which is growing at the same pace as population will have, aside from seasonal and cyclical fluctuations, an index of about 100. An industry which is rapidly outstripping the growth of population will stand in 1928 substantially above 100.

The severe depression of 1921, after the post-war boom, was followed, as evidenced in Chart I, by recovery in almost all lines of production. This movement reached a peak in mining and manufacturing in 1923, slumped somewhat in 1924, and climbed to new levels in 1926; and manufactures reached an equally high level in 1928. Building picked up rapidly in 1922, took another spurt in 1924 and 1925, and by 1926 reached a point well above the 1923-25 average. There was a slight recession in building in 1927, but a new peak was reached in 1928. Crop marketings per capita were low in 1920 and again in 1923, but have been consistently high in recent years, with a peak in 1928 about 12 per cent above the 1923-25 average. The marketings of animal products per capita, on the other hand, rose from 1920 to a peak in 1924 and have since declined several per cent. Forest products also reached a peak in 1926 and have subsequently declined. The incomplete returns on forest products available at the time this article is being written indicate no marked change in 1928 from the 1927 output.

AGRICULTURAL AND ANIMAL HUSBANDRY¹

The year 1928 was, on the whole, a good crop year. A composite yield of seventeen principal crops, weighted in proportion to their ten-year average value per unit, was 4.7 per cent greater in 1928 than in 1927, and 7.5 per cent greater than the average production in the ten years 1918-27.

The per capita output in 1928 was 0.7 per cent less than the average for the preceding ten years.

The yield per acre, for forty-four crops combined, weighted in proportion to relative importance, was about 2.2 per cent above the 1927 yield, and 3.5 per cent higher than the average of the preceding ten years.

Of the major crops, the per acre yield of spring wheat, oats, barley, and Irish potatoes was 10 per cent or more above the average of the preceding ten years; winter wheat was 7.4 and corn

¹ The discussion in this section is based chiefly upon estimates compiled by the United States Bureau of Agricultural Economics, published in *Crops and Markets*, December, 1928; and upon indices of crop marketings published in the *Survey of Current Business*

1.4 per cent above, but cotton was 2.6 per cent below the ten-year average. Only rye and some of the truck and fruit crops declined 10 or more per cent from the ten-year average.

The acreage in corn increased over two million acres, and the total crop for 1928 was about seventy-seven million bushels in excess of the 1927 crop. Despite a decline of over a million acres in wheat, the total yield exceeded the 1927 crop by some twenty-four million bushels. Cotton acreage jumped to 45,326,000 acres, an increase of over five million acres above the 1927 acreage, and the crop exceeded the 1927 crop by 1,418,000 bales.

It may be noted that despite an increased acreage for the total of all crops, the estimated farm value of 1928 crops was less than that of 1927 by about sixty-five million dollars.

The preceding figures refer to crop yields only. The index of crop marketings shown in Table I and Chart I represents agricultural production from a different angle; and the index of marketings of animal products represents a phase of farm operations not covered by the crop estimates. Crop marketings reached a new high level per capita in 1928. The marketing of animal products also rose to slightly above the 1926 and 1927 level, but was still 6 per cent below the average of 1923-25.

MINING

Bituminous coal production did not fully recover from the 1927 slump occasioned by the extensive strikes which began in April of that year, and when allowance is made for typical seasonal variation 1928 production did not quite reach the 1923-25 level in any month, and for the year as a whole was below the 1927 total.

A rapid increase in crude petroleum production had been checked in the second half of 1927 by the efforts of the producers to curtail production; and, allowing for the usual seasonal differences, production fell slightly in the first half of 1928; but higher gasoline prices stimulated the development of new producing areas, and in the second half of the year production rose continuously with the result that the total production for the year is estimated at nine hundred million barrels, or slightly in excess of the 1927 output.

While the production of bituminous and anthracite coal, and also lead and silver, was lower in 1928 than in 1927, substantial increases occurred in the production of iron ore and copper, and slight gains in crude petroleum, as noted, and in zinc.²

TABLE I
INDICES OF PRODUCTION PER CAPITA, UNITED STATES, 1920-28*
(Average of 1923-25 = 100)

Industry	1920	1921	1922	1923	1924	1925	1926	1927	1928
Building	55	60	91	85	94	121	127	123	129
Animal products marketings	88	88	96	102	104	95	93	93	94
Crop marketings	92	105	102	94	104	102	106	108	113
Forest products	88	73	93	101	97	102	95	89	†
Freight-car loadings	97	83	89	102	98	101	104	99	98
Mining	95	73	77	107	96	97	105	102	100
Manufactures:									
Total	93	70	90	103	94	103	105	102	105
Petroleum refining	68	67	77	87	99	113	121	130	144
Rubber tires		58	80	87	98	114	113	116	136
Tobacco manufactures	93	89	92	98	99	103	111	113	117
Iron and steel	106	48	86	107	88	104	110	100	113
Cement, brick, and glass	70	66	83	97	95	108	110	104	111
Paper and printing	93	73	88	97	99	104	112	109	111
Non-ferrous metals	83	41	71	96	99	105	109	104	109
Automobiles	62	43	68	104	90	105	106	82	107
Textiles	90	91	102	107	91	102	101	108	101
Leather and shoes	104	94	105	112	94	95	95	99	98
Food products	90	87	97	101	103	96	94	92	93
Lumber	84	71	92	101	96	103	97	90	84

* Computed from indices given in the *Federal Reserve Bulletin* and the *Survey of Current Business*, February, 1929, and earlier issues. The index for building represents the value of contracts awarded, as compiled by the F. W. Dodge Corporation, deflated by dividing by the index of construction costs compiled by the Associated General Contractors of America. All of these indices have been reduced to a per capita basis by dividing by an index of population at the midpoint of each year as estimated by the Bureau of the Census.

† Unavailable at time article was written.

MANUFACTURING

The manufacturing industry as a whole has prospered since the depression of 1921, with a recession in 1924 and a moderate decline again in 1927. The year 1928 witnessed a recovery which carries the index for manufacturing, even when adjusted for population growth, to the high level reached in 1926, 5 per cent above the 1923-25 average. This gain, however, has not been equally distributed among the several industries. A perspective of the rel-

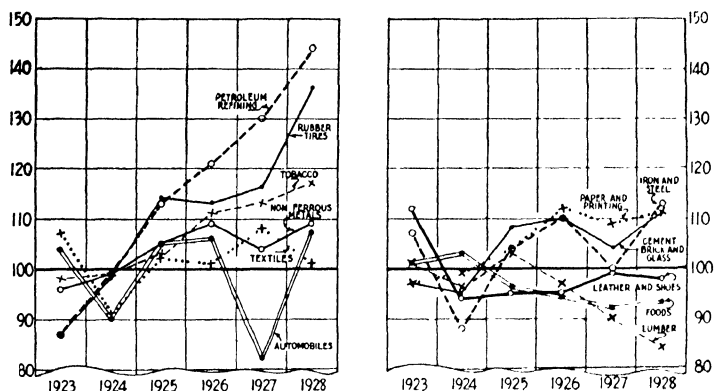
² Monthly and annual indices of mineral production, 1919-28, for eight minerals and their composite are given in the *Federal Reserve Bulletin*, March, 1927, p. 177, and February, 1929, p. 118.

ative movement in the leading manufacturing industries may be obtained by an examination of Chart II, based on Table I. For each industry the curve represents the estimated quantity volume of production per capita in the industry as compared with the average for the years 1923-25. In arriving at these estimates, the indices of production compiled by the Federal Reserve Board were

CHART II

VOLUME OF MANUFACTURING PRODUCTION PER CAPITA, BY INDUSTRIES, 1923-28*

Indices with average of 1923-25 = 100



* For the numerical data from which these indices are plotted see the last twelve series in Table I.

adjusted to a per capita basis with the aid of the annual estimates of population made by the United States Bureau of the Census.

Let us consider the separate manufacturing industries, taking them in order of the extent to which they had increased by 1928 from the base period (1923-25).

Despite the efforts on the part of producers in the last year or so to check the rapid increase in production, the 1928 output of crude petroleum, as previously noted, reached a new high level, and petroleum refining increased from 130 per cent of the 1923-25 average in 1927 to 144 in 1928. Likewise, the production of rubber tires took a new spurt in 1928 to a point 36 per cent above the base-period average. The output of tobacco products continued to show the steady increase which it has evidenced each year since

the depression of 1921. Other industries that showed by 1928 a gain of 10 per cent or more above the 1923-25 average were iron and steel, cement, brick and glass, and paper and printing. Iron and steel had reached a new high point in 1926, but in 1927 declined sharply in the second half of the year, this decline and the subsequent substantial recovery in 1928 being largely due to similar movements in the automobile and building industries.

The production of automobiles, which had fallen off sharply in 1927 from the peak of 1926, owing partly to the stoppage of the Ford output for much of the year after May, recovered to a per capita level in 1928 slightly above the previous peak of 1926.

The textile group, which has recovered slowly from the post-war slump, showed substantial improvements in 1927 but declined again in 1928.

The per capita output in one group of industries, foods, lumber, and leather goods and shoes (shown in the lower part of the right hand section of Chart II), has fallen below the 1923-25 average. Leather and shoes, which had been making moderate gains since 1924, declined slightly in 1928. Food products showed a slight gain in 1928, but are still 7 per cent below the 1923-25 average; and lumber continued in 1928 the steady decline evident in the two preceding years.

The consumption of electric power, one of the best indices of industrial activity, increased about 10 per cent in 1928, to a level 46 per cent above the 1923-25 average. Part of this gain, however, is doubtless due to an increasing substitution of electric for other types of power.

CONSTRUCTION

The construction industry affects directly or indirectly a large fraction of the working population, and by some students of the business cycle variations in building activities are assigned a major position among the influences determining fluctuations in general business activity. While unfortunately there is no single series which can be taken as a substantially complete record of the volume of actual construction, there are indices which are useful in forming an approximate judgment of construction activities. One important measure of construction activity is the sta-

tistics of building contracts awarded in thirty-six states, compiled by the F. W. Dodge Corporation, in terms both of square feet and of dollar value. The volume of building in square feet, as represented by contracts awarded, increased 14.6 per cent as compared with 1927. The gains ranged from about 6 per cent for public works and utilities to 16 per cent for residential buildings and 34 per cent for industrial structures. Only public and semipublic buildings registered a decline. The aggregate value of contracts awarded increased 12.7 per cent over the 1927 total.

In Table I and Chart I is shown an estimate of the trend in the volume of building which was obtained by taking the F. W. Dodge figures for the value of building contracts awarded and adjusting these figures, both for population growth and for changes in prices and wages. The latter adjustment was made by dividing by an index of building costs compiled by the Associated General Contractors of America. Comparison of this index with other indices of the growth of building would suggest that it may exaggerate somewhat the increase in the physical volume of building, inasmuch as neither the 1928 figure for contracts awarded in terms of floor space nor an index of the volume of production compiled by the Associated General Contractors of America shows as high a level for building in the last few years as is indicated by the index plotted in Chart I. However, all series agree in showing a substantial gain in building in the last four years as compared with the preceding period.

In 1928 new orders for concrete roads and streets, as reported by the Portland Cement Association, reached a new high level of over twelve million square yards per month, nearly 18 per cent above the previous high figure reached in 1927.

The volume of work on federal aid highways declined in 1926 and 1927 from the 1925 level of 862 completed miles and 12,187 miles under construction, and continued this decline in 1928, to 621 completed miles and 8,879 miles under construction.

SUMMARY

With the exceptions noted above, 1928 witnessed a recovery in the physical volume of production from the mild recession of 1927, the most substantial gains being in building, crops, and man-

ufacturing. The manufacturing gains were chiefly in a group of industries associated with building and with the manufacture and use of automobiles, notably petroleum refining, rubber tires, the manufacture of automobiles, and iron and steel.

It may be noted that the relatively high level of production in recent years does not necessarily involve equally satisfactory employment conditions. The employment situation in the soft coal industry is more or less chronically unsatisfactory. In manufacturing, despite the increase in the volume of production, the total number employed, to judge from the available indices of the number of workers on pay-rolls, continues to decline, creating a growing interest in the problem of "technological unemployment."⁸ It is urged by some commentators that the observed progress in technical efficiency is seriously aggravating the unemployment evil; others hold that the labor released by technical improvements has merely found employment in expanded and newly developed non-manufacturing occupations. It is a somewhat sad commentary upon the adequacy of our industrial statistics that there should be opportunity for a wide difference of opinion on this point.

In appraising the significance of the continued high level of production experienced in 1928, it should be noted that while the general average of production has run a relatively stable course since 1924 and on a generally rising level, even in this relatively stable period there has been a considerable diversity in the trends of the separate industries and that compared with population, some major lines of production are actually declining.

⁸ The Federal Reserve Board index of factory employment on a 1919 base was 91.9 in 1927 and 90 in 1928.

FOREIGN POLICY

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ABSTRACT

The outstanding event of the year 1928 was the anti-war pact. The year 1928 saw a renewed effort to secure the participation of the United States in the World Court. It saw new arbitration and conciliation treaties. As far as Latin American affairs were concerned, the year was momentous. For a time there was danger of a conflict between the international principle embodied in the League Covenant and the Monroe Doctrine, but this danger has now disappeared, primarily because of the arbitration and conciliation treaties signed at the Pan-American Arbitration Conference. The settlement of the Bolivia-Paraguay dispute was an example of co-operation between the United States and the League in preventing war in the Western Hemisphere.

The outstanding event of the year 1928 was the conclusion of the anti-war pact. This agreement was signed in Paris on August 27, by fifteen states and it was subsequently adhered to by about fifty more. The treaty is short. In Article I, the parties agree to "renounce war as an instrument of national policy." In Article II, they promise never to seek the settlement of disputes "except by pacific means." The Senate of the United States finally approved the anti-war pact on January 15, 1929, after an unsuccessful attempt of Senators Moses and Reed to secure the adoption of "reservations." Nevertheless the treaty was approved only after the Committee on Foreign Relations had made a report to the effect that the anti-war pact does not curtail in any way the right of self-defense; that the Monroe Doctrine (as interpreted by the Committee) is part of the national defense of the United States; that the treaty does not provide sanctions, express or implied, nor change the present position of the United States toward the League of Nations.

After the debate in the Senate in which senators minimized the effects of the pact upon the foreign policy of the United States, it is natural to ask the question: does the pact have any concrete value? Basis for a negative answer to this question is found by

some critics in the passage of an act a few weeks after the ratification of the anti-war pact, which authorizes the construction of fifteen 10,000 ton cruisers and one aircraft carrier at an authorized cost of \$274,000,000. From the standpoint of absolute principle there is something incongruous about ratifying a treaty "renouncing" war and then voting to increase the size of the navy. It would seem to indicate that even though we have no aggressive designs we do not trust the promises of other states not to go to war. In fact the defenders of the cruiser bill state that wars of self-defense remain valid under the anti-war pact and that the United States must possess a navy as strong as that of any other power, in order to be prepared to defend itself against attack.

If the United States already possessed the strongest navy in the world, the 15-cruiser bill would be open to severe condemnation. But it must be remembered that the American fleet has been undersized in cruisers; that following the Washington Conference the British government began the construction of large cruisers; and that for several years the American Congress held back appropriations in order that a further naval limitation agreement providing for parity in cruisers between Great Britain and the United States might be negotiated, just as such an agreement in regard to battleships had been negotiated in 1921. An attempt to secure naval agreement at Geneva in the summer of 1927 failed largely because of the reluctance of the British government to accord parity to the United States. The ill feeling generated at the Geneva naval conference became more tense following the announcement of the Anglo-French naval accord in August, 1928. This agreement, which was negotiated privately, provided for the limitation of large cruisers, but allowed Great Britain to construct as many small cruisers, i.e., those carrying six-inch guns, as she liked. American opinion regarded this agreement as a British attempt to secure French support for the position taken by Great Britain against the United States at Geneva. Had the terms of this agreement been privately communicated to the United States before being announced to the world much of the ill will would not have arisen. But the fact that the accord had been negotiated was blurted out in the House of Commons by Sir Austen Chamberlain

last July in a manner which led many Americans to assume—perhaps unjustly—that he was trying to confront the United States with a *fait accompli*. As a matter of fact, the accord brought forth such a protest from English leaders of opinion that the two governments promptly buried it and there were few mourners at the funeral.

Following such diplomatic blunders, the passage of the 15-cruiser bill by the United States was perhaps inevitable. It is possible that this bill may incite the British and American governments to enter upon a naval race, but it seems more probable that it will lead to a naval holiday. Assuming that the British government suspends further cruiser construction, the British and American fleets will be substantially equal in strength when the United States completes its present cruiser program. The most practical basis for limitation, therefore, is an agreement providing for the *status quo* in naval construction.¹

As a result of the insistence of Senators Borah and Reed, the cruiser bill as finally passed states that Congress favors the negotiation of treaties before 1931 "regulating the conduct of belligerents and neutrals in war at sea, including the inviolability of private property thereon." The adoption of this provision has also shocked some friends of the anti-war pact, simply because it does not mention the anti-war pact nor the difference between legal and illegal wars. The very concept of neutrality is based on the principle that war is legal. But this principle is changed by the League Covenant and the anti-war pact. Henceforth all wars "as an instrument of national policy" are illegal. Moreover, members of the League promise to apply an economic blockade against a state which is recognized as an aggressor. Such a state will have violated not only the Covenant but also the anti-war pact. While the United States is not a member of the League, it is the co-author of the anti-war pact. How can we, therefore, claim the right to trade with a state which has flagrantly violated its obligations? The other states could not grant us any such right without violating their obligations under the Covenant to apply a blockade.

In an attempt to make explicit the principle that seems to be

¹ Assuming the construction by the United States of its 15 cruisers

implicit in the anti-war pact, Senator Capper revived his famous resolution, on February 11, 1929. This provides that the United States will not protect its nationals who attempt to trade with an aggressor and that the president may even impose an arms embargo against the aggressor. This bill has aroused opposition in Washington on the ground that it would be unneutral for the president to decide which of two states is the aggressor, both of which claim to be acting in self-defense. The determination of this question obviously is a task which must be left to some international machinery. It is doubtful, therefore, whether Congress will pass the Capper resolution until the United States is willing to co-operate with the League Council in determining which belligerent has violated its obligations.

The year 1928 thus saw a debate in regard to the attitude of the United States toward the next war. The assumption of this debate is that the "next war" will take place. This assumption may be correct. But surely the debate misplaces the emphasis. The only real way to protect American property and to guarantee international trade rights is to develop machinery for the pacific settlement of disputes before they lead to hostilities. When the newspaper reader learns of the existence of a conflict it is usually only after it has leaped into the headlines, but in practically every case these conflicts arise out of a deep background of submerged grievances. International machinery which sits idly by until guns are fired and then attempts to enforce peace inevitably will break down. What international machinery should do is to bring grievances into the open before the parties reach the breaking point.

During the past year the opinion seems to have grown that, if the anti-war pact is to have concrete value, it must be implemented by agreements in regard to machinery for the prevention of war. Whether or not as a result of the anti-war pact, the year 1928 saw a renewed effort to secure the participation of the United States in the World Court. It will be remembered that in January, 1926, the Senate consented to adhere to the Court subject to five reservations the most important of which provided that the United States should participate in meetings of the Council and Assembly of the League for the purpose of electing judges and that the United

States should have a veto over requests for advisory opinions in which we "have or claim an interest." In September, 1926, a conference was held at Geneva at which the other states accepted all of our reservations except the one about advisory opinions. Here they merely proposed that the United States should have the same voice in objecting to an opinion as members of the Council, leaving to the future whether or not the request for such an opinion should be made by unanimous or by majority vote. The fear was expressed that, if the United States had the right to veto a request for an advisory opinion, the work of the Council in the conciliation of disputes might be seriously hampered. The Geneva compromise was not, however, acceptable to the United States. And the question was stalemated until the election of Mr. Charles Evans Hughes as a judge of the court in September, 1928, and the appointment of Mr. Elihu Root as a member of the committee of jurists to revise the Court statute. In February, 1929, Mr. Root arrived in Geneva, where he proposed a formula which provided that Council members and the United States should exchange views in regard to a request for advisory opinions, and, if after this exchange of views the United States still maintained its objection, it should have the right to withdraw from the World Court "without any imputation of unfriendliness to co-operate generally for peace and good will." The formula thus safeguards the interests of the United States without necessarily impairing the usefulness of the advisory opinion. In practice, it is doubtful whether the United States will wish to veto many advisory opinions, or whether the Council will wish to press the request for an opinion to which the United States is resolutely opposed. The Root formula will probably bring the United States into the World Court.

The year 1928 saw the signature of an increasing number of arbitration treaties, the most important one of which was the Pan-American Arbitration Treaty discussed later. While arbitration is important, it is usually confined to legal questions which even if unsettled would not provoke a war. The really serious questions are "political." And for the settlement of these questions a different method, of conciliation, has been devised, a method which the United States has accepted in the Bryan Peace Commission Trea-

ties. In fact, as a result of our arbitration and conciliation treaties, we have accepted the principle of pacific reference of all disputes to which we may be a party. These treaties are, however, merely self-denying ordinances; they do not pledge the United States to a conciliatory effort to prevent other states from going to war. If we take the anti-war pact in earnest, we must agree to place our influence alongside that of other powers in inducing third states to settle their disputes by peaceful means and in preventing such disputes from leading to hostilities. The most effective conciliation machinery in the world is the Council of the League of Nations, and sooner or later we may expect the United States to co-operate with this body for the purpose of preventing the violation of the anti-war pact.

As far as the relations between the United States and Latin America were concerned, the year 1928 was momentous. At the beginning of the year these relations had been strained by the intervention of the United States in Nicaragua and by the interventionist stand of the United States at the Havana Conference. A few weeks after the Havana Conference a representative of Argentina told a League of Nations commission that his government did not recognize the Monroe Doctrine. In July, the little state of Costa Rica requested the League Council to interpret the Monroe Doctrine in relation to Article 21 of the Covenant. Even today Argentina and Brazil have refrained from adhering to the anti-war pact out of fear that it sanctions the Monroe Doctrine, by which they mean the right of the United States to dictate to the other nations of the Western hemisphere.

In its reply to Costa Rica the League Council quietly said that, while it could not interpret the policy of any government, it could state that every member of the League had the same rights as any other. This meant, therefore, that a Latin-American state might appeal to the guaranties of the Covenant in case of dispute with the United States. For a time at least there seemed to be the danger of a conflict between the international principle embodied in the League Covenant and the interpretation of the Monroe Doctrine under which the United States could—as judge and party in the same cause—decide for itself the obligations of states in the

Western hemisphere. Happily the year 1928 saw the disappearance of the likelihood of any such conflict and the improvement of our Latin-American relations generally. The difficulties with Mexico were appeased in the oil settlement of January, 1928.² The difficulties with Nicaragua were softened by the successful supervision of the Nicaraguan elections of November, 1928. The basis of the fears directed against the Monroe Doctrine and our Latin-American policy generally was removed, or at least reduced, by President Hoover's journey to Latin-America and by the Pan-American Arbitration Conference held at the end of 1928. At this conference two important agreements were signed. The first agreement provides for the obligatory arbitration of legal disputes, which are defined to include questions in regard to the interpretation of a treaty; questions of international law; the existence of any fact which, if established, would constitute a breach of international law; and the nature and extent of the reparation to be made for any breach. Exceptions to arbitration include controversies over domestic questions and questions affecting states not a party to the convention. It is to the credit of the United States that our delegates signed this agreement without any reservation pertaining to the Monroe Doctrine or to any other question. The arbitration treaty provides that, if the parties cannot agree within three months upon the definition of the particular subject to be referred to arbitration, the court may draw up an agreement or *compromis* containing such a definition. This provision overturns the practice hitherto followed in the United States of giving the Senate a veto over the special agreement. While the Upper House on the Hill has already approved the Pan-American conciliation agreement, it has failed as yet to act on the arbitration treaty, apparently because of the *compromis* question.

According to the conciliation convention all disputes not referred to arbitration must, in case they threaten to disturb the peace, be referred to conciliation commissions. Here the 1929 conference merely revised the Gondra Convention of 1923 by providing that diplomatic committees at Montevideo and Washington

² See "Foreign Policy of the United States in the Year 1927," *American Journal of Sociology*, July, 1928

may take the initiative in conciliating a dispute "when it appears that there is a prospect of disturbance of peaceful relations."

Once these agreements are ratified, it will be untrue to say that the United States is judge and party of the same cause—that it declines to refer to international tribunals the extent of its own rights and obligations in the Western hemisphere. For example, if the United States threatens to land marines in Nicaragua, the diplomatic committee at Montevideo may raise the question whether or not the United States has lived up to these treaties. The conciliation convention in principle places the intervention policy of the United States under some form, however vague, of international control. In accepting these conventions, we have to a certain extent converted the Monroe Doctrine from a unilateral to an inter-American understanding. Further evidence of this view is found in the settlement of the Bolivia-Paraguay boundary dispute, which almost led to war in December, 1928. Both Mr. Hughes and Mr. Kellogg declined the suggestion of the Pan-American Arbitration Conference that the United States undertake to mediate the dispute. Instead it was agreed that the question should be referred to a joint commission.

Bolivia and Paraguay are members of the League of Nations, and when the dispute broke out the Council of the League, then meeting in Lugano, sent several telegrams reminding these states of their obligations under the Covenant. Although the dispute was finally referred to an Inter-American commission, there is no doubt but that the quick and firm action of the Council had a profound effect in inducing these states to resort to pacific settlement. The fact that the dispute was not submitted to a Geneva tribunal did not mean a defeat for the League. The Covenant favors regional agreements and local conciliation boards. But when these bodies fail to bring about an agreement, the Council reserves the right to intervene. The joint action of the Council and of the Pan-American Arbitration Conference is the first example of co-operation between the United States and members of the League in preventing war in the Western hemisphere. It is an example which will probably be followed in the future.

Shortly after the signature of these notable arbitration and

conciliation agreements, the Senate Committee on Foreign Relations attempted to clear up the misapprehension of the outside world in regard to the Monroe Doctrine. In its report on the anti-war pact, the Senate Committee set down what it regarded as the "true interpretation" of the Monroe Doctrine. Instead of quoting with approval from the Minneapolis address (1923) of Mr. Charles Evans Hughes upon this subject, the Committee quoted, among others, Professor Theodore Woolsey, to the effect that when the Monroe Doctrine "oversteps the principle of self-defense, reasonably interpreted, the right disappears and the policy is questionable because it then violates the rights of others. . . ." This statement seems to throw overboard the Rooseveltian interpretation of the Monroe Doctrine under which the United States has undertaken to stamp out revolution in Central America. The Senate seems to have returned to the original interpretation of the Monroe Doctrine—namely a Doctrine that merely authorizes the United States to come to the aid of a Latin-American state when attacked by a European power.

The year 1928 has seen, therefore, an improvement in the relations between the United States and the remainder of the world. Prospects for a new understanding with Latin-America are bright. The conclusion of a treaty last July with China in which we recognize Chinese tariff autonomy has seemed to give us a special place in the good will of the Chinese people. Our renewed interest in the World Court and our daily co-operation with the League denotes a more sympathetic attitude on the part of Washington toward all forms of international organization. So far, however, the really vital economic matters, which are at the source of the majority of international differences, remain scarcely touched. The questions of tariffs, shipping wars, trade promotion, and commercial policy generally must soon be grappled with if peace is to be permanently maintained.

LABOR

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ABSTRACT

The year 1928 was one of comparatively normal activity for labor as a whole. The membership has virtually remained stationary, and attempts at increasing it by organizing the unorganized brought no results. The old procedure in collective bargaining is, with some exceptions, still followed. There has been a slight decrease in strikes. Labor banking is marking time, and the results of labor's effort in politics are uncertain. Workers' education has stirred up considerable controversy, leading to assertion of dormant minority elements. As a result of the continued "expulsion" policy of the unions, the Communists have modified their "boring-from-within" policy by organizing "dual unions."

In general labor followed a normal course in 1928, although a few developments, which at present do not lend themselves to evaluation, may prove of great significance in future years.

MEMBERSHIP, ORGANIZING THE UNORGANIZED, COLLECTIVE BARGAINING

Union membership has virtually remained stationary. Indeed there may have been a decline, but, when unions are encountering reverses, it is difficult to secure accurate membership figures. To illustrate, the United Mine Workers still show a membership of 400,000, whereas the loss of the bituminous coal strike has shattered its forces in some of the most important mining areas. Furthermore, membership figures for 1928 are not available for all the unions. However, the figures for the American Federation of Labor show the slight increase of 83,537 over 1927. For the latter year the paid up membership was 2,812,526, and it is given as 2,896,063 for 1928.

In order to recoup its membership the Federation is urging its affiliated bodies to "double the membership in 1929." This is a rather ambitious program in view of the fact that the problem confronting the American union movement is not increasing membership in shops and areas where the unions already operate, but in the

unorganized areas, and chiefly in the so-called basic industries employing predominantly semi-skilled and unskilled workers. Since the collapse of the war boom, the Federation unions have met with little success in these areas of large-scale and integrated industry, where welfare work, company unionism and the labor spy are resorted to by the financially powerful firms to counteract unionism. The latest unsuccessful attempt was in the automobile industry. In 1926 plans were laid to organize this industry and the Metal Trades Department was entrusted with the responsibility. The president of that department in his annual report acknowledges that thus far no headway has been made. Having encountered a snag in this industry, the Federation has now turned its attention toward organizing the textile workers of the South.

Although the new form of collective bargaining in which labor assumes a responsibility for production is being featured, it is not being rapidly extended. Some of the largest railroad corporations have introduced it in their railroad shops, where the workers are strongly organized. Outside of these instances the new practice is resorted to on a limited scale, chiefly by the smaller firms where unions still exercise influence in a number of the less important industries. This mode of union-management co-operation has received little consideration from either labor or employers in the best organized industries, as building trades and coal mining. Of course, in the unorganized industries like automobile, iron and steel, it is not even considered.

STRIKES REACH THE TROUGH

It seems that the trough has been reached in the strike cycle. Table I shows that the downward trend is gradually spending itself. Not only has there been a slightly smaller number of strikes, namely 576 for 1927 as against 580 for 1928, but there was also a decrease in the number of workers participating in strikes from 362,495 in 1927 to 342,341 in 1928.

The two outstanding strikes of the year were those of the bituminous coal-miners and the New Bedford textile operatives. The former strike began on April 1, 1927, and officially terminated July

8, 1928. It involved something like 200,000 workers in the central and southwestern coal fields. The coal-miners were among the few groups of even organized workers that had not suffered a wage reduction from the war peak. The operators demanded concessions and the union resisted. The strike was one of the most bitterly contested and of unusual duration, exhausting the resources of the union. It was finally called off by the union permitting the various districts to effect settlements with operators "upon a basis mutually satisfactory." The settlements that followed resulted in wage reductions of from 10 per cent to 25 per cent. The forces of the union were badly shattered, so that it has not succeeded in re-establishing itself in some of the most important coal-mining areas.

TABLE I
NUMBER OF DISPUTES AND EMPLOYEES
INVOLVED, 1927-28

YEAR	DISPUTES IN WHICH NUMBER OF EMPLOYEES INVOLVED WAS REPORTED	
	Number of Disputes	Number of Employees
1927	580	362,495
1928	576	342,341

Chiefly as an outgrowth of the strike situation, internal union strife developed, leading the opposition elements, consisting of progressives and Communists, to form themselves into a "Save-the-Union Committee." But the controlling union officials would not permit them to function as an organized opposition within the United Mine Workers, expelling their leaders. Consequently some of the progressives withdrew, but, under the inspiration of the Communists, the organization was turned into an independent union of coal-miners as a rival to the United Mine Workers.

The New Bedford, Massachusetts, textile strike was a protest against an announced wage cut of 10 per cent by the textile manufacturers. It started in April 16, 1928, and ended October 8th in a compromise, the workers accepting a 5 per cent wage reduction. Some 25,000 textile operatives were involved, with only a small proportion, being chiefly the skilled, belonging to the union. Never-

theless the walkout was virtually 100 per cent effective. The Communists immediately entered the arena as the champions of the unorganized and unskilled, succeeding particularly in winning adherents from among the immigrant workers. Throughout the strike there was rivalry between this group and the old union affiliated with the American Federation of Labor and known as the United Textile Workers. Now that the settlement which the Communist-led group opposed has been made, both sides are striving to win the confidence of the workers.

LABOR BANKING AND POLITICAL ACTION

Labor banking is also at a standstill, as Table II, compiled from figures issued by the Industrial Relations Section of Princeton University, indicates.

TABLE II
SUMMARY OF STATISTICS OF LABOR BANKS, 1927-28

Date of Statement	No of Labor Banks	Capital	Surplus and Undivided Profits	Deposits	Resources
December 31, 1927	32	8,282,500	3,751,176	103,322,214	119,815,386
December 21, 1928	27	7,487,500	3,848,718	99,018,502	116,309,227

From Table II it is evident that the number of banks has declined, and so have the capital, deposits, and resources; but surplus and undivided profits show slight increase. The financial conditions of the remaining banks having improved, the financial status of labor banking has not been materially affected. While these remaining banks are prosperous, the original aspirations of the devotees of labor banking is farther from its achievement than ever, when their resources of \$116,309,227 are compared with the \$69,439,471,224 of resources for all the banks of the country. Moreover, a future additional shrinkage in labor banks may be looked for since the Brotherhood of Locomotive Engineers is continuing its policy of curtailing its financial interests.

Labor political action has virtually reverted to its pre-war standing. The American Federation of Labor pursued its old policy of non-partisanship in the last campaign with the exception that the Executive Council, after much study and bitter debate, decided to

remain neutral in so far as the presidential candidate is concerned. This was a blow at Smith, since the Federation had supported the Democratic candidate from the inception of its non-partisan policy, except in 1924 when it supported La Follette. Besides, Smith had always had the support of labor and more closely approximated the Federation's ideal of a candidate. However, most of the outstanding subsidiary units of the Federation supported Smith, and President Green of the Federation spoke favorably of his record. It is not known for a certainty what actuated the Executive Council to assume this attitude of neutrality, nor was it a unanimous decision. However, it is in accord with the post-war tendency of organized labor to disassociate itself from the democratic elements in the country and instead cater to what is commonly termed the "big interests." Nevertheless, the non-partisan policy was carried out with reference to candidates for congressional and state office. Too many other factors entered into the recent election to make it possible to gauge the influence of labor as a political force.

The elements that favored independent political action were badly and traditionally divided into four parties, and in the aggregate made a poorer showing than ordinarily. Their combined vote netted 343,635, being less than 1 per cent of the total vote cast, and entirely out of proportion to the 5,000,000 votes drawn by La Follette. This small vote is indeed a surprise and indicates a serious setback in view of the extensive and systematic campaigning of the Socialist and Communist parties. Norman Thomas, the Socialist standard bearer, a college man, an able campaigner with an appealing personality and polished manner, appealed to the La Follette supporters and the general independent voter in addition to the worker vote. He made 250 speeches in 39 states in the course of four major tours which included the "solid South." But the unresponsiveness was overwhelming and even the lone Socialist congressman, Victor Berger, was defeated, although by a very small vote. The party polled 267,835 votes as against 920,000 (4 per cent of the total) in 1920, when it last placed an independent presidential ticket in the field.

The Communists also carried on an extensive campaign, encountering "obstructions by super-patriots, police authorities and

hoodlums." In 1924 the Workers (Communist) party ticket was on the ballot of only 14 states, and in 1928 it succeeded in placing its ticket on the ballots of 43 states, among which were counted several southern states. The increase in vote, however, was not in proportion to the effort in activity. The party polled 33,076 votes in 1924, and increased its total to only 48,228 in 1928.

Notwithstanding the severe setback suffered by the elements favoring independent political action, the usual gloom and pessimism seem to be absent. Indeed, among the non-Communist elements there appears to be greater enthusiasm for a new party than before the election, and these groups are quietly laying plans for the launching of a new party in the near future. The Communists feel encouraged by their ability to enter their ticket on so many more state ballots and by the increased vote, and are carrying on optimistically.

WORKERS' EDUCATION AT THE CROSSROADS

In so far as internal conflict in the labor movement is concerned, workers' education has held the stage since the middle of the year. It became the haven of refuge of the so-called progressives, who enjoyed such a prominent position in the movement during the first half of the post-war decade. Gradually their strength was cut into until they ceased to function as an organized opposition. But their scattered forces exercised considerable influence in workers' educational activities. They were good naturedly tolerated by the controlling group, although hindered in their activities here and there. Functioning with moderate success, this minority element kept the spark of progressivism alive, even occasionally cautiously criticising the policies and tactics of the dominant administrative forces. During 1928, the progressives asserted themselves more boldly. This act, coupled with other circumstances, led the Executive Council of the American Federation of Labor to launch an attack on Brookwood Labor College, the only resident institution, but exercising influence and leadership among the few remaining non-resident labor colleges and classes. The usual charges that a dominant political group hurls at those who are in its disfavor were directed at Brookwood. It is accused of being Communist, anti-religious, disloyal and so on. These accusations are denied by

the college. But its sponsors and officials acknowledge that in trade-union policy they and the college are not in complete accord with the official labor leadership. On the other hand, they maintain that in its educational policy Brookwood Labor College pursues the highest academic standards of a free educational institution, emphasizing the factual approach to the study of social problems through dispassionate but critical presentation and discussion of the subject matter, in order to give the student a working fund of knowledge and at the same time prepare him to cope independently with problems. Hence, while the college is permeated with a labor loyalty, it is studiously aimed not to favor factions, and students are admitted regardless of point of view. The controversy reached the floor of the Federation convention held at New Orleans in November. There the action of the Executive Council in condemning the college was sustained. An interesting sidelight at this convention was the attack by some of the outstanding labor leaders upon Professor John Dewey, who had in the meantime sided with Brookwood, as a Communist propagandist. Professor Dewey has since more vigorously entered the controversy on the side of the progressives. As a member of the American Federation of Teachers, which is affiliated with the Federation of Labor, he considers it his duty to interest himself actively in the internal affairs of the labor movement.

In the meantime Brookwood has also drawn the fire of the Communists. Some of their sections are quietly discouraging those of their disciples who are either not sufficiently well grounded in Communist philosophy or are not sufficiently positive minded, from attending the college. The Communist leaders and press have also openly attacked the institution as sponsoring "yellow social reformism" and being, therefore, "counter-revolutionary." To clinch their argument they have characterized the faculty as "petty-bourgeois social democratic professors."

PERSISTENCE OF OPPOSITIONS

The opposition groups in the labor movement, although weaker than ever, seem to be even more persistent. The Communists are continuing their aggressive and defiant attacks on the dominant leadership, taking out time occasionally to criticize and ridicule the

other opposition elements. On the other hand, the expulsion policy of the unions is still vigorously, although not as extensively, applied. This situation has made it difficult for the Communists to work within most of the unions, leading them to modify their "boring-from-within" policy by organizing separate "revolutionary" unions wherever they have a sufficient following. They have thus, in part at least, reneged on their former unequivocal opposition to "dual unionism," justifying themselves on the ground that the "radicalization of the workers" has reached the stage where it is desirable to organize "revolutionary industrial unions." Thus far the Communists have founded such unions in the needle trades, mining, and textile industries. They also dominate an independent shoe workers' union, an independent union in the automobile industry, and a few miscellaneous and scattered unions, as well as workers' leagues and clubs organized on industrial or trade lines. They also aspire to bring into being a central co-ordinating organization that will bring these unions together and act as a rival to the American Federation of Labor. Although the chief excuse of the Communists for organizing "dual unions" is the need for organizing the unorganized, their prime union activity at present is among organized workers. The real test of their achievements must, according to their own admission, be the degree to which they organize the unorganized in the basic and highly integrated industries. At present they have "nuclei" scattered throughout these industries and, therefore, have a substantial base of operation.

In the meantime there rages a bitter factional fight within the Workers (Communist) party, the dominating and co-ordinating agency of all Communist activity, which consumes much of the time and energy of the leaders and members and to that extent affects their effectiveness in furthering their objectives. In accordance with the policy of "Communist self-criticism," their press is clotted with "theses" and "discussions" in which the different factions accuse each other of having wrongly diagnosed conditions, thereby predicating faulty prognostications which resulted in "right deviations" and hence the negation of "Marxist-Leninist tactics." These "oppositions" have been "liquidated" at past party conventions in order to assure a "united Party." However, they seem to

trickle out and congeal shortly after the "liquidation" ceremony if they have actually succumbed to the dissolution process.

Largely as a result of the Brookwood-Federation controversy, the non-Communist opposition elements have taken new courage. For the past six years there had been no organized opposition at Federation conventions, but the Brookwood dispute gave these scattered dissident elements a new rallying point. And no one was more surprised than they at the effective fight they put up. They had discovered that they could rise on the floor of the convention in order to oppose the "high lights" of the administration "without being struck dead." Since then these progressives have begun to assert themselves anew and are crystallizing into a rejuvenated "minority," as some of their more timid prefer to label themselves. If they are to become a real positive force they will probably find it necessary to become an aggressive "opposition." Indeed, if the controversy continues as it likely will, they will find themselves jockeyed into such a position no matter how they maneuver to the contrary.

The outcome of this controversy has also stirred an element among the Socialists to renewed aggressive assertiveness. Since the war it had become the policy of the Socialists to refrain from attacking the labor leadership with the hope that they would be permitted to carry on their propaganda in peace, gradually making converts among the high and low. The fortunes of the Socialist party do not prove this to have been an efficacious policy. Now a group centering around Norman Thomas, the party standard bearer, and the editorial staff of the official organ of the party, the *New Leader*, have begun an aggressive and critical attack upon the "reactionary labor officials," which does not meet with favor from some of the "old Guard." If this militant faction has its way, there is likely to be an alliance with the progressives. If this new faction encounters insurmountable opposition within the Socialist party, it is likely to drift into the ranks of the progressives either through open revolt or through individual defections.

WAGES

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ABSTRACT

The real wages of the employed workers in manufacturing, after having remained on a virtual plateau from 1923 to 1927, inclusive, rose by 6 per cent during 1928. This increase was composed of a 5 per cent advance in average money earnings and a decline of 1 per cent in living costs. Some of the increase was, however, more apparent than real, since the decline in employment was probably heavier among the less efficient and hence lower-paid workers than among the upper groups, and this in itself would raise the general average. Among specific industries, glass and automobiles fared particularly well. The average increase in the real weekly earnings of unskilled labor was approximately 5 per cent, and in hourly earnings 2 per cent. The wages of farm laborers, on the other hand, remained virtually constant. The average union hourly rates in the building trades and in other industries rose by less than 1 per cent, which was a much smaller rate of gain than had been obtained in previous years.

The general increase in the real earnings of the employed workers must, however, be considered in connection with the probable slight decline in the volume of employment if we are to appraise the welfare of the working class as a whole.

During 1928, the average money and real wages of the employed workers showed an apparent increase above the average for 1927. In that year the average annual earnings of employed wage-earners¹ in manufacturing was \$1,266. This was 118 per cent above the average for 1914, or if 1914 be taken as 100, the relative for 1927 was 218. Since the relative for the cost of living for urban workers in that year was, according to my revision of the Bureau of Labor Statistics index, 171, this was equivalent to an increase in the real annual earnings of 28 per cent. This was in turn virtually the same gain as had been shown for each year since 1923. Real earnings in manufacturing had thus remained on a virtual plateau for five years.

I have spliced the statistics of the average earnings in manufacturing during 1928 as compiled monthly by the Bureau of Labor Statistics² from more than 11,000 establishments in fifty-four

¹ Computed from mimeographed release of the United States Census Bureau

² These are published periodically in the issues of the *Monthly Labor Review* under the heading of "Employment in Selected Manufacturing Industries"

industries and employing approximately 3.1 million wage-earners to the 1927 average by the method of chain-indexing, and I have made them comparable with the census figures for that year. Table I shows the average rate of yearly earnings by months in manufacturing as a whole and the relation which these averages bear to the average for 1914. The yearly averages are obtained by multiplying the average weekly earnings for each month by fifty-two, which is a precisely similar method to that followed by the Public

TABLE I
AVERAGE ANNUAL EARNINGS OF EMPLOYED WAGE-
EARNERS IN MANUFACTURING 1927-28

Year and Month	Average Rate of Annual Earnings	Relative Annual Earnings (1914=100)
1927. Average .	\$1,266	218
1928. Average	1,324	228
Jan	1,267	218
Feb	1,329	229
Mar ..	1,337	231
Apr	1,321	228
May	1,334	230
June	1,326	229
July	1,300	224
Aug .	1,329	229
Sept.	1,321	228
Oct.	1,360	234
Nov. .	1,324	228
Dec . ..	1,337	231

Health Service in showing mortality rates by weeks and months throughout the year.

This shows, therefore, an average increase of 10 points, or 5 per cent, in money earnings for 1928 as compared with 1927. The index rose from 218 in January to 229 in February and, save for a slight drop to 224 in July, fluctuated thereafter between 228 and 234. It should be recognized, however, that this increase was probably in part more apparent than real. There was a decline in the volume of factory employment during the year, and the natural tendency of the employers under such circumstances would be to discharge in the main the less effective workers at each grade. The earnings of these men were undoubtedly somewhat below those who

remained, and their removal therefore would of itself raise the general average, even though the money earnings of those who continued to be employed were still as before.

In order to measure the real progress of the wage-earners, however, we must also measure the changes in the cost of living which occurred during the year. This is shown by the following index given in Table II which differs from the semi-annual index of the Bureau of Labor Statistics in the following ways: (1) The semi-annual index for the country as a whole is built up by weighting the index for each of the thirty-two cities covered by its population instead of weighting the national index for each group of commodities

TABLE II
INDEX OF RELATIVE LIVING COSTS OF URBAN WORKERS
1927-28 (1914 = 100)

Year and Month	Index of Living Costs (1914 = 100)	Year and Month	Index of Living Costs (1914 = 100)
1927:		1928	
Average	171	June	168
1928		July	169
Average	169	Aug	169
Jan	171	Sept	171
Feb	169	Oct	170
March	169	Nov	170
April	168	Dec	170
May	169		

by its relative importance in workers' budgets. (2) The probable relatives for the intervening months are found by interpolation, using the monthly cost-of-living index of the National Industrial Conference Board to determine the *relative* monthly changes on the assumption that any differences in the amount of change as between the indexes of the Bureau and of the Board were evenly distributed over the six months' period. (3) The relative for the year as a whole is then the simple average of the relatives for the months.

Living costs declined, therefore, by 2 points in 1928 as compared with 1927, or by slightly more than 1 per cent.

The indexes of real annual earnings can now be obtained by dividing the index of money earnings by the index of living costs and these are shown for manufacturing in Table III.

This shows a gain of 7 points, or approximately 6 per cent, in the real earnings for 1928 as compared with those for 1927. The

TABLE III
RELATIVE REAL ANNUAL EARNINGS OF EMPLOYED WAGE-
EARNERS IN MANUFACTURING (1914 = 100)

Year and Month	Relative Real Annual Earnings	Year and Month	Relative Real Annual Earnings
1927:		1928:	
Average	128	June	136
1928:		July	133
Average	135	Aug.	136
Jan.	128	Sept.	133
Feb.	136	Oct.	138
March	137	Nov.	134
April	135	Dec.	136
May.	136		

rise in February was particularly abrupt since the index advanced from 128 to 136. The index remained, however, at about this point

TABLE IV
THE AVERAGE MONEY AND REAL EARNINGS OF WAGE-EARNERS IN
SPECIFIC MANUFACTURING INDUSTRIES 1927-28

Industry	Average Annual Earnings in Dollars		Relative Annual Money Earnings (1914 = 100)		Relative Real Earnings (1914 = 100)	
	1927	1928	1927	1928	1927	1928
Slaughtering	\$1,357	\$1,372	216	218	126	129
Confectionery	902	895	226	224	132	132
Baking	1,373	1,371	221	221	130	131
Knit goods	989	983	249	248	146	146
Shirts	752	738	201	201	118	118
Furniture	1,267	1,253	225	223	132	132
Paper and wood pulp	1,313	1,331	218	221	128	131
Planing mills	1,306	1,308	203	203	119	120
Glass	1,236	1,267	220	225	128	133
Leather	1,283	1,276	225	223	131	132
Automobiles	1,712	1,781	213	222	125	131
Automobile tires	1,395	1,415	234	237	137	140

during the remaining months of the year, save for recessions during July, September, and November, when it was carried down to 133 and 134.

It is of interest to note the changes in a number of specific manufacturing industries as well as in all manufacturing, and these are

given in Table IV, where the absolute averages as projected from the 1927 census, together with the relatives of money and real earnings, are shown for the years 1927 and 1928. Because of reasons of space, the monthly averages and relatives are not given.

This table shows advances of real earnings of 1 point for baking, planing mills, and for leather, of 3 points for slaughtering, paper and pulp, and automobile tires; of 5 points for glass, and 6 points for automobiles. Real earnings were, on the other hand, stationary in the case of the confectionery, knit-goods, shirt, and furniture industries.

TABLE V
AVERAGE ANNUAL EARNINGS OF EMPLOYED WORKERS ON
THE RAILROADS BY MONTHS 1927-28

Year and Month	Average Annual Earnings	Year and Month	Average Annual Earnings
1927		1928.	
Average	\$1,677	Average	\$1,703
Jan	1,702	Jan.	1,717
Feb	1,591	Feb . . .	1,655
Mar.	1,731	Mar	1,753
Apr	1,663	Apr	1,664
May	1,667	May	1,705
June	1,654	June	1,666
July	1,641	July	1,679
Aug	1,719	Aug	1,739
Sept	1,671	Sept.	1,669
Oct	1,720	Oct	1,784
Nov . .	1,664	Nov	1,701
Dec ..	1,702	Dec . . .	1,709

The average annual earnings of the employed workers on the railroads as compiled by the Interstate Commerce Commission by months during 1927 and 1928 were as given in Table V.

This shows an increase in average annual money earnings of \$26 during 1928 over the average for 1927. This was equivalent to an advance of 1.6 per cent in money earnings and of 3 per cent in real earnings.

Three other main groups for which comparisons of earnings are available are (1) unskilled labor, (2) farm labor, and (3) the unionized building trades craftsmen. The best index of the earnings of unskilled labor are the monthly averages compiled by the

National Industrial Conference Board³ for male unskilled labor in manufacturing. Although the absolute earnings of these workers are probably somewhat higher than those of corresponding workers elsewhere, their earnings are undoubtedly a good measurement of the changes in relative earnings of this class of labor in other industries as well. The weekly and hourly average by months have been given in Table VI.

TABLE VI
AVERAGE WEEKLY AND HOURLY EARNINGS OF MALE
UNSKILLED LABOR IN MANUFACTURING
1927-28

Year and Month	Average Weekly Earnings (in Dollars)	Average Hourly Earnings (in Cents)
1927		
Oct	\$24 21	49 0
Nov	23 42	48 2
Dec	24 12	48 8
1928		
Average	24 85	49 3
Jan	24 66	49 1
Feb	25 25	49 5
Mar	25 05	49 5
Apr	24 47	49 1
May	24 98	49 8
June	25 17	49 8
July	24 69	49 5
Aug	24 78	49 4
Sept	25 27	49 7
Oct	24 72	49 2
Nov	24 34	48 8
Dec	24 76	48 7

There was thus an increase on the average during 1928 of 93 cents in the weekly earnings of the unskilled workers and of two-thirds of a cent in the hourly earnings as compared with the corresponding averages for the last quarter of 1927. These amounted to increases in money earnings of 4 per cent and of 1.4 per cent respectively. The greater increase in the former as compared with the latter was due to an increase in the average amount of time actually worked. Since the cost of living decreased over the corresponding period of time by a little over 1 per cent, the increase

³ See *Monthly Letters on Industrial Relations* of the National Industrial Conference Board

in real weekly earnings was 5 per cent and in real hourly earnings 3 per cent.

The wages of farm laborers during these two years⁴ are given in Table VII.

The money wages in 1928 were therefore virtually identical with those in 1927. Owing to the difficulty of determining the relative changes in the cost of living in the rural regions, it is virtually impossible to draw any precise conclusions about fluctuations in the real wages of these rural workers. It seems probable, however, that if any change at all occurred, it was but slight.

TABLE VII
AVERAGE RATES OF FARM WAGES 1927-28

YEAR AND MONTH	WAGES PER MONTH		WAGES PER DAY	
	With Board	Without Board	With Board	Without Board
1927				
Jan	\$32 94	\$47 07	\$1 79	\$2 36
April	34 53	48 47	1 78	2 37
July	35 59	49 52	1 89	2 44
Oct	35 68	49 77	1 96	2 51
1928				
Jan	32 50	46 75	1 76	2 34
April	34 46	48 44	1 78	2 34
July	35 39	49 32	1 84	2 39
Oct	35 75	49 60	1 96	2 51

In the building trades, the average hourly wage rate increased by a fraction of a cent, rising from \$1.323 to \$1.330; or, in terms of the average for 1913 serving as 100, from a relative of 257 to 258.⁵ Dividing these by the appropriate cost-of-living relatives with 1913 as the point of reference, we get indexes of net hourly wage rates for these two years of 149 and 151, respectively. The standard number of hours constituting a week's work in the building trades averaged 43.5 in 1928. If we take the average for nine sets of union trades, namely, (1) bakers, (2) building-trades workers, (3) chauffeurs, teamsters, and drivers, (4) granite and stone cutters, (5) laundry workers, (6) linemen, (7) longshoremen, (8)

⁴ See *Crops and Markets* (published by the United States Department of Agriculture), V, No. 10 (October, 1928), 370.

⁵ *Monthly Labor Review*, XXVII, No. 5 (November, 1928), 10-13

book and job printing and publishing, and (9) newspaper printing and publishing, we find that the average hourly rate increased slightly from \$1.190 in 1927 to \$1.195 in 1928, or from a relative (with 1913 as 100) of 259.5 to one of 260.6.⁶ This was a much smaller increase than had been obtained in the previous years, since the gain had amounted to 9 points in 1927, 12 points in 1926, 10 points in 1925, and to 18 points in 1924. In terms of real hourly rates, the average relatives for the nine combined union trades would be 150 in 1927 and 152 in 1928. There was a decrease of

TABLE VIII
AVERAGE HOURLY AND FULL-TIME WEEKLY EARNINGS IN SPECIFIC
MANUFACTURING INDUSTRIES 1926-28

INDUSTRY	AVERAGE HOURLY EARNINGS			AVERAGE FULL-TIME WEEKLY EARNINGS		
	Average 1928	Relative (1913 = 100)		Average 1928	Relative (1913 = 100)	
		1926	1928		1926	1928
Cotton mfg.	\$0 324	221	218	\$17 30	205	203
Men's clothing	0 731	292	284	32 16	251	243
Boots and shoes	0 530	219	220	26 02	195	197
Sawmills	0 371	178*	185	21 00	168*	170

* 1925

one-half of 1 per cent during 1928 in the average length of the working week in the union trades, bringing the average full-time hours per week down to 44.9, or a reduction of 8 per cent from the average for 1913. In terms of full-time weekly earnings, therefore, the 1927 and 1928 relatives were identical, being each 141 per cent above that for 1913. This amounted to a real full-time weekly index of 139 in 1927 and of 140 in 1928.

The Bureau of Labor Statistics has also compiled data on the average hourly rates and full-time weekly earnings during 1928 in a number of specific industries.⁷ These are shown in Table VIII. This shows a decrease of 1 per cent in both the hourly and full-time weekly wages in the cotton industry between 1926 and 1928, and of 3 per cent in men's clothing. There was an increase of 1

⁶ *Ibid.*

⁷ *Ibid.*, October, 1928, pp. 89 ff.; December, pp. 173 ff. and 179 ff.; January, 1929, pp. 128 ff.

per cent, however, in the boot and shoe industry, and of 4 per cent in the hourly earnings of sawmill workers between 1926 and 1928, and of slightly more than 1 per cent in their full-time weekly earnings. Expressed in terms of relative real wages, the hourly and full-time weekly relatives for these industries were as given in Table IX.

TABLE IX
REAL WAGES (1913 = 100)

	Relative Hourly Rates 1928	Full-Time Weekly Earnings 1928
Cotton mfg	127	118
Men's clothing	166	142
Boots and shoes	128	115
Sawmills	108	99

In order to obtain a complete picture of the relative economic welfare of the working class, it is however necessary to consider not only the earnings and wages of the employed workers, as I have tried to do in this paper, but also the relative movement of employment and unemployment. It is possible that the increase in unemployment may have been sufficient to eliminate any gains which the wage data when taken alone may show. But this latter possibility can only be answered by consulting Mr. Berridge's analysis of the employment situation in the succeeding paper.

EMPLOYMENT AND BUYING POWER

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ABSTRACT

The problem of measuring unemployment volume—The direct method, its difficulties—The indirect method, its inaccuracies and inconsistencies.—Mann's study of occupational shifts—Brookmire's study of unemployment volume for 1928 and earlier.

Employment and incomes in 1928 compared with previous years—Their course within the year.—Factory and railroad employees—Confirmation through labor-turnover indexes.—Recent progress toward covering other employments currently.

In closing the discussion of employment last year for the *American Journal of Sociology*, the writer took occasion to point out the very serious error to which estimates of unemployment volume in the United States are necessarily liable. Even in cases where it is certain that no deliberate bias is present, unemployment estimates must perforce be made up from data which are not accurate even within wide limits of error. Obviously no analysis, however conscientious, can impart to an estimate dependability which does not exist in the raw data utilized. Only a few of the basic data prerequisite to formulating any satisfactory approximation were available. This year the problem has advanced a little toward solution—but only a little.

The year 1928 was noteworthy in producing an unusually large number of unemployment-volume estimates. Some who have attacked the problem have taken the trouble to marshal certain new basic data; but in the main they have merely re-worked old ground by slightly different methods. There is as much confusion of counsels this year as last, and perhaps more. Hence, much the same cautious attitude should be maintained as heretofore. It is only fair to add that those deriving the new estimates are not so naïve as to deny the extreme frailty of much in their data and in their procedures as well.

Only two main types of procedure are possible: (1) the direct, involving a complete census or a set of suitably planned sample counts; and (2) the indirect, involving a subtraction of the number employed from the number available for and seeking employment.

DIRECT EVIDENCE

Neither on the total volume of unemployment in the United States, nor on its distribution among industries, nor on its geographical distribution, nor on its duration, is there any direct evidence worthy of serious consideration. Such unemployment data as are available for organized trades are not representative of the gainfully occupied population as a whole—at least, not representative as to the actual incidence of unemployment. And such intensive local surveys as have been made in scattered places form too thin a sample to yield valid indications of national conditions; moreover, they differ too widely in scope, definition, and other technical respects, to be either merged, compared, or used as a basis for national or other broad estimates.

UNEMPLOYMENT CENSUS; THE 1930 CENSUS OF OCCUPATIONS

To define true "unemployment" in a manner both sound from an economic point of view and workable from a statistical point of view in questionnaire or field canvass is difficult. Are the following genuinely unemployed: the temporarily sick or disabled; the permanent invalid or cripple; those dependent upon public aid; those accustomed to a certain wage in a certain occupation who can secure work at another wage or another occupation but decline to take it; those who leave a job voluntarily, in order to "shop around" for a better? Other questions of conception and of definition of terms will readily suggest themselves to the reader.

But even after the problem has been suitably defined, a special national survey by the direct method would be prohibitively slow and expensive. To be sure, the regular decennial Census of Occupations for 1930 might with much less expense include a question or two which, if properly handled, could throw at least some light upon the problem. A movement to do just this has been on foot during 1928-29. The usual census practice is simply to indicate on

the field cards in what industry and in what occupation (if any) a person is usually gainfully occupied—but without distinguishing whether he is or is not employed in that (or in any other) line at the census date. The recent proposal was simply to split the column in order to make possible the essential distinction between employment and non-employment at the usual occupation. It was also proposed to go perhaps one step farther, and designate which of those employed were at work on their jobs at the census date—thus helping to determine the extent of “unemployment within employment.” These are fairly simple, tabulatable facts, even though the resulting data would not indicate *simon-pure* unemployment in the economic sense. These proposals have had responsible backing, but their fate at the hands of the government is uncertain at this writing (March 15).

LOCAL SURVEYS

An interesting example of the localized unemployment survey is that made for Baltimore under the direction of Dr. J. Knox Insley, Maryland commissioner of labor and statistics, in February, 1928. The questionnaire and instructions to canvassers were carefully thought out, being largely the work of Ethelbert Stewart, United States commissioner of labor statistics. The field work was done by the Baltimore police force, and the statistical analysis by Miss A. Louise Murphy, statistician. This survey brought to light approximately 15,500 unemployed persons who usually are engaged in some gainful occupation, who could work and wanted to work but were unable to secure employment. Dr. Insley's office estimates that this number constitutes about 4 per cent of the employable population of Baltimore. It is curious to note, in passing, that the figure 15,500 is less than one-half that estimated by a commercial organization, and about one-fifth of that arrived at by a labor organization, both in Baltimore. The results of this survey have been published by the Maryland Commissioner, and a second one was made a year later (February, 1929). It is much to be hoped that the project will be repeated annually over a period of years, like the excellent series for Columbus, Ohio, made by Pro-

fessors Frederick E. Croxton and Mary L. Mark for each of the years 1921-25 inclusive.¹

Conditions during 1928 were not such as to bring forth any group of surveys, comparable in character, for a number of cities, as was done during 1914-15 by the United States Bureau of Labor Statistics and the Metropolitan Life Insurance Company. The scattered and diverse character of those which were made render impossible any formulation of the general severity of the unemployment problem in 1928.

INDIRECT EVIDENCE FROM EMPLOYMENT DATA

Owing to the theoretical as well as the practical difficulties encountered in attempting to measure unemployment volume by the direct method, students of the problem are largely thrown back upon the indirect method—that based upon changes in employment. There too the results are by no means conclusive. This method, with all its drawbacks, has two advantages: (1) that the fact of a person's being employed (i.e., on a pay-roll) is inherently easier to ascertain than the fact of his being truly unemployed in an economic sense; (2) that collecting data from employers by mail is far easier than canvassing individual workers. Several investigators have sought to use such employment data as are available, and by estimating the supply of employable labor to determine by subtraction the number employed.

In addition to the two studies outlined below, others resembling them were made by Professor Sumner P. Slichter² and Meredith B. Givens.³ Mr. Lawrence B. Mann, Division of Statistical Research, United States Department of Commerce, has been able to assemble a considerable mass of new evidence on employment changes in

¹ For a comparative summary of the five Columbus surveys see Dr. F. E. Croxton, *U S Bureau of Labor Statistics, Bull 409* (June, 1926). See also "An Experiment in the Measurement of Unemployment," American Statistical Association, *Papers and Proceedings*, March, 1929, pp. 58-64

² "Market Shifts, Price Movements and Employment," *American Economic Review*, Suppl., XIX (March, 1929), 5-22.

³ Preliminary observations on Givens' methods and findings appear in the American Statistical Association, *Papers and Proceedings*, March, 1929, pp. 33-41. The full statistical statement is to be contained in the Hoover study of *Recent Economic Changes*. Givens made use of some recent work by Dr. Willford I. King.

numerous occupations between 1920 and 1927. His study⁴ was presented at the December, 1928, meeting of the American Statistical Association.⁵ His conclusion was that there had been an increase of over 2,800,000 workers engaged in transportation, distribution, professional service, and personal service, as compared with a decrease of about 2,000,000 in agriculture, mining, manufacture, and United States government service. He also thought it probable that there had been large gains in a number of other employments for which he was unable, even with the resources of the Department of Commerce at his disposal, to secure estimates which were satisfactory to him. Construction, general retail distribution, and real estate selling are among these.

In a letter to the writer, Mr. Mann went by request a step farther, and by deducting his estimated net shift in employment from estimated changes in the total number of persons gainfully occupied (allowing for school attendance, etc.) arrived at results which he tentatively offers in the following words:

In the period from 1920 to 1927, estimates of the Census Bureau indicate that the population of the United States increased by 12,200,000 persons or 10½ per cent. If this same percentage of increase is applied to the total number of persons gainfully employed in 1920, it appears there should have been an increase of 4,400,000 in the working population of the United States. There has, however, been a very decided increase in the amount of higher education in recent years, which has tended to curtail the expansion in the number of persons gainfully employed. From 1920 to 1926, the number of secondary-school students increased by 1,637,000 and the number of students in colleges and normal schools increased 440,000. Assuming that all of the increase in college and normal-school attendance and one-half of the increase in secondary-school attendance resulted in a reduction of the available labor supply, and projecting this development to the end of the year 1927, it appears that the increase in higher education absorbed about 1,500,000 persons who might otherwise have been gainfully employed. This leaves a net increase in the number of available workers amounting to 2,900,000.

The studies which I have made of shifts in occupations indicate that there were increases estimated at 2,846,000 in the number of workers engaged in transportation and communication, distribution, professional service, and

⁴An earlier version thereof appeared in the *American Federationist*, XXXV (June, 1928), 667-69

⁵The full paper appears in the *Papers and Proceedings*, published by the Association in March, 1929, pp 42-47. Papers on related subjects by Isador Lubin and Ralph J. Watkins also appear there (pp. 27-32 and 48-57).

domestic and personal service between 1920 and 1927, while there was a total estimated decrease of 1,931,000 in the number of workers engaged in agriculture, mining, manufacturing, and United States government service. Consequently, there was a net increase of 915,000 in the number of workers engaged

TABLE I
ESTIMATES OF OCCUPATIONAL SHIFTS, 1920-27
(Mann's estimates, in thousands of persons)

	1920	1927	Increase	Decrease
Agricultural . .	10,953	10,030		923
Minerals (excluding petroleum)	975	910		65
Manufacturing and auto repair-shops	10,752	9,960		792
Transportation and communication	2,916	3,820	902	
Railroads (excl repair-shops)	1,612	1,325		
Pullman Company	23	27		
Highway transportation	940	2,025		
Telephones	281	359		
Telegraphs and cables	62	84		
Distribution . .	718	1,409	691	
Automotive products	256	543		
Radio	25	150		
Mail-order houses	24	32		
Pharmacists	80	100		
Opticians	13	18		
Insurance agents	120	216		
Motion pictures	200	350		
U S government service	1,025	804		221
Civil service	691	559		
Military and naval service	334	245		
Professional service	2,066	2,530	464	
Teachers and professors	815	1,004		
Clergymen	199	216		
Lawyers and judges	123	145		
Physicians and surgeons	145	150		
Nurses	301	352		
Hospital attendants	400	542		
Dentists	56	67		
Dental assistants	7	24		
Chiropractors, osteopaths, and chiropodists	20	30		
Domestic and personal service	1,864	2,625	761	
Hotel, restaurants, etc	1,500	2,025		
Barbers, hairdressers, and manicurists	216	385		
Power laundries	130	182		
Dyers and cleaners	18	33		
Net increase all occupations shown			817	

in the occupations studied. If this figure is deducted from the increase of 2,900,000 in the available labor supply, it appears that there were about 2,000,000 workers in 1927 who were either engaged in occupations which were not included in my study or were unemployed. It is probable that many of these workers were absorbed by various types of retail distribution, building trades, and real estate selling.

TABLE II
UNEMPLOYMENT SHOWN AS THE DIFFERENCE BETWEEN FULL AND
ACTUAL EMPLOYMENT
(Brookmire estimates)

	U S Pop (ooo)	FULL EMPLOYMENT		ACTUAL NO EMPLOYED (ooo)	UNEMPLOYED (ooo)
		Per Cent	No (ooo)		
1910*	92,267	41 5	38,167	38,167	
1911 . . .	93,628	41 5	38,856	38,360	496
1912*	95,097	41 5	39,445	39,445	
1913 . . .	96,512	41 6	40,149	39,882	267
1914 . . .	97,928	41 7	40,875	38,848	2,027
1915	99,343	41 9	41,585	40,106	1,479
1916 . . .	100,758	42 0	42,318	42,206	112
1917*	102,173	42 1	43,016	43,016	
1918 . . .	103,588	41 5	42,980	42,931	58
1919 . . .	105,003	40 8	42,841	42,766	75
1920*	106,422	40 2	42,809	42,809	
1921 . . .	108,445	39 8	43,161	39,508	3,653
1922 . . .	109,893	39.3	43,180	40,622	2,567
1923*	111,693	38 8	43,284	43,284	
1924 . . .	113,727	38 0	43,216	41,826	1,390
1925 . . .	115,378	37 1	42,805	42,418	387
1926*	117,136	36 2	42,433	42,433	
1927 . . .	118,628	36 2	42,943	41,477	1,466
1928 (March)	120,013	36 2	43,445	40,813	2,632

It is of interest to summarize Mann's estimates for the various lines separately, as shown in Table I.

By a different though related method, the Brookmire Economic Service has attempted⁶ to estimate the volume of unemployment not only as of March, 1928, but for each year back to 1910. The following discussion summarizes the methods utilized, and Table II summarizes the results attained, by that organization.

Years starred were assumed to be years of "full employment," owing to the high level of business as shown by the Brookmire

⁶ *Special Report A-127*, dated April 30, 1928.

Business Index. The percentage of total population employed was computed for these years, of full employment, and percentages for intervening years interpolated on a straight line and used for computing full employment for said years.

"Actual employment" for each year was computed by the Brookmire staff from official data taken from following sources: Census, Department of Agriculture, Department of Labor, Interstate Commerce Commission, Bureau of Mines, and the Federal Reserve Board; also National Industrial Conference Board, Russell Sage Foundation, *New York Times Annalist*, and Paul Douglas.

Unemployment as shown is the difference between probable maximum employment and actual employment. It does not allow for numbers idle even during years of exceptionally high business activity.

In arriving at actual employment, shown above, detailed figures were compiled for each year. For example, in 1927 there were 8,077,000 engaged in manufacturing; 1,780,000 in railroad transportation; 10,900,000 in agriculture; 715,000 in coal-mining; 2,505,000 in known professional and miscellaneous pursuits; and 17,500,000 engaged at work for which complete data are available only in census years. Allowance was made for a marked increase in the last group owing to the growth of new industries during recent years. In 1920, a census year, the number of workers in this group was 16,000,000.

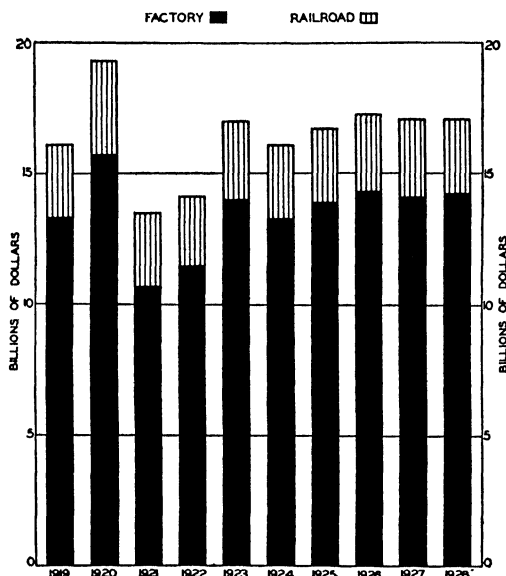
There could hardly be any more convincing commentary on the essential hazards of estimating unemployment volume by this indirect method from data thus far existing, than are the discrepancies between the various constituent estimates by such competent investigators as Mr. Mann and the Brookmire Economic Service.

YEARLY INCOME OF FACTORY AND RAILROAD EMPLOYEES

A striking commentary upon the comparative stability of American industry and trade in 1928 and other recent years is afforded by the figures on wages and salaries paid to employees on the railroads and in the factories of the country. Chart I has been prepared from official census figures for factory employees in the

alternate census years, supplemented by estimates based upon other evidence which we think dependable for intercensal years; for railroad employees we have used the totals prepared by the Interstate Commerce Commission for Class I roads. Therefore, there is little likelihood of serious error in any of the items shown on the

CHART I
YEARLY INCOMES OF EMPLOYEES



chart, either for factory-workers' incomes (dark bars) or for railroad-workers' incomes (light bars).⁷ Last year the salaries and wages paid to these two groups aggregated more than \$17,000,000,000. Still more impressive than the bulk size of this 1928 figure is the additional fact disclosed by the chart, namely, that the income totals for each of the past four years have averaged close to the same large figure of \$17,000,000,000. Even in 1924, when general business conditions were slightly curtailed though without be-

⁷ As railroad repair-shop employees are represented in both subtotals, they duplicate each other by about \$600,000,000 (in 1927)

ing genuinely depressed, the total was still in excess of \$16,000,000,000.

How agreeable is this sharp contrast between the economic stability which has, in the main, characterized these workers' incomes during the past six years and the riotous instability of the preceding three! The steadying-up of the volume of wage and salary payments is partly a cause, and partly a result, of steadier activity in industry and trade. For if industry had not been steady during this period, the earnings of employees would naturally have suffered more serious curtailment, which in turn would have diminished the volume of goods purchased by them and thereby the volume of industrial activity necessary to produce those goods.

The fourteen-billion-dollar buying power of factory employees, and the three billion dollars earned by railroad employees, have in short been important contributors to, as well as important beneficiaries of, economic stability.

MONTHLY EMPLOYMENT AND INCOMES IN 1928

A new and highly commendable venture was launched during the latter part of 1928 by the United States Bureau of Labor Statistics, for collecting monthly employment and pay-roll data for several lines of economic activity not previously covered by that organization.⁸ The lines thus added comprise retail trade, wholesale trade, metal-mining, coal-mining, public utilities, and hotels. The Bureau contemplates adding other lines presently. Building construction is one important activity for which such data are badly needed. Several state bureaus have found it possible to collect dependable employment figures from building contractors; it is much to be hoped that the federal Bureau will do likewise.

The several series above mentioned cover only the last two to five months of 1928—the period differing for the different lines of activity; moreover, the reporting samples are still rapidly growing. For these reasons it is impossible to offer at this time any authentic observations on the movements of employment and earnings in lines other than manufacture and steam-railroad transportation,

⁸ For years certain state bureaus, notably Wisconsin and Illinois, have collected such data, covering within their jurisdictions numerous lines of activity, much like those recently taken up on a national scale by the United States Bureau.

for which long and well-tested evidence is available, and in monthly form.

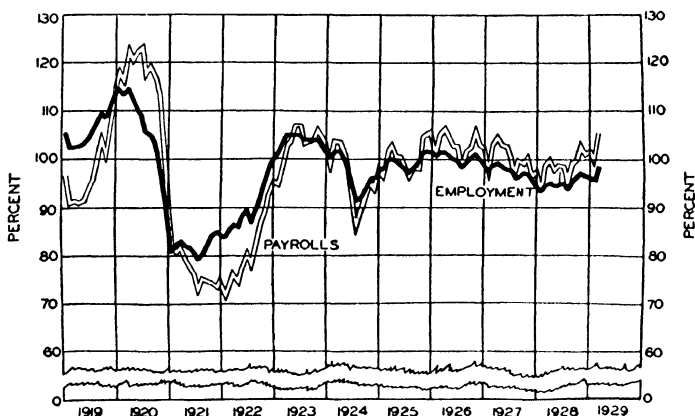
For railroad employees, employment and pay-rolls both averaged lower in 1928 than in 1927 (see Table III), and fail to show the marked upward movement during 1928 easily discernible in the two corresponding indexes for factory-workers given below.

TABLE III
RECENT COURSE OF RAILROAD EMPLOYMENT,
EXCLUDING SWITCHING AND TERMINAL
COMPANIES
(After Interstate Commerce Commission)

	Employees (Thousands)	Total Pay-Rolls (Millions)
1920	2,023	\$3,682
1921	1,600	2,765
1922	1,627	2,641
1923	1,858	3,004
1924	1,751	2,826
1925	1,744	2,861
1926	1,779	2,946
1927	1,735	2,910
1928	1,656	2,816
1927		
January	1,701	241
February	1,697	225
March	1,707	246
April	1,735	240
May	1,770	246
June	1,798	248
July	1,799	246
August	1,772	254
September	1,764	245
October	1,760	252
November	1,706	236
December	1,638	232
1928		
January	1,591	227
February	1,585	218
March	1,603	234
April	1,635	226
May	1,686	239
June	1,711	237
July	1,705	238
August	1,706	247
September	1,698	236
October	1,700	252
November	1,656	235
December	1,598	227
1929:		
January	1,595	

For factory employees, the year 1928 was one of fairly steady improvement in economic status. The first month of the year was its worst. In that month both the employment and the incomes of this group reached identical low points, each equal to about 93 per cent of the 1923-25 average (see Chart II). From January on, the rise of both indexes has been persistent up to the present time, except of course for the usual seasonal slowing-down in midsummer

CHART II
FACTORY EMPLOYMENT AND PAY-ROLLS
Base: 1923-1925 average = 100 percent



and midwinter. That seasonal movement may be readily detected by the reader in practically every one of the ten years shown on Chart II. For obvious reasons, the amount of pay-roll (hollow line) shows the seasonality more sharply than does the number employed (full line) on that chart.

The upswing which began in January, 1928, and is still in progress at this writing (March 15) has carried employment from 93 to 99, and pay-rolls from 93 to 106, per cent of their 1923-25 base. It will be noted that these revised indexes show lows of early 1928 which were appreciably above⁹ their respective lows of 1924, as

⁹ The chart shown in last year's write-up indicated employment in January, 1928, as a trifle lower than that of 1924. The reason is that the old index contained a slight but cumulative bias, which has now been largely eliminated through adjustment to a later Census of Manufactures than was then available. This adjust-

well as of 1921. While the latest point reached by employment is not quite up even to the 1923-25 average, pay-rolls have attained a

TABLE IV
RECENT COURSE OF FACTORY EMPLOYMENT
AND PAY ROLLS

(After Federal Reserve Board. Base 1923-25
average = 100 per cent)

	Index of Number Employed in Factories	Index of Amount of Factory Pay-Rolls
1919	106 6	98 2
1920	106 3	116 0
1921	98 8	75 4
1922	90 3	81 7
1923	103 8	103 2
1924	96 7	96 1
1925	99 5	100 7
1926	100 3	103 0
1927	97 0	99 9
1928	95 2	99 0
1927		
January	97 4	97 0
February	98 7	103 0
March	99 0	104 3
April	98 3	103 0
May	97 7	102 6
June	97 5	100 6
July	95 9	96 4
August	96 4	99 5
September	97 1	98 9
October	96 9	100 1
November	95 3	96 4
December	94 2	97 1
1928		
January	93 2	93 4
February	94 6	98 6
March	95 1	99 9
April	94 5	97 8
May	94 6	98 8
June	94 8	98 6
July	93 6	95 5
August	95 2	99 0
September	96 4	100 0
October	97 2	103 9
November	96 9	100 9
December	96 6	101 5
1929		
January	96 2	98 1
February	98 4	105 7

ment was made by Mr. Woodlief Thomas, who was associated with the writer in setting up these indexes originally for the Federal Reserve Board.

level but slightly lower than any peak in the preceding eight years. Further data on both variables are provided in Tables IV and V.

Confirmation of improvement in factory employment during 1928 is afforded by certain labor-turnover indexes recently constructed by the Metropolitan Life Insurance Company.¹⁰ Chart III shows two of these, the accession or hiring rate (full line) and the lay-off rate (dotted line). It will be seen that accessions were about doubled, and lay-offs about halved, during the course of the last

TABLE V
RECENT COURSE OF FACTORY EMPLOYMENT IN INDUSTRIAL GROUPS
(After Federal Reserve Board Base 1919 average = 100 per cent)

	1928												1929
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan
Metals and products	80.9	81.0	84.3	84.6	85.3	85.5	84.7	86.0	87.2	88.2	89.2	89.4	90.1
Iron and steel	80.7	82.7	84.0	84.2	81.0	85.0	84.6	80.0	87.2	88.2	89.1	89.4	90.3
Textiles and products	92.9	93.8	92.9	90.0	87.8	87.4	84.5	85.3	86.8	89.4	90.2	90.6	90.0
Fabrics	95.1	95.1	93.6	91.0	88.9	88.6	86.2	86.3	87.0	90.8	92.0	93.8	91.2
Textile products	89.0	92.3	92.0	88.7	86.3	85.9	82.2	84.1	86.6	87.6	86.8	86.4	85.9
Lumber and products	81.9	85.0	86.0	87.0	87.0	87.7	86.7	80.1	89.6	89.5	89.7	87.1	85.1
Railroad vehicles	70.5	70.4	71.3	72.0	72.5	72.7	71.7	71.6	71.2	70.6	70.5	70.1	69.6
Automobiles	114.0	121.8	130.2	133.6	141.2	141.1	141.0	119.9	151.2	152.1	138.4	136.6	150.4
Paper and printing	108.6	108.1	107.0	105.9	106.3	106.1	106.1	106.3	106.7	108.1	109.5	109.5	108.3
Foods and products	83.8	84.8	84.4	82.8	83.0	81.2	81.4	81.0	86.8	88.7	88.3	88.5	85.8
Leather and products	83.2	81.6	81.1	79.8	77.7	77.6	81.2	82.9	83.1	81.8	77.1	76.6	79.4
Stone, clay, and glass	101.6	101.9	105.7	100.1	113.8	114.9	112.8	115.7	114.6	112.1	109.3	106.2	99.3
Tobacco products	73.8	77.1	77.9	76.0	76.8	77.5	73.4	79.0	80.0	82.0	82.4	79.8	70.2
Chemicals and products	75.1	77.2	76.9	76.7	74.5	75.1	73.9	73.9	77.0	78.4	79.1	79.0	79.0
All groups	87.9	89.4	89.9	89.3	89.5	89.6	88.5	90.0	91.2	92.0	91.6	91.3	91.0

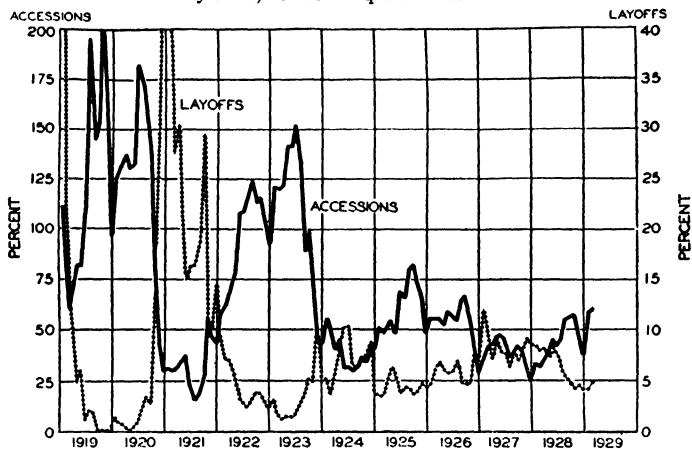
twelve or fourteen months shown on the chart. Contrast the much heavier lay-offs, and lighter accessions, prevailing during the greater part of 1927.

The fact that both the lay-offs and the accessions curves have been running at much lower levels during the past five years than in the preceding five is chiefly due to the much stabler economic conditions prevailing in the later period—a point already referred to earlier in this article. The plain fact is that the administration of business enterprise as it enters a busier or a quieter phase of the economic cycle has been of a much more sane, orderly, and conservative sort during these past few years, as contrasted with the

¹⁰ The data are collected by the Company's Policyholders' Service Bureau, in co-operation with certain outside agencies, from manufacturers numbering at present about 350

orgy of overdevelopment during 1919-20 and the drastic liquidation and depression of 1920-21. It is only natural that this greater

CHART III
ACCESSION AND LAYOFF RATES IN FACTORIES
Monthly Data, Scaled in Equivalent Annual Rates



sanity and stability should reflect themselves in a generally more conservative rate of hiring and laying-off of factory labor since 1921.

LABOR LEGISLATION

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ABSTRACT

Labor legislation in 1928 was enacted by Congress and by regular legislative sessions in nine states and insular possessions. Most important were new laws in the field of social insurance, including particularly workmen's accident compensation and rehabilitation of industrial cripples, old-age pension and retirement systems. Legislation to strengthen state regulation of fee-charging employment agencies was made necessary by a Supreme Court case abolishing the regulation of fees charged applicants for jobs. Other legislative topics of importance were child labor, safety and health, wage payments and mechanics' liens.

In discussing the new labor legislation enacted during 1928, one turns first to the field where the most material advancements were made; namely, social insurance. Workmen's compensation, vocational rehabilitation, and old-age pensions each shared in the general growth and expansion. Insurance is essentially a guaranty to the insured person of material aid in time of loss or incapacity.

WORKMEN'S COMPENSATION

During 1928 several important laws were enacted relating to workmen's compensation. It will be remembered that this type of social insurance was the first form to be extensively introduced in America, developing suddenly out of the far less effective system of employers' liability whereby the injured employee attempted to recover his losses by suing his employer. It is readily evident that such a procedure was advantageous neither for the workman nor for his employer. True, the employer could have at his disposal the ablest lawyers, especially equipped to defeat the claims, but this process was expensive for him, and doubly so for the workman, who was also obliged to engage legal aid. The suit was apt to be slow and the small recompense which the defendant might receive was certain to be inadequate. Dissatisfaction with employers' liability was, therefore, keen and eventually resulted in the adoption of workmen's compensation.

Although in sections of Europe this form of social insurance was early put into practice, it was as late as 1911 that the first permanent American state compensation act went into effect in New Jersey. During the following ten years the system spread rapidly throughout the United States. It aims to reinstate the injured man in his work as quickly as possible, and meanwhile to provide for his family during the time he is incapacitated. The question of workmen's compensation has many sides and complexities which cannot be discussed here, but suffice it to say that progress has been fairly consistent since 1911, and more workers constantly are being protected, waiting periods are being reduced, and the allowance for medical attention is on the increase.

The year 1928 has ushered in several important compensation changes, notably in connection with the District of Columbia, Porto Rico, and liberalizing amendments in New Jersey and New York. In 1927, Congress passed the Longshoremen's and Harbor Workers' Compensation Act, thereby bringing under compensation protection a third of a million men engaged in hazardous harbor work. In 1928, Congress put through an extension of this law in regard to the District of Columbia, providing that compensation should apply to all private employees in the District of Columbia, excluding seamen, railway employees in interstate commerce, and employees in agriculture, domestic service, and casual employment. Important provisions include a seven-day waiting period, all necessary medical care, the compensation of all occupational diseases, a two-thirds wage scale, a \$25 weekly maximum with a limit of \$7,500 on the total amount.

Among the important supplementary compensation acts passed during 1928, that of Porto Rico is particularly striking. The law was repealed and re-enacted. The usual provisions were made, for the act is compulsory and applies to all employees except domestic servants and casual workers. Employees of the government and municipalities, except clerks, are covered. All necessary medical care and a seven-day waiting period are provided. The act is administered by an industrial commission of three members created in the Department of Agriculture and Labor.

The Workmen's Compensation Act of New York was also supplemented in several respects, notably as regards the extension of

compulsory coverage to all employments in which four or more workmen are engaged. Meanwhile, in New Jersey the weekly maximum compensation was raised from \$17 to \$20 and the minimum from \$8 to \$10. Similarly in Louisiana, Massachusetts, Rhode Island, and Virginia, supplementary acts to existing compensation laws were passed, indicative of the liberal trend in workmen's accident compensation in the United States. At present, when this article is written, only five states (North and South Carolina, Arkansas, Florida, and Mississippi) remain without this important form of social insurance.

VOCATIONAL REHABILITATION

Closely connected with workmen's compensation is vocational rehabilitation, which aims to reinstate the crippled worker in either his original or some other form of employment. Very often extensive medical and educational assistance must be afforded the injured man before he is equipped once more to enter industry as a self-supporting worker. Obviously this may be an expensive process, but in the long run, so far as society is concerned, the expenditure is justified, for it is far cheaper for a community to aid an incapacitated member temporarily than to support him and his dependents permanently as public charges. Vocational rehabilitation legislation developed late, and was introduced here in 1918 by Massachusetts. In 1920 the federal-state plan was adopted by Congress. Eight years later forty states had adopted measures relative to rehabilitation, and though 1928 saw no startling developments, still there were several laws of some interest passed. In New Jersey, a particularly important act was concerned with the redefining of a "physically handicapped" person as someone incapacitated for education as well as for remunerative occupation. This includes all persons, instead of, as formerly, only those over sixteen years of age. Louisiana and Mississippi introduced state boards for the blind, designed to act as bureaus of information and industrial aid for the sightless.

OLD-AGE PENSIONS

One of the most important, though at the same time neglected, forms of social insurance in the United States is our old-age pension system. At the present writing there are only six states (Montana,

Nevada, Colorado, Kentucky, Wisconsin, and Maryland), in addition to Alaska, which grant old-age pensions to private employees. When the reader considers that the United States along with China and India are the only three heavily populated countries without this form of social insurance, he will realize the significance of such neglect. The alternatives to the pension system are basically inadequate, especially institutional care for the aged or reliance on family aid. The latter is only too frequently non-existent, and charity, in the shape of institutional care, is often degrading and disagreeable.

Legislation in the pension field during 1928 took place in Massachusetts, where a public bequest commission was organized, and was included in the commissions serving under the governor and council. A public bequest fund consisting of bequests and gifts to the fund was established and put under the commission's control. When the fund's principal amounts to \$500,000, the commission, with the governor's and council's approval, may distribute the fund's income to needy and worthy women citizens sixty years of age and over, and to men citizens sixty-five and over. In 1926, New York State had passed a bill authorizing a joint legislative committee to investigate the condition of the aged poor with the ultimate purpose of devising a state policy and recommending legislation for carrying it into effect. The appropriation for the committee was but \$5,000, which was repeated in 1927. In 1928 a new law was put into effect allowing the joint legislative committee to continue its study of the aged poor until March 1, 1929, with a doubled appropriation. Similarly in Rhode Island the state commissioner of finance was directed to investigate the general subject of old-age pensions and the various state old-age pension systems with a view to their practical adaptability in Rhode Island.

Meanwhile, pension systems for public employees were extended. In Kentucky a state teachers' retirement system was established, to be administered by the state board of education. Funds are to include moneys provided by the state, $2\frac{1}{2}$ per cent of the members' salaries and an equal contribution by their employers. Minor laws relating to teachers' pensions were enacted in Mississippi, New Jersey, and Vermont.

EMPLOYMENT

In 1928 employment legislation was chiefly concerned with the question of private employment offices. As a result of the now famous Ribnik case of New Jersey, May 28, 1928, that state passed a bill vitally important to the interests of private employment agencies. Briefly, the Ribnik case arose over the refusal of Commissioner McBride of the New Jersey Department of Labor to grant a license for a private employment office on the ground that the fees proposed to be charged were excessive. The United States Supreme Court declared this procedure unconstitutional, stating that such action conferred "upon the commissioner of labor the power to fix the prices which the employment agent shall charge for his services." Thereupon New Jersey made the following important amendments to the law regulating private employment agencies, declaring that the furnishing of food, supplies, tools, or shelter to laborers in connection with the promise or offer to provide employment or help violates this act. Furthermore, all violations of the established provisions regarding licenses and advertisements are to be punished by fine or imprisonment. If after due investigation it appears that without an additional agency the existing public and private offices are adequate to supply industry's needs, licenses may be withheld. Applicants for licenses to carry on an agency, in addition to existing requirements including proof of good moral character, must furnish proof of citizenship of the United States. A schedule of fees must be posted in the office of every agency. Louisiana's 1928 law relative to private employment agencies resembles that of New Jersey in the punishments exacted for violations of the provisions. The commissioner of labor is authorized to supervise the work of labor agents and employment bureaus, and levy on them annually a \$500 tax.

On the subject of employment, it is interesting to note the measure adopted by Porto Rico, in 1928, authorizing the commissioner of agriculture and labor to investigate and report to the 1929 legislature the means of adapting to Porto Rico the Florida and North Carolina system of developing tobacco in order to combat unemployment. Of importance, too, was the 1928 Act of the United States directing the secretary of labor to investigate, compute, and

report to the Senate the extent of unemployment, and also the method whereby frequent periodic reports and permanent statistics of unemployment may be made.

SAFETY AND HEALTH

Work done in sanitary, well-equipped factories is apt to be superior both in quantity and in quality to that turned out of dirty, unsafe, and poorly ventilated workrooms. Safety measures for factories and workshops were passed in several states in 1928, such as that of Kentucky regulating polishing and grinding machinery with the aim of protecting the worker. Of more interest were the safety regulations enacted during the past year in reference to mining. The Kentucky law was repealed and re-enacted, now providing that only competent engineers may be in charge of engines used for lowering employees into or hoisting them out of coal mines. In addition, each person riding on a cage or a car must have three square feet of floor space, and all persons are forbidden to ride on a loaded cage or car. But of even greater importance was the act passed by Congress directing the Senate committee on interstate commerce to investigate conditions in the coal fields of Pennsylvania, West Virginia, and Ohio, especially in regard to injunctions issued, eviction of miners and families from their homes, and abrogation of wage contracts.

CHILD LABOR

In reference to child labor, John Dewey, as an educator, has summed up the question tersely and inclusively, when he says: "What the best and wisest of parents wants for his own child that must the community want for all its children." Of particular interest in the child-labor field is the 1928 legislation for the District of Columbia, the main provisions of which apply to the exclusion of children under fourteen from gainful occupation and regulate the hours and working conditions of minors. For example, girls under eighteen are forbidden to work in any retail cigar store, hotel, or apartment house, or as usher, attendant, or ticket seller in any place of amusement. Similarly Rhode Island prohibits boys under twelve and girls under sixteen from engaging in street trades in cities of

over forty thousand inhabitants. In New York State important changes in the Child Labor Law were enacted during 1928; providing that children under fourteen be forbidden to work in any trade, business, or occupation carried on for pecuniary gain. Here also the hours and the types of employment for minors were regulated.

WAGE PAYMENTS AND MECHANICS' LIENS

The 1928 legislation in the field of wage payment saw no startling innovations. Louisiana, Massachusetts, New York, New Jersey, and Virginia each enacted laws slightly changing existing regulations regarding payments and penalties. Among the earliest forms of American labor legislation appear the so-called "mechanics' lien" laws, the first having been passed in New York in 1830. The aim of these laws is to protect the worker by allowing him to sue for his wages against the value of the building or land on which he is employed. In many states these laws extend to numerous types of employment. In Louisiana the 1928 law extends the mechanics' lien to well-workers and those employed on building, street, railroad, and ditch labor. New Jersey provides for the appointment of a joint commission to revise the present mechanics' lien law, while Mississippi, New York, South Carolina, and Virginia adopted amendments to existing laws.

ADMINISTRATION AND MISCELLANEOUS

The Kentucky child-welfare commission was abolished and in its place the Kentucky Children's Bureau was created, the duties of which include the supervision and control of the administration of mothers' aid, the investigation of the needs of Kentucky children, and assistance in the establishment of county children's bureaus. New York amended its penal law to include among misdemeanors a violation or non-compliance with any rule, regulation, or order of the department of labor. In addition, the joint legislative committee appointed in 1926 to investigate industrial conditions and the administration of labor laws was continued to March 1, 1929, with an additional appropriation of \$30,000. Congress added \$100,000 for the fiscal year 1929 to the budget of the federal Bureau of Labor Statistics.

Certain minor and miscellaneous measures have been omitted from this survey in the belief that their detailed and specific nature offers insufficient general interest. The comparative leanness of last year's labor legislation was largely due to the fact that in addition to Congress only nine states and two insular possessions held regular legislative sessions.

SOCIAL LEGISLATION

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ABSTRACT

The output of 1928 was meager, notwithstanding only nine state legislatures and Congress held sessions. Social legislation in its comprehensive aspects includes subjects like labor legislation, which is treated in a separate article (*q v*), public health, also covered in a general article on "Public Health and Medicine" (*q v*), and many important administrative measures, which are treated in a special article on "Government" (*q v*). The topics briefly summarized with respect to significant legislative changes in 1928 are: public poor relief, including poor laws, public charities, dependent and defective children, child welfare, mothers' pensions, old age pensions, housing, city planning, and zoning; public health, public education, and recreation; humane legislation, including prevention of cruelty to animals, prevention of cruelty to children, juvenile delinquency, courts, and probation, treatment of prisoners, and prison labor

Although the year 1928 was an off year for legislation, only nine states and Congress holding legislative sessions, the output of social legislation seems to have been unusually meager. There also were few outstanding decisions of courts of last resort, dealing with legislative acts in this field.

In any review of American legislation it is well to remember that decisions of courts of last resort, which determine constitutionality and practically define the scope and application of statutes, constitute often the more important part of the legislative process, especially in dealing with social problems through the legislative method.

PUBLIC POOR RELIEF

The most important legislative proposal dealing with the poor laws in 1928 was the Fearon-Shonk bill in New York, which is an omnibus codification and restatement of the law based on legislative investigations and reports of recent commissions. It would replace the existing Poor Law and 140 amendments, exemptions, exceptions, and special applications which have made such a patchwork of the laws that chaos paralyzed the work of distributing relief to the poor in their homes. It would establish a new public

welfare law for the state. This bill passed the Senate and had the support of the State Board of Charities, the Association of County Superintendents of the Poor, and important private and semi-public associations like the State Charities Aid Association, which has been the active agency in promotion of this great reform. So few states have a poor law in the form of a comprehensive statute regulatng public relief to the poor and its administration that a general codification and simplification of existing state laws, based so largely on the early English poor law, is essential. The New York proposal has been reintroduced in the legislature of 1929 and became law with the approval of Governor Roosevelt, April 12, 1929. It will doubtless become more or less a model for enactment elsewhere.

Massachusetts (c. 155) eliminated the word "pauper" and substituted "person who has no legal settlement," and provided that "overseers of the poor" should be changed to "a Board of Public Welfare."

Several statutes deal with minor matters of administration of public charities, such as tax exemption of children's homes (Va., c. 45, par. 435); tax exemption of charitable and charity organization societies (Ill., 2d Ex., p. 91); how charters can be amended (La., pp. 216-17, No. 156); tax exemption (Miss., pp. 245-46., c. 185); (P.R., pp. 120-22, No. 4); powers of municipal charities (P.R., pp. 336, No. 53, par. 7); trustees for gifts to charities (Va., pp. 25-26, c. 30), and tax exemption (Va., pp. 238-39, c. 45, superseding laws, 1924, c. 289).

Old-age pensions are attracting increasing attention everywhere. In 1928 New York continued a joint legislative committee, appointed under an act in 1926, to investigate the condition of the aged poor with the ultimate purpose of devising a state policy and recommending legislation. Five thousand dollars was appropriated for this committee in 1926 and the same amount again in 1927 and double that amount in 1928. The committee was directed to report not later than March 1, 1929.

In Rhode Island the State Commissioner of Finance was directed to investigate the general subject of old-age pensions and the various state systems, reporting on their practical adaptability

in Rhode Island (see the preceding article, "Labor Legislation"). Many laws relating to teachers' pensions and to pension systems for public employees were enacted, notably in Kentucky, Mississippi, New Jersey, and Vermont.

CHILD WELFARE

Child-labor legislation or some modification of existing legislation relating to child labor and compulsory school attendance was enacted by Congress for the District of Columbia in the new child-labor law, which is a great advance over the former law, especially in its enforcement and administrative provisions and its regulation of street trading and dangerous or injurious occupations. It removed the poverty exemption for children twelve years of age or over and established a minimum age of fourteen in all gainful occupations except housework or agricultural work outside of school hours for the child's parent or guardian. It excepted children twelve years of age and over who may sell newspapers, and children ten years of age and over who may distribute newspapers on regular routes. It fixed an eight-hour day, a forty-eight-hour week and a six-day week for children between fourteen and eighteen, and prohibited night work between 7:00 P.M. and 7:00 A.M. for boys under sixteen and for girls under eighteen, and between 10:00 P.M. and 6:00 A.M. for boys between sixteen and eighteen. It specified dangerous and injurious occupations prohibited for minors under sixteen and under eighteen, and prohibited the employment of any minor at employment dangerous or prejudicial to his life, health, safety, or welfare, and provided for two inspectors appointed by the Board of Education to enforce the law.

Several states, in fact nearly all in legislative session in 1928, amended and improved their existing child-labor legislation, though Massachusetts defeated a bill to raise the standards.

Kentucky and Mississippi enacted laws which authorized public aid to mothers with dependent children, empowering the counties to provide funds. A Kentucky statute (c. 17, L. 1928, amending c. 107, L. 1922) abolished the child-welfare commission previously created, and established in its place a non-partisan state children's bureau of nine members, not less than four of whom shall be women, and with an appropriation of \$5,000 a year for the ensu-

ing biennium. The Mississippi act authorizes the board of supervisors in each county to set aside out of the poor fund, or the county general fund, a "children's aid fund" for the purpose of providing home care and maintenance for dependent and needy children. New Jersey increased the amount of aid authorized, making the maximum now \$16 a month for one child under sixteen, \$30 a month for two, and \$12 a month for each additional child. Louisiana weakened its mothers' aid law by making it optional instead of mandatory for parishes and municipalities to provide funds.

Official child welfare commissions have been active during the year in Georgia, Kentucky, and South Dakota, the latter having made a second survey of mothers' pensions in that state.

Minor changes in the law dealing with offenses against children were made in Kentucky and New Jersey, both of which increased the penalties for kidnapping, and in New York, which provided that the consent of the person kidnapped shall not be a defense unless such person is over sixteen years of age. Various provisions concerning non-support and illegitimacy, adoption and guardianship, but all of minor importance, characterize changes in the legislation of New Jersey, New York, and Kentucky. Physically handicapped children were dealt with in several statutes in New Jersey, which continued the crippled children's commission created in 1926, appropriating additional money and asking it to submit recommendations to the 1929 legislature.

HOUSING, CITY PLANNING, AND ZONING

An ambitious attempt to rewrite and revamp the New York Tenement House Law, which has for more than a quarter of a century been a model of restrictive housing legislation, failed of enactment though prepared after extensive study by a Legislative Commission. It attempted too much and antagonized too many elements in the opposition to housing reform. The multiple dwelling bill was a document of 168 pages which completely restated the existing Tenement House Law without regard to the parts that had been judicially interpreted and upheld and without being able to make a technical subject at best any better understood by the average legislator. The Commission has been continued and

has reported a less ambitious measure to the New York Legislature of 1929, which has become law.

There were some amendments to the New Jersey State Tenement House Law (c. 77 and c. 78) and also of the New York State Housing Law of 1926, but they were of a minor character with respect to administration of these laws.

In the matter of city planning and zoning some items are worth noticing, especially California's comprehensive and complete City Planning Act, which puts that state in the lead and follows very closely the Standard City Planning Enabling Act of the United States Department of Commerce.

The city planning and zoning movement has made remarkable progress in America during the last twenty years, and this is likely to be accelerated by the work of the Advisory Committee on City Planning and Zoning of the United States Department of Commerce. This Committee has recently completed a Standard City Planning Enabling Act similar to its Standard Zoning Enabling Act, which before it was issued in printed form already served as the basis for legislation in several states.

New Jersey has already enacted a new Zoning Enabling Act (c. 274, L. 1928), which became effective on April 3 and follows pretty closely the lines of the Department of Commerce Standard Zoning Enabling Act. It made some departures in its provisions for Boards of Appeals. The history of zoning in New Jersey has been extraordinarily interesting, and during the last seven years more than seventy-five municipalities in New Jersey have enacted zoning laws under the authority of a state Enabling Act similar to that recommended by the Department of Commerce and already adopted in other states. The New Jersey courts, however, held that the fundamental principles of zoning, with its consequent regulation of the use of property, did not come within the police power of the state. Under the leadership of the New Jersey State League of Municipalities and with the co-operation of many civic agencies, such as the New Jersey Association of Real Estate Boards, the New Jersey Federation of Women's Clubs, and the New Jersey State Chamber of Commerce, an amendment to the constitution was adopted by an overwhelming majority at the same election in

the fall of 1927 at which four other amendments were rejected. It has the distinction of being one of two amendments voted by the people of New Jersey in the last fifty-two years. The new Zoning Enabling Act is the first fruits of that victory and was made retroactive to validate all existing zoning ordinances adopted prior to the adoption of the new act. Already many decisions of the New Jersey Supreme Court, showing the influence of the United States Supreme Court decision (272 U.S. 365) in the *Euclid Village Case*, indicate that the new constitutional amendment and the new Enabling Act with its retroactive feature will probably be sustained by the Court of Errors and Appeals, which is the court of last resort if these decisions of the Supreme Court are appealed. Another United States Supreme Court case, *Nectow v. Cambridge* (277 U.S. 183), reversed the lower court and held invalid an arbitrary and unreasonable exercise of the zoning power; and still another case, *Buchanan v. Warley* (245 U.S. 260), decided in the negative an old controversy whether racial segregation can be accomplished by means of zoning.

Kentucky (c. 80, L. 1928) passed an act to provide for the creation and organization of a city planning and zoning commission for cities of the second class and surrounding territory which bears relation to the planning and zoning thereof. The same act empowers cities to approve and effectuate the commission's action in so far as it may concern property within the city limits, and authorizes county fiscal courts to do the same for property outside the city limits: it also empowers cities to provide for the appointment of boards of adjustment, defining their powers and prescribing their procedure, and it authorizes zoning. Another Kentucky act (c. 89, L. 1928) regulates filing of plats and maps for dedication of streets, ways, and easements in corporate limits of cities of the fourth class, and by chapter 90 authorizes cities of the fourth class to purchase or receive by donation, lands and property for public parks or playgrounds.

Louisiana (c. 98, L. 1928) authorizes municipal corporations having one hundred thousand or more population to adopt ordinances condemning buildings or structures which endanger pub-

lic welfare or safety and providing for removal of such at the expense of the owner.

Massachusetts (c. 70, L. 1928) amended section 22, chapter 488 of the Zoning Law of 1924 in regard to exemptions of public service corporations from the operation of that act, and also provided for public hearing, notice, etc., in the procedure under the act. An act relative to the height of buildings in the city of Boston (c. 137, L. 1928) provides that the height may exceed 155 feet provided the volume of building does not exceed the number of square feet of buildable area of the lot, multiplied by 155, and provided further that every part of the building above a height equal to two and one-half times the effective width of the street but not exceeding 125 feet shall set back from every street and lot line 1 foot for $2\frac{1}{2}$ feet of height.

Rhode Island (c. 1240, p. 713, L. 1928) repealed a law of 1927 (c. 1077) which authorized the city of Providence to create a thoroughfare plan commission and passed an act (c. 1277, p. 811, L. 1928) authorizing the town of Narragansett to enact building and zoning ordinances.

Virginia (c. 55, L. 1928) authorized the circuit court of the County of Henry to appoint for the town of Martinsville a zoning commission and board of zoning appeals under chapter 197, Laws of 1926, and also under chapter 277, Laws of 1928, providing a new charter for the town of Winton, authorized a town plan and planning commission and the acquiring of land in the vicinity of parks. Similar legislation for the town of Waynesboro (c. 482, L. 1928) provides a new charter with the same authorization for town plan commission, platting, and acquiring land.

Analogous to zoning and planning legislation affecting property are several acts authorizing counties, municipalities, or other subdivisions of the state government to establish and maintain airports, aerodromes, and aircraft fields, and defining powers of special boards for such purposes (Ky. c. 77, L. 1928; La. c. 24, L. 1928; Mass. c. 350, L. 1928; Miss. c. 63, L. 1928; N.J. c. 181, L. 1928; S.C. c. 919, L. 1928, for city and county of Greenville).

Not less than forty-three cities and towns in eighteen states

were added to the list of zoned municipalities in 1928, bringing the total up to more than six hundred.

PUBLIC HEALTH, EDUCATION, AND RECREATION

General public health legislation is dealt with in a separate article (*q.v.*), and also problems of health and safety in industry in the article entitled "Labor Legislation" (*q.v.*). Rhode Island passed an act for the promotion of the welfare and hygiene of maternity and infancy; it also authorized two or more towns to unite in the employment of a health officer. Porto Rico established in the Department of Education a division of child hygiene with a physician as director, and New Jersey amended its law requiring private nursing homes to be licenced, making it apply also to private hospitals.

Important hearings before committees of Congress and constructive discussion of the Newton bill to provide for a continuance of the important work of the Children's Bureau in the administration of the Maternity and Infancy Act of 1921, while not resulting in any legislation thus far, seem to assure the passage of an act either extending the life of the Welfare and Hygiene of Maternity and Infancy Act of November 23, 1921, which expires, under the provisions of existing legislation, June 30, 1929, or substituting for that act a somewhat different but possibly better and more comprehensive provision for co-operation of the federal government and the states, in maternity and infancy protection. This experiment has been one of the most socially useful pieces of public health work of recent years, and its continuance and further development is a matter of major concern in American social work generally.

On the border line between public health, charity, and education are two statutes (Miss. c. 149; La. Act No. 101), creating state boards or commissions for the blind to supervise and provide teaching and training for blind persons and to market their products.

Georgia and Oklahoma were admitted to the Birth Registration Area, which is accorded to states registering more than 90 per cent of their births.

Education legislation dealt in many important particulars with

compulsory school attendance and employment certificate laws, also educational requirements for employment certificates. The standards of the educational requirement were raised to the completion of the sixth grade in specified subjects or completion of a program in a prevocational or vocational school approved by the Commissioner of Education and equivalent to one year beyond the fifth grade in New Jersey, this requirement to become effective September 1, 1929. In New York, the compulsory school attendance and employment certificate laws were rewritten, the former simplified and broadened and its administrative provisions improved, and the latter made to require a physical examination each time the child changes his employment. Similar improvements in standards and methods of enforcement for compulsory school attendance laws were enacted in Virginia, and efforts to reduce standards were proposed but failed to pass in New York.

Regulatory legislation dealing with recreation was passed in Rhode Island prohibiting the admission to motion-picture theaters of children under fifteen unless accompanied by a person eighteen years of age or over, except that children between ten and sixteen are admitted outside of school hours between the hours of 9:00 A.M. and 7:00 P.M. There was no promotive recreation legislation in 1928 aside from power to acquire land for recreation. (See Housing, etc., ante.)

HUMANE LEGISLATION AND PUBLIC MORALS

Under the prevention of cruelty to animals we find a few statutes bearing directly on the suppression of cruelty, such as Massachusetts, chapter 347, Laws of 1928, prohibiting the cropping of ears of dogs, and New Jersey, chapter 83, relating to the impounding of dogs, etc., in municipalities, and New Jersey, chapter 115, Laws of 1928, prohibiting the exhibition at roadstands of animals where inhumane confinement is involved, and Virginia, chapter 209, Laws of 1928, providing for permits for kennel dogs to run at large. There is a greater variety of game laws extending or restricting the hunting season, providing for trappers' licenses and restrictions (Miss. c. 114, L. 1928), and the use of pole-traps (N.J. c. 8, L. 1928), also regulating trapping, etc., with respect to squirrels and rabbits (N.J. c. 16), which have an indirect but

less important relation to cruelty. A New York statute (c. 242, L. 1928) provides that cats may be killed if found killing birds; and the Virginia general cruelty statute was amended (c. 241, L. 1928) to include in its regulations birds and fowls, and by another statute (c. 443, L. 1928) the power of arrest was given to humane officers.

Prevention of cruelty to children and provision for public treatment of neglected and delinquent children received only slight and indirect attention in the legislation of the year, as already indicated in the discussion of child welfare. In New York the special juvenile court laws for Buffalo and Syracuse were amended and the New York State Division of Probation was made a statutory division of the Department of Correction, which was given general supervision over the administration of probation throughout the state, including probation in children's courts. Louisiana provided for a state industrial school for colored boys seventeen years of age or under committed by the juvenile courts. New Jersey amended its law relating to guardians of minors, granting to mothers and fathers equal rights to dispose of their children by will with the consent of the other parent.

Little of note in the treatment of prisoners or in legislation for the management of prisons or prison industries occurred during the year. Massachusetts passed an act providing for the payment of wages to prisoners, who are to receive one-half of any increase in profit from prison industries over and above the profit now being made. Much interest has centered in the Hawes-Cooper Bill in Congress, which deals with the fight against the manufacture of prison products for sale in the open market. This bill is a permissive act enabling any state to bar the shipment of prison-made goods into the state, and became a law on January 19, 1929, with the title "An Act to Divest Goods, Wares and Merchandise Manufactured, Produced or Mined by Convicts or Prisoners of Their Interstate Character in Certain Cases." It follows the principle of the celebrated Webb-Kenyon Law of preprohibition days, which attempted to divest intoxicating liquors of their interstate character when shipped into a state contrary to the law of that state. The Webb-Kenyon Act, passed over the veto of President Taft,

who doubted its constitutionality, was later sustained by unanimous decision of the United States Supreme Court.

In the enforcement of prohibition many important administrative changes were made by the federal government and under some of the state enforcement acts, but there was little new legislation in 1928. North Dakota voted on primary election day (June 27, 1928) on the repeal of the prohibition clause in the original state constitution. The vote against repeal was 103,696, or 51.7 per cent of the total vote cast.

As far as the vote in the presidential campaign could be analyzed with respect to this issue, the retention and enforcement of prohibition seemed to be strongly favored.

PUBLIC HEALTH AND MEDICINE

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ABSTRACT

The people became, in 1928, more conscious of "cultural lag" in the field of medicine and public health. *Mortality and morbidity statistics.*—The general death-rate was higher than for the preceding year, owing partially perhaps to two influenza epidemics. There were decreases in the death-rate due to various diseases of public health importance, according to the experiences of the Metropolitan Life Insurance Company, and increases in the rates among certain degenerative diseases. *Public health measures.*—Eighty-seven new county health departments, established as a result of flood work, were maintained without loss during 1928. Three new enterprises were launched or furthered: the American Foundation for Mental Hygiene, a Committee for Research on Syphilis, and the Gorgas Memorial Laboratory in Panama. *Private practice.*—The number of physicians, nurses, and dentists still appeared to be increasing. *Hospitals and clinics.*—The Columbia-Presbyterian Medical Center was opened. The number of hospitals continued to increase, and there was a tendency for certain kinds of clinics to associate themselves with hospitals. *Legal measures.*—While the legislatures of most states did not hold sessions in 1928, several legal decisions of importance were rendered. *Biological research.*—Two scientists, whose work has been responsible for notable progress in disease control, succumbed to disease. Several discoveries of importance were made. *Research in medical sociology and economics.*—Four commissions or committees issued reports of significance.

Many human beings suffered and died during 1928 from diseases which might have been prevented, innumerable remedial defects remained unremedied, and a host of persons with curable diseases remained uncured. "We know how to do a lot of things," says William H. Welch, "which we don't do, or do on a wretchedly small scale." There are evidences that the people in 1928 became more conscious of this manifestation of cultural lag than ever before; moreover, there was definite progress during the year toward the more effective utilization of modern science, both in the cure and in the prevention of disease.

The important changes during the year may be looked for under the following topics: mortality and morbidity statistics, public health measures, private practice, hospitals and clinics, legal measures, biological research, and research in medical sociology and economics.

MORTALITY AND MORBIDITY STATISTICS

A recently computed provisional death-rate for 1928 (based on a population of 37,600,000) was 12.3 per thousand, somewhat higher than the rate for the same population in 1927, which was 11.8. The rate for 91 per cent of the population for 1927 (virtually the final rate) was 11.4, the lowest yet reached in the United States.

The infant mortality rate has shown for several years a downward trend, and while the figure for 1928 was not available at this writing, it was announced during the year that the 1927 rate had reached the lowest point in the history of the United States—65 deaths per thousand live births for the registration area, as compared with 73 in 1926.

The outstanding achievement of the year among the eighteen million policy-holders of the Metropolitan Life Insurance Company was a further decline in mortality from tuberculosis, the 1928 death-rate for this disease in all of its forms being 90 per hundred thousand. On the other hand, the National Tuberculosis Association states that the decline of this death-rate during recent years "is showing a tendency to lessen." The Metropolitan Company reports that five other diseases, all of major public health importance—typhoid fever, scarlet fever, diphtheria, diarrhea complaints, and puerperal conditions—showed lower death-rates among policyholders in 1928 than ever before. Of unfavorable developments for the year among Metropolitan policy-holders, the foremost was an increase in the death-rate from heart affections to almost the highest figure recorded; the cancer situation continued to grow definitely worse; and for a fourth consecutive year the diabetes death-rate rose. While, since the introduction of insulin, the rate for this last disease among males under forty-five has gone down, and while the rate among males between forty-five and sixty-five has remained almost stationary, after sixty-five there has been a distinct and significant rise.

The birth registration area was enlarged by the admittance, for the first time, of the states of Colorado, Georgia, and Oklahoma. The state of South Carolina was readmitted to the birth registration, and the state of Georgia to the death registration area.

While the United States Public Health Service and other agencies have continued their efforts to develop morbidity statistics, it is still difficult to secure reliable figures on the incidence and prevalence of various diseases. Two influenza epidemics, however, may be recorded, one early in the year and one beginning in November. From forty-one states having a population of almost 84,000,000, there were reported to the Public Health Service more than 805,000 cases of this disease. The smallpox record of the United States remains a disgrace. While this disease might be virtually wiped out, there were reported during the year from forty-two states, more than 34,500 cases.

PUBLIC HEALTH MEASURES

While there remain among official health departments of the United States a lack of trained personnel and an inadequacy of funds, there were significant forward steps during the year. Following the emergency work done in 1927 by the Public Health Service, the Rockefeller Foundation, and the state departments of health in the extensive area flooded by the Mississippi River, there were established eighty-seven new county departments of health, with one or more whole-time officers in charge. All of these were maintained without loss through 1928.

On the part of local health departments, there was a definite effort, according to the American Public Health Association, to win the participation of private practitioners in preventive measures, such as the immunization of children against diphtheria, and this effort appears to have met with some success.

In Washington, the Parker Bill, providing for a more efficient Public Health Service, was passed by both houses of Congress, but was vetoed by President Coolidge. A bill introduced by Senator Ransdell, providing for the enlargement of the Hygienic Laboratory, failed to pass. These two measures, however, stimulated much discussion regarding the importance of the work of the Public Health Service and won the Service many friends. Congress appropriated \$9,000,000 for replacing worn-out marine hospitals, but refused to make available an appropriation of \$75,000 for a special program in cancer research recommended by a committee of eminent scientists.

In the field of mental hygiene, the most significant development of 1928 was the creation of the American Foundation for Mental Hygiene, Incorporated. Its chief aim is to secure a large fund for various types of work in the field of mental hygiene, at home and abroad, and to administer the fund in the interest of the movement as a whole. The closing weeks of 1928 were employed in the completion of initial plans for the First International Congress on Mental Hygiene, to be held in Washington in May, 1930. Several of the states extended their facilities for mental hygiene work. There continues to be, however, a scarcity of adequate personnel for child guidance and other types of mental hygiene clinics.

In the field of venereal disease control and social hygiene, approximately 324,000 cases of venereal diseases were reported to state departments of health, during the year ending June, 1928—a decrease of about 40,000 cases since 1927. There was an increase from 425 to 451 in the number of clinics reporting. The reduction in the number of cases may or may not have been partially due to a decreasing degree of care on the part of physicians reporting. Under the leadership of the American Social Hygiene Association, there was created a committee for research on syphilis with adequate funds to launch an important program of laboratory and clinical studies. Progress was made in the development of sound sex instruction. Parent-teacher associations and religious organizations entered into active participation in this and other fields of social hygiene work.

For the support of the Gorgas Memorial Laboratory in Panama, organized to study tropical preventive medicine, Congress provided for an annual appropriation of \$50,000. The Republic of Panama has donated the site and has pledged one-half million dollars for the construction of the laboratory.

The private foundations, including the Carnegie Corporation, the Commonwealth Fund, the Milbank Memorial Fund, the Rockefeller Foundation, the Russell Sage Fund, and the Twentieth Century Fund, continued to make possible pioneer efforts of immeasurable value in the control of disease by providing grants to both public and private enterprises. Details from annual reports are not available because of the early preparation of the present ar-

ticle. In addition, the Julius Rosenwald Fund adopted during 1928 a plan for providing for the establishment of hospitals and clinics, especially for persons of moderate means.

Reports were received early in the year of a dinner attended by several hundred physicians, sanitarians, and social workers in commemoration of the achievements in disease prevention of Lee K. Frankel. Thus, public service was recognized and a useful citizen honored while alive and active among his associates.

The president of the American Child Health Association, in November, 1928, was elected president of the United States.

PRIVATE PRACTICE

While private practitioners, especially surgeons and other specialists, continued to perform miracles in the diagnosis and cure of many disorders hitherto fatal, search through medical journals fails to reveal any significant efforts in the establishment of better organization. While specialization is increasing, private medicine in general remains unorganized.

There was an increase in 1928 in the number of physicians in continental United States, a total of 152,000 being reported in the 1929 *American Medical Directory* as compared with 149,500 in the 1927 issue. The number of medical school graduates in 1928 was 4,262, a larger number than in 1927 or in any year since about 1910 when there were more medical colleges than at present.

Approximately 20,000 persons were graduated from nursing schools in 1928 as compared with 17,500 in 1926. The number of dentists in the United States in 1928 was 67,334, while three years earlier there were only 64,716.

HOSPITALS AND CLINICS

While a number of new hospitals were opened in 1928, probably the largest institution throwing open its doors was the Columbia-Presbyterian Medical Center, with several units completed. There was also created, during the year, the Joint Administrative Board of the New York Hospital and Cornell Medical College Association, which has plans for the establishment in New York of another large medical center. Among various other developments

during 1928 was the rising cost of hospital care and the increasing demand for lower priced service.

There were 6,852 hospitals in the country in 1928, with 892,-934 beds, an increase of 45 hospitals and 39,616 beds over 1927. Figures also indicate that a growing proportion of hospitals provided themselves with X-ray departments, clinical laboratories, and physical therapy departments.

Clinics have probably increased in number, but no survey was made during the year to show the extent of the growth. In 1927 there were more than 5,700. There has been a notable recent tendency among venereal, cardiac, and prenatal clinics to associate themselves with hospitals, either by transferring an existing clinic to the outpatient department of a hospital, or by inducing a hospital to establish such services in its outpatient department when not previously found in the community.

The Thomas Thompson Trust announced the inauguration, during the year, of two plans for sickness insurance. These provide, in consideration of small payments of cash, benefits to meet the expenses of hospital service in excess of certain minimums.

LEGAL MEASURES¹

While the legislatures of most states did not hold sessions during 1928, and therefore few state laws were passed important to public health and medicine, there were during the year several legal decisions of moment. The principle that a municipality is liable for damages if it permits its water supply to be contaminated was established by a series of court decisions. The Harrison Narcotic Act was upheld in April, 1928, by a decision of the United States Supreme Court. A world-wide quinine monopoly was permanently enjoined in September, 1928, against the further violation of the anti-trust laws by a decision of the Federal District Court in New York.

BIOLOGICAL RESEARCH

Joseph Goldberger, of the United States Public Health Service, completed in 1928 reports on his notable work in the study of pellagra, and late in the year was attacked by a rare form of cancer

¹ See also the article on "Social Legislation," by Samuel McCune Lindsay in this issue

which subsequently resulted in his death. Goldberger gave himself freely to science. He once contracted yellow fever in connection with his experiments. A few years later he fell a victim to typhus fever. He was also attacked by dengue fever. Undaunted by these experiences, he responded promptly to a summons to work on pellagra, and discovered the cause of a malady which had brought disability and death to thousands of persons in the United States. Few men of our time, states the editor of a Washington newspaper, have been ushered by death into a more secure immortality than Joseph Goldberger.

Hideyo Noguchi, of the Rockefeller Institute, died of yellow fever, a martyr to his researches on that disease, leaving work which may show later that the malady has two forms.

E. V. Hardy, of the Public Health Service, showed that probably undulant fever, generally known as Malta fever, is of frequent occurrence in rural districts and is responsible for many sicknesses frequently diagnosed as grippe, typhoid fever, or tuberculosis. R. R. Spencer and R. R. Parker, of the Public Health Service, demonstrated that a vaccine developed by them is highly effective in the prevention of Rocky Mountain spotted fever. Oliver Kamm, of Detroit, announced that the important beta hormone produced by the posterior-pituitary gland, which controls the water deposits of the body, may be made artificially from animal glands.

The Nobel Prize in medicine for 1928 was awarded to Charles Nicolle, of the Pasteur Institute at Tunis, in recognition of his researches on typhus fever. The Nobel Prize for chemistry was given to Adolph Windaus, of Goettingen, Germany, for his part in experiments proving that ultra-violet light will activate ergosterol and confer on it antirachitic properties. The gold medal of the American Medical Association was awarded to Edward Francis, of the Public Health Service, for his work on tularemia, the committee on awards believing that his contribution in this field constituted the most important medical work of the year, judged on the basis of originality.

RESEARCH IN MEDICAL SOCIOLOGY AND ECONOMICS

Three commissions or committees, previously created, issued reports of significance during the year. In addition, there was pub-

lished a report by the Advisory Committee on Burial Survey. The latter report showed that the undertaking business in the United States has been badly disorganized. Undertakers are having a difficult time in making a reasonable income, and funeral costs often are excessively high. Largely as a result of this study, presumably, the funeral directors of the country have organized the Funeral Service Bureau of America to improve the organization and ethics of the business.

The Commission on Medical Education during 1928 issued two reports. They showed that while medical education has been held responsible by some persons for many of the inadequacies of medical service, great progress has been made because of the higher standards of medical schools and of boards of licensure. The second of these reports presents principles which the Commission believes should be emphasized in medical training.

A report of the Committee on the Grading of Nursing Schools, entitled *Nurses, Patients, and Pocketbooks*, contains valuable data on the sociology and economics of nursing. Its chief conclusion is that there are more nurses being graduated than can secure employment at existing rates.

The Committee on the Cost of Medical Care issued in February, 1928, its five-year program of studies. The number on the committee was increased to forty-two persons, including private practitioners, sociologists, economists, and representatives of the public, and a research staff of six was organized. Some six or eight studies have been inaugurated. The various researches are to be carried on with the co-operation of the American Medical Association, the American Dental Association, the National Drug Trade Conference, the Metropolitan Life Insurance Company, the United States Public Health Service, and other agencies.

The more effective utilization of the benefits of modern science and the more efficient functioning of public health agencies, hospitals, clinics, and private practitioners of various kinds await the development of social research, experimentation, and demonstration. If the organizations responsible for these developments do their work well, the health and happiness of the people of the United States may be immeasurably improved.

COMMUNICATION

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ABSTRACT

During the year 1928 the newer forms of transportation and communication like the automobile, the motion picture, the aeroplane, and the radio continued to increase in numbers and in use more rapidly than older facilities, such as the railroad, the telegraph, the telephone, and the newspaper. The rapidity of social changes consequent upon the introduction and extension of these agencies has occasioned serious problems of social adjustment arising from the decline of customary neighborhood controls and the enlarged freedom of the individual. At the same time, readjustments are taking place not so much from social prevision but as a natural consequence of the use of these newer instrumentalities of communication. Through the motion picture, the aeroplane, and the radio, the individual is participating imaginatively and actually more and more fully in "the great society"

The year 1928 brought a clear recognition to the public of the economic, social, and cultural significance of the newer forms of transportation and communication. The automobile, the motion picture, the radio, and the aeroplane are no longer considered merely as instruments of amusement and entertainment and of adventure and spectacle but as forces of social change rapidly molding a new and different civilization.

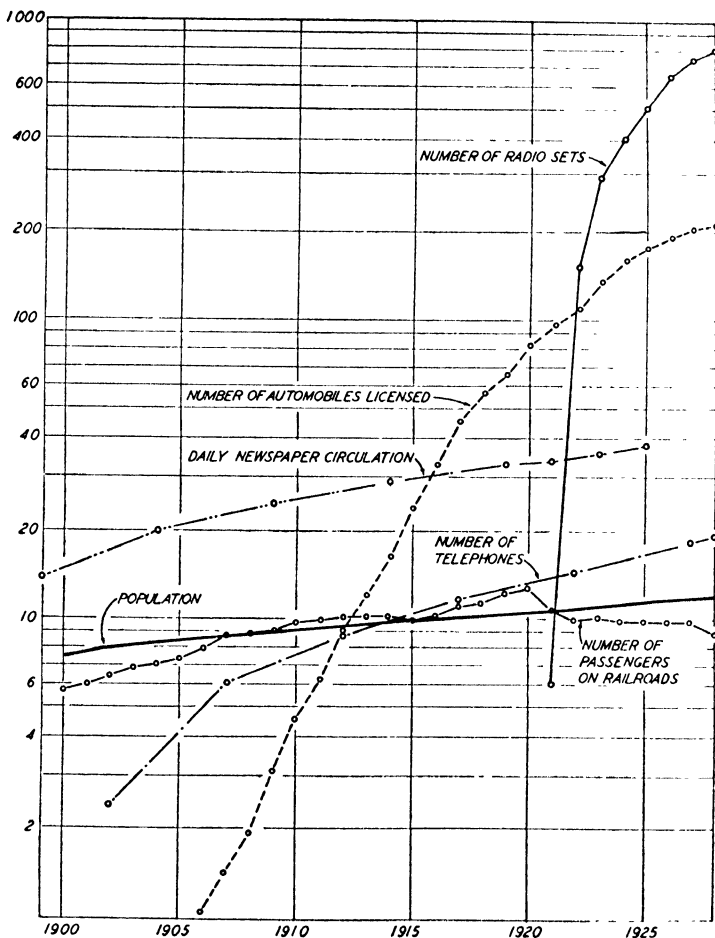
This article, then, will concentrate its attack upon a description and an analysis of the dynamic rôle of these newer forms of transportation and communication in American life. It will also call attention to the many evidences manifest during the last year of the increasing public interest in these effects and of the serious attempts at social control that are in progress.

But before taking up in detail a summary survey of the social transformations taking place through the instrumentality of the automobile, the motion picture, the aeroplane, and the radio, the accompanying graph is presented (Chart I). It indicates that during 1928 the newer forms of communication continued to maintain

a relatively more rapid increase than the older instruments of transportation and communication like the railroad, the telegraph, the telephone, and the newspaper.

CHART I

RATES OF INCREASE OF DIFFERENT AGENCIES OF COMMUNICATION, OR THEIR USE, IN THE UNITED STATES, 1899-1928



THE AUTOMOBILE IN SOCIAL DISORGANIZATION AND
REORGANIZATION

The automobile and the motion picture developed practically simultaneously. The rapid growth of the automobile is seen in the increase in registered passenger cars from 8,000 in 1900 to 21,379,125 in 1928, or from 0.1 to 178.0 per thousand persons.¹ During last year the production of motor vehicles was the largest in the history of the industry, or a total number of 4,357,384, of which 3,826,643 were passenger cars.² According to figures vouched for by the National Automobile Chamber of Commerce, the total highway mileage surface increased from 575,000 in 1927 to 625,000 in 1928, and the gasoline used by motor vehicles from 10 billion gallons in 1927 to nearly 11 billion gallons in 1928.

The first serious and comprehensive attempt to gauge the social consequences of the automobile was made by the completion last year of a dissertation, "The Automobile: a Sociological Study,"³ by Professor John H. Mueller, University of Oregon. He stated, "The automobile is one of the new forces which has disturbed most profoundly the social equilibrium and has made necessary new adjustments."⁴ He described the way in which the automobile disorganized the old rural order and is determining the new territorial radius of reorganization. Although, from 1917 to 1928, the mortality rate from automobile accidents increased from 8.9 to 20.7 deaths per hundred thousand population, the deaths per hundred thousand cars declined sharply from 176 to 102.⁵

He traced the history of the public reaction to the problems of accidents and of social disorganization introduced by the automobile as follows: (1) the early period of prohibitory legislation; (2) the intermediate period of exhortation, and (3) the period, just beginning, of rational control based upon the scientific study of the problem.

This pioneer sociological inquiry should stimulate further detailed research. A study, for instance, might well be made of suc-

¹ *Facts and Figures, Automobile Industry, 1929*, National Automobile Chamber of Commerce, p. 5.

² *Report of the United States Department of Commerce.*

³ Doctoral dissertation (University of Chicago Library).

⁴ *Ibid*, Appendix, p. 1.

⁵ Compare *ibid*, p. 93, and *Facts and Figures, Automobile Industry, 1929*, p. 84.

cessful attempts to reorganize rural and urban life on the basis of the new alignments caused by the automobile.

THE MOTION PICTURE AND CHANGING MORES

The automobile has greatly increased personal mobility by undermining, even in rural districts, the social control of the neighborhood. The effects of the motion picture upon personality development and cultural life, while apparently quite as profound, are more indirect and subtle. The motion picture is only one of the devices of communication which are at work undermining and modifying the mores and traditional forms of conduct. For years the motion picture has caused lively concern to parents, teachers, social workers, ministers, and moralists. The large attendance at motion pictures, aggregating in 1928, it is estimated, 60,000,000 men, women, and children weekly, indicates the popularity of this modern means of entertainment. The lead of the United States in motion-picture growth is shown by the fact that 20,700 of the 57,431 motion-picture theaters in the world are in the United States.⁶ The Motion Picture Producers and Distributors of America give 20,233 as the number of motion picture theaters in this country, which is practically the same as the number 20,700 given above. Both these figures, however, seem high when compared with the total of 14,991 motion picture theaters for the United States in 1926 as given by J. S. Dickerson on the basis of detailed figures by states and published in a booklet entitled *A Survey of Motion Picture Theaters in the United States* and published by the Motion Picture News Service.

The effects of attendance at cinemas upon the dress, manners, and ideals of youth have for a long time been increasingly evident. The creation of the two social types, the sheik and the flapper, has been attributed to imitation of famous "stars" of the silent drama. The motion picture has undoubtedly played some part in the increasing sophistication of "the younger generation." Both within the motion-picture industry and by outside agencies censorship has been established ostensibly in the interests of the child.

A most significant development in the motion-picture world during the year was the movement to produce talking films and

⁶ *American Year Book*, 1928, p. 830.

those synchronized with sound effects. The union of so-called "movies" and "talkies" introduced new factors which must be taken into account in any appraisal of the future of the cinema. By the end of the year, neither the public, the producers, the exhibitors, nor the critics were agreed upon the final rôle of voice and sound pictures. Mordaunt Hall pointed out that fewer than one thousand of the twenty thousand motion-picture theaters in this country were wired for the reproduction of sound pictures, and that not more than four thousand were likely to be so equipped by the end of this year.⁷

AVIATION AND INTERNATIONAL RELATIONS

If the year 1927 represented the climax of spectacular feats in aviation, the year 1928 marked the transition to an appreciation and realization of its solid practical uses in transportation, in communication, and in international relations. The national celebration at the close of last year of the twenty-fifth anniversary of the Wright Brothers' original aeroplane flight at Kitty Hawk vividly recalled the succession of brilliant achievements during this short time.

The statistics of civil and commercial aeronautics for the year are impressive, as reported by the Assistant Secretary of Commerce for Aeronautics, William P. MacCracken:

Commercial aeronautics has entered into the business world and, without subsidy, it has become an integral part of American business and transportation. . . . In air transport service alone there has been an unprecedented increase. By comparison with a scheduled route mileage of 8,396, which was the total one year ago, the transport companies now operate routes covering 11,191 miles, over which their planes fly a daily mileage of 27,817. Eighty-eight cities are now directly served by these routes, with a total trading area population of 80,000,000. On several of the routes passenger service was inaugurated during the year and preparations are now being made to include it on various others. . . .

But scheduled air transport service, which is the foundation of commercial aeronautics, is only one-tenth of all civil flight in the United States. The remainder is made up of miscellaneous operations such as student instruction, passenger or sightseeing flights, scenic tours, aerial advertising, crop dusting and spraying, messenger service, and many other uses, including private flying for both business and pleasure.

⁷ *American Year Book*, 1928, p. 830.

In this class of flying there has been a tremendous increase. It is conservatively estimated that a total of 30,000,000 miles were flown during the year 1927, an increase of 12,000,000 miles over the preceding year. Student instruction alone has taken on unusual proportions and is taxing training facilities to the limit. It is also presenting a problem in the matter of adequate control of such facilities.⁸

According to a report made by the Aeronautical Chamber of Commerce in America, the volume of air mail increased from 1,222,843 pounds in 1927 to 3,632,059 pounds in 1928. The 294 planes operated by air transport companies in the United States during the last year flew a total of 10,472,024 miles on regularly scheduled routes and carried 52,934 passengers. According to the figures assembled by the United States Department of Commerce, there were at the end of last year 20,788 miles of airway, of which 9,341 miles were suitable for night-flying; more than 1,600 improved airports, and as many as 3,000 towns scattered over the country which had been "air marked."

In 1928 the duly licensed air pilots numbered 4,690, of whom 34 were women. California led with 894 pilots; New York was second with 472, and New Mexico lowest with 4.⁹ The number of accidents reported for all classes of flying in 1927 was 200, in 1928, 1,062, of which 368 were fatalities and 322 severe injuries.¹⁰

The brilliant international flights of 1928 equaled, if they could not surpass, those of 1927. The round-the-world trip (by steamboat from San Francisco to Tokio) of the French aviators Costes and Le Brix, the pioneer flight across the Atlantic of the Junkers monoplane "Bremen," the trans-Pacific flight of the "Southern Cross" with its Australian and American crew, the non-stop distance flight of the Italian flyers Ferrarin and Delprete, the trip of the Zeppelin across the Atlantic, the Arctic Ocean flight of the Wilkins expedition, and the tragic polar flight of the "Italia" were outstanding aerial events of the year. They all had one common effect, the undermining of national animosities and the increase of international friendship. The first conscious endeavor to promote international relations by aviation was apparent in the

⁸ *Ibid.*

⁹ *United States Daily*, January 12, 1929, pp. 1, 5

¹⁰ *United States Daily*, February 27, 1929, p. 1.

successful "good will" flight of Colonel Charles A. Lindbergh to Mexico, Central America, and the West Indies.

Another aspect of international relations involved with aviation was emphasized in the International Civil Aeronautics Conference held in Washington, December 12-14, 1928, and attended by delegates from forty countries. One subject discussed was that of the law of aerial navigation. "More than five hundred bilateral treaties regulating the conduct of international air navigation and prescribing the conditions upon which freedom of innocent passage has been accorded by each of the contracting parties to the national aircraft of the other have been made."¹¹

RADIO, POLITICS, AND GOVERNMENTAL REGULATION

Of the 20,000,000 and more radio sets in the world in 1928, it is estimated that there were more than 8,000,000 in the United States, 2,500,000 in Great Britain, 2,350,000 in Germany, and 1,250,000 in France.¹² Accurate statistics on the distribution of radio sets are not available. The estimate of 8,000,000 sets for this country is regarded as conservative. Some estimates place the number as high as 15,000,000.¹³ A canvass two years ago of more than 4,000,000 families in country and town districts of presumably representative density of population gave the percentage of families owning telephones as 56.5; automobiles, 55.7; pianos, 40.4; phonographs, 46.2, and radios, 24.1.¹⁴ These proportions, if representative, would indicate that the estimate of 8,000,000 radio sets is more likely low than high.

During 1928 radio attained an established position as an indispensable instrument of communication in our political life. During the presidential campaign the two major political parties uti-

¹¹ Statement by E. E. Danly, Department of Justice, *United States Daily*, February 12, 1929.

¹² Lawrence D. Batson, "The Extent of the Development of Radio over the World," in *Radio*, a supplement to the March, 1929, issue of the *Annals of the American Academy of Political and Social Science*, pp. 21-31.

¹³ *Radio Retailing* estimated in May, 1928, that the number of receiving sets was 12,000,000. Another authority gives 8,000,000 sets with loud speakers, and 4,500,000 with headphones. During last year 2,550,000 receiving sets were sold in this country (the *American Year Book*, 1928, p. 460).

¹⁴ *Facts and Figures*, National Automobile Chamber of Commerce, 1928, p. 6.

lized broadcasting as the chief method of placing the personalities and programs of their candidates before the public. The great increase in the popular vote was in part at least due to the interest stimulated by radio-broadcasting of the principal campaign speeches. In the future the daily paper, which superseded the mass-meeting as the chief channel of political communication, may in its turn be eclipsed by the radio.

The trend of the cultural effects of the radio is not so clearly defined. There are indications of a growing influence of its musical, educational, and religious programs. No study has yet been made to determine the extent to which the radio tends to increase or to lessen attendance at events broadcast or similar events not broadcast.

By the Radio Communication Act of 1912, Congress adopted the first general legislation for the regulation of radio transmission. Under the authority of the Radio Act of 1927, the country was divided into five zones and the Federal Radio Commission was established, with authority, among other matters in the public interest, to classify radio stations, to prescribe the nature of their services, and to determine their locations. The amendment of March, 1928, to this act required a new allocation of licenses, wave lengths, times for operation, and station power so as to give each of the five regional zones equality of broadcasting service, both of transmission and of reception. "Millions of rural listeners in the agricultural sections and in remote towns and villages are the chief beneficiaries of the new arrangement, especially in their ability to hear clearly smaller stations in their own neighborhoods and states."¹⁵

The operations already licensed on all the various waves of the spectrum are as follows: 600 broadcasting stations; 2,166 ships; 65 shore-to-ship stations; 85 transoceanic stations; 280 point-to-point continental stations; 17,000 amateur stations; 203 experimental stations, and 31 trade and technical schools.¹⁶

With the growing complexity of the regulation of radio, spe-

¹⁵ O. H. Caldwell, "The Administration of Federal Radio Legislation," in *Radio*, special supplement of *Annals of the American Academy of Political and Social Science*, p. 51.

¹⁶ *Ibid.*, p. 53.

cial attention has been given during the last year to its legal aspects. The Federal Radio Commission established its own legal division on June 25, 1928. Last fall the American Bar Association, which already had an Air Law Committee, concerned with both air and ether, divided the two and created a separate Committee on Radio Law.

COMMUNICATION AND SOCIAL CONTROL

The continued increase in the number and the use of the facilities of modern transportation and communication raises the vital question of social control. Society and human nature are being more profoundly changed by the automobile, the motion picture, the aeroplane, and the radio than by the machine in industry. For the machine and the factory meant routine and repression, but these new devices of communication bring adventure and freedom.

The pertinent question, of course, is whether man and society are to be conditioned by these new techniques of movement and contact or are to limit their scope and direct their expression. No final answer to this question is attempted here. It is realized also that the problem of control may involve manipulation of these powerful instrumentalities for purposes of private rather than of public interest.

The disorganizing and reorganizing effects of these modern instruments of transportation and communication may be realistically stated in terms of the decline of neighborhood and traditional influences and of the rise of cosmopolitan and modern influences. The motion picture, the aeroplane, and the radio have perhaps accomplished as much for world solidarity as has the League of Nations. At any rate, they are becoming indispensable instruments for the successful functioning of a world-society. The motion picture, accused of Americanizing the world, is, without doubt, making the peoples of the earth acquainted with one another. And the radio, with its vivid, concrete, and accurate reporting of dramatic events, is serving not only as a valuable check upon its rival, the newspaper, but also as an instrumentality by which citizens may intelligently participate in a democracy. Through these newer forms of communication the individual is participating imaginatively and actually more and more fully in "the great society."

GROUP AND COMMUNITY ORGANIZATION

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ABSTRACT

Community organization among foreign-speaking peoples in America reflects the results of immigration, showing a shift from mutual aid organizations of adults on the "town society" model to English-speaking organizations in the control of the younger generation. Education and training for participation in American life are emphasized but cultivation of unity within each language group is a chief end. The German groups of pre-war and post-war immigrants find themselves in need of organizations of adjustment to each other. Studies of racial groups have taken the form of inquiry into the complex of relations known as "The Negro Community," "The Jewish Community," etc. Relief and social service organized on a city basis is making an effort to adjust its appeals to the concentration of ownership in business that puts the control of finances outside many of the cities of operation. Public provision for group organization and recreational association developed in scope and importance. City planners formulated principles of subdivision planning involving neighborhood units. Adult education methods in group organization spread. Studies of communities were of the nature of cultural inquiries.

Communal organization is not separate or different from institutional organization but is rather a reflection of the latter, and in the community will be found face to face organization that reflects the social changes often described in terms of wider relationships. The community, if it could be dissected, would represent a cross-section of institutions dealt with in other portions of this symposium, plus the interrelations between those institutions and the peculiarities that mark any one community in its entirety. The complex of organization and associational contacts within the community forms the matrix within which the forces of extensive institutions work their molding influence on the individual. Primary organization is intimately related to and affected by every large social development. Actually social changes take place in communities, but the effect of developments in industry and in trade, or of new knowledge that affects traditional attitudes, or of movements of population or of critical periods in national history, appears in communal organization only after a perceptible lag. In the

history of face-to-face group changes for 1928, the relation of the community developments to some of the more extensive phases of social change seems to be discernible.

LANGUAGE AND RACIAL GROUPS

In the group organizations of foreign-speaking people two influences of large scope seem to have shown themselves in many places, viz., the restriction on immigration and the emphasis on adult education partly due to the first phenomenon, partly to the national interest in the subject. The quota system of immigration regulation has, by reducing the numbers of foreign-speaking adults who arrive, diverted the organization interests in the representatives of the respective nationalities in this country from the older problems of adjusting newcomers in their first trying months to American ways to the problems of more thoroughgoing equipment and training for participation in the industrial, civic, and social life of the country. The new interest is switching also from adults, since adults are the bulk of newcomers, to the children of those who have been here for some time. The control of communal organization is passing into the hands of the younger members. The Foreign Language Information Service sums up the wishes of the representatives of many nationality groups as they were revealed in discussions and interviews in every part of the nation in the last two years. First, they are anxious to promote the education and interests of their own members. Second, they wish to play a larger part in American life. Third, they are eager to interpret their group and its backgrounds to Americans and to preserve for America something of the traditions, culture, and character which they have brought from the old country. Fourth, they are concerned with their own children. This is a far cry from the sort of organization aim exemplified in the "town society" that characterized the first organization efforts of many national groups made up of the older element to maintain the institutions of mutual aid, worship, and even the personnel that was banded together on "the other side." For the various foreign-speaking groups there have been forms of organization, representing the progressive steps in assimilation, and apparently this latest general form organization is taking, is representative of a new step.

Considerable progress toward English speech is manifest. The Poles have turned over many fraternal organizations to the younger groups and have made these lodges English speaking; a list of forty such lodges is printed and an annual convention for them has been advocated. It must not be assumed that there is any desire to get away from nationality ties or to "Americanize" to the extent of neglecting organization efforts to hold the members of the various groups to their respective allegiances. On the contrary, 1928 was marked by a strengthening of organized efforts to keep the foreign-speaking peoples each within its cultural pale. Polish Day was a huge affair in Chicago, partly to secure funds for various educational and charitable institutions, partly to promote a spirit of unity among those of Polish extraction. The Slovenes for the first time organized a national lecture tour to deal with immigrant problems and the differences in the old and the American cultures and to create a better understanding between immigrant youth and its parents. There was distinct recognition of the bidding of foreign language organizations for the interest of their members' sons and daughters in competition with commercial amusements, the settlements, institutions of American ways and traditions such as the Y.M.C.A. and Y.W.C.A., and even public institutions.

A distinct effort to retain a cultural complex exists in the Jewish Center, a well-developed program which has grown in numbers and in diversity recently. There has been an extension of educational and cultural activities and a merging into larger units. In 1922 there were 350 Y.M.H.A.'s, Y.W.H.A.'s, combined Y.W. and Y.M.H.A.'s, and community centers. In 1928 with larger equipment and membership there were 300. Within the Jewish religious organizations a new type of organization came to notice in the Synagogue Center, with aim and emphasis on religion. There was more discussion than heretofore of the Jewish community and the question of co-operation in larger measure with the larger community, but there was little evidence of any merging of the two in the minds of Jewish leaders.

Trips to the "old countries" of children of immigrants have become a feature of advocacy and organization. The order of Vasa, for example, has organized thirty new clubs all over the

country to teach the Swedish language in song and saga and to plan a trip to Sweden. Such trips have been suggested to all foreign-speaking groups.

The war was a cause of changes abroad that necessitated changed community organization in America. For one example, it created a split between the older German immigrants whose traditions were those of the former régime, and the Germans who have come since the war and whose traditions of the Fatherland are of a different sort. There results a need of assimilating German immigrants to each other, a need met in Cleveland by a large new organization devoted to mutual aid between the two factions. Entertainments in the winter and the operation of a recreation farm in summer are prominent factors in the program. There are more than 5,000 members, 56 per cent of the older German immigration; 44 per cent new.

Among Negroes as well as among Jews, the whole complex of relationships of institutions and organizations in a given area has assumed pre-eminence in the approaches of students and leaders to their race problems, and the Negro community is the subject of inquiry. The method of dealing with the problem has brought out the differentiations, rivalries, and distinctions within the Negro community as much as any unity among the colored within a given city or neighborhood. There seems to be a larger number of colored representatives from several communities, among them districts in St. Louis, Kansas City, Cleveland, New Haven, Newport, Chicago, Wilmington, Annapolis, Pittsburgh, Boston, elected to the state legislatures, county councils, and to administrative offices. A negro congressman has been sent to Washington for the first time in a quarter of a century.

CHAIN STORES AND COMMUNITY CHESTS

Community organization for relief of distress and the adjustment of social difficulties of many kinds is trying to catch up with changing forms of business organization. Non-resident ownership and management of business has grown with the concentration of capital and the merging of firms. Between 1923 and 1925 manufacturing firms with net incomes of over \$5,000,000 increased incomes 25 per cent on the average, those with net incomes under

that sum suffered decreases averaging 11 per cent. Chain stores in the grocery business belonging to 850 systems are said to do one-third of the business and the chain systems for 5 and 10 cent stores and other "lines" are of importance. But the federations of relief and social agencies are organized on a city basis. Appeals of a local charity federation to a branch office of a huge business concern do not focus social responsibility adequately nor secure results. As a result, a study stimulated by a conference held by the Association of Community Chests and Councils has been undertaken by the National Bureau of Economic Research to bring out the actual practices and to provide the facts on which communal service agencies may reach the institutions of largest surplus drawn from the communities. Conferences of the Association report a belief that the year witnessed a significant shifting of health organizations from private to public auspices, and a like tendency in recreation. Public recreation was said to be supplanting in a measure some of the work of the settlements.

The Community Trusts have recently become a feature to be reckoned with in the present support of social-service organization. Of the sixty-three in the United States, twenty are distributing income.

PUBLIC ASPECTS OF PRIMARY ORGANIZATION

Public responsibility for the provision of facilities for certain forms of recreative association was a feature of emphasis as at no previous period. A five-year study by the Recreation Department of the Russell Sage Foundation appeared under the title *Public Recreation*. It was a significant analysis of some trends that can fairly surely be said to exist. Not only are playgrounds and other forms of recreation assumed to be a public responsibility, but space per child per day is calculated as definitely due from city treasury as school facilities. The older areas of New York City left unprovided in the growth of the city are described according to playground adequacy. The report, together with the increase in municipal provision of camps, emphasizes the tendency of municipalities, counties, and states not only to provide at public expense the ground for group meeting, play, and camping, but in several successful instances to furnish personnel or administration for such

association. Professor Jay B. Nash, making a national survey of school properties devoted to community or extra-school activities of children or adults, is finding indications of increase in the use of school buildings for such purposes. Cost of gymnasium, swimming-pool, and locker rooms as percentage of the cost of the entire building is for elementary schools 13 per cent, Junior high schools 17 per cent, Senior high schools 28 per cent. He found one hundred school superintendents unanimous in the feeling that school buildings must be used more intensively. Professor Nash asserts that the newer types of buildings, the more recently adopted curricula and the methods of administration of the school look to a larger responsibility of the school for the social life of the community.

The Playground and Recreation Association has found an increase in the number of cities providing year-round recreation programs or recreation centers, in the size of public recreation budgets, and in municipally provided music.

During the year recognition was given by the city planners to the need and practicability of planning subdivisions for unified and adequate neighborhood life. Clarence Perry made detailed studies of the essentials for school, playground, community center, and neighborhood marketing purposes for a planned community of approximately 5,000 population, studies that were followed by proposals from other sources and a demonstration of the money economy of the Perry Plan by Robert Whitten. The plans involve dead-end streets within the neighborhood and the routing of through traffic past rather than through the community. The American City Planning Institute in a formal statement (July) on the control of subdivision and building development states:

There is an almost complete divorce between the subdivision of the land and an intelligent and socially constructive use of the land. . . . The standardized pattern in land subdivision makes it impracticable to secure permanence in residence neighborhoods. . . . Vast areas are being cut up into streets and lots with no provision whatever for small parks for recreation and amenity.

And as a

measure of control there should be prepared, officially adopted, actually developed and enforced, a comprehensive "master plan" for every community. . . . The master plan should provide opportunity in unbuilt areas and, if possible, in the built up areas to create neighborhood units of varying size and charac-

ter, which may be so far as possible self-contained as to community needs for schools, churches, shops and recreation space.

A feature in communal planning was the emphasis in journals, studies and conferences on planning of town and country relationships, and the organization of sympathetic contacts and channels through which projects of mutual concern to farmers and townsmen could be handled.

EDUCATIONAL ASPECTS OF GROUP ORGANIZATION

There has been a continued development of adult education methods in various group organizations including the Y.M.C.A., the Y.W.C.A., the Y.M.H.A., the Y.W.H.A., the Jewish Centers, Pioneer Youth, and several foreign-speaking groups. Strength has been added to the efforts in certain of the larger cities to co-ordinate the agencies and organizations rendering some form of adult education service. Forums have apparently increased in numbers and in effectiveness. In New York City, a forum speakers' service has been established.

The efforts to adjust the work of so-called character building agencies to the findings of educational psychologists have continued. The Girl Scouts adopted as a chief aim "to keep pace with modern scientific developments in educational psychology and constantly utilize the findings of this group of educators."

BOOKS AND RESEARCH

Three significant books have appeared during the year, the first by Arthur Evans Wood on *Community Problems*, the second by Walter Pettit on *Case Studies in Community Organization*, giving the history and a comprehensive description of certain organized efforts to bring about community improvement, and the third *The American Community in Action* by Jesse Frederick Steiner, which consists of a score of histories of development and analyses of factions and co-operative effort in small towns in different parts of the country. The last named book treats the community as a whole from its inception, regarding community organization as the adjustment of the town to new economic or social conditions. It is the first text that deals at all adequately with the sociological concept that underlies the study of community organization, viz., that of adjustment. Work was done during the year on a fourth volume

that did not appear until 1929, describing in minute and exact detail the life of a small town, and using the cultural approach. The book is Lynd's *Middletown*.

The year saw the almost complete capture of community studies by the cultural approach. Mrs. Bessie Bloom Wessel revealed in papers the method of the investigations conducted in connection with the project called the "Study of Ethnic Factors in Community Life," in which the community area has been the regional and social unit adopted for a number of investigations. To quote her:

This approach follows inevitably from the growing realization that sociological studies are depending primarily upon techniques and methodologies borrowed from the fields of social psychology and cultural anthropology. . . . We are concerned particularly with the concept of the cultural area and with the techniques for analyzing the existing or interrelation of cultural traits within the area . . . to the end that the survey itself and the community program may have fuller meaning. . . . Empirical and analytical techniques employed by ethnologists in the study of cultural areas can be carried off bodily to the study of the modern community.

In Los Angeles, Pauline V. Young undertook a study of the Russian Molokan Community as an example of urbanization of a peasant sectarian group, studying the history and backgrounds of the people, all available records, and, through personal interviews and contacts, ascertaining the values held by the sect and the conflicts and differentiations within the community. E. Franklin Frazier studied the Negro community in Chicago by ascertaining figures which give an index to status among the colored. The effort was to study the Negro community as made up of a number of institutionalized relationships, according to any one of which the Negroes, though united as a race, are competing and contending for place in their own and the white community.

John Landesco reports on a study of crime that has been in progress for the last three or four years, a study carried on for the most part among criminals of Chicago, particularly in the Sicilian district. Through the life-history Landesco traced the progress of the formation of the gangster personality and in the gangster personality found the reflection of gang and neighborhood life. A historical study of organized crime was made to supplement the life-histories by utilizing the files of newspapers, and the community was studied through personal investigation.

RURAL LIFE

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ABSTRACT

Mechanical and scientific innovations have thrown populations into disequilibrium and farming people have responded by taking on a high degree of mobility and fluidity. There is a vast exchange of populations between town and country, the net losses on the country side being excessively heavy. This has incremented urban and lessened rural gains. It has finally resulted in an actual decrease of the farm population of the nation. The advent of improved highways, motor vehicles, radios, and other mechanical devices has brought disintegrating effects on rural communities. Small local communities are vanishing, larger interest communities are supplanting them, neighboring and neighborly friendliness among farmers have become less. Divorce is much less prevalent in the country than in large cities. The schools of farmers are still quite backward both in academic standards and in the emoluments of teachers. Nevertheless there are records of some gains in standards. The presence of new unsettling conditions in modern society has registered on the economic status of farmers. They have lost in wealth, comparatively, and have made no gains actually. Relatively, also, their total income has been cut into very severely. Farm land is static commercially.

If we are to believe many and frequent writers in the literary, scientific, and business press, we would conclude that most profound and remarkable transformations are taking place in our present human world. Some visualize the great mechanical inventions and scientific discoveries of the last decades and find their symptoms in the results they have wrought and are working. Others view the changes in household conveniences and modes of living and thinking and note the great gulf dividing this age from the eighties or nineties of last century. A few, quite submerged by the appearance of new products in the field of practical arts such as the alloys, think that we are entering into a construction era as far in advance of our era of steel as that era was ahead of the ages of bronze and copper. There are statements from sober writers to the effect that a revolution is now in process which is quite as much of an industrial revolution as was that which eventuated from the creation of power machinery. Were we to scale down these various estimates a

great deal, we would still be inclined to believe that tremendous things are coming to pass in our social world today. Then when we turned our attention to the realm of agriculture and the farming population, we would be bound to conclude that agricultural peoples and rural communities must, of course, be participating in these momentous events and that perhaps as marked changes are occurring there as in the world at large.

Innovations in the fields of science and the practical arts commonly register in the field of population by disturbing its balance and producing a state of mobility and fluidity. So we have the great over-the-sea migrations, those between sections of a nation and those between town and country. In the United States we have a great kaleidoscopic spectacle of shifting currents of people between rural districts and cities and villages. So far as we can discover, there was a net transfer from rural districts to cities of about 4.5 million individuals between 1900 and 1910, and of some 6.5 million during the next decade. There were no data prior to 1920 from which to glimpse the current moving in the opposite direction, so we do not know what may have occurred of that nature before that date. But our national government has been sampling population movements since 1920 and giving us the results. Now we behold a cityward movement of over 12,000,000 persons during the six years 1922, and 1924-28 inclusive, and a farmward movement of 7,200,000 for the same years, a net gain for cities and villages of about 4.8 million, or 800,000 a year. Were this movement to continue at the same rate during a decade, the net gain to city and village population would approximate eight million people. It would seem that rural migration, the total movement from farms, has been greatly stimulated since the World War, no doubt owing, in part, to conditions brought on as a sequence of that great international disturbance.

That this trend toward urban districts is of long standing is now known. In his *Constructive Rural Sociology*, the present writer gave evidence that rural migration had been going on in certain parts of New England since 1820. Professor Bruce L. Melvin, in his study of rural, farm, and urban populations in New York, shows that it has taken place in that state since 1855. He finds that

the "rural" population decreased from 2,081,000 in 1855 to 1,795,000 in 1920, shrinking from 60 per cent to 17.3 per cent of the total population. The open country or farm population, likewise, underwent a contraction, declining from 1,153,000 in 1855 to 797,000 in 1920, or from 33.3 per cent to 7.7 per cent of the state's population.

The change is also evident in new agricultural states. Let us note North Dakota, as a sample. Its farm population decreased from 394,500 in 1920 to 372,886 in 1925, or from 61 per cent to 58 per cent of the whole population.

It is interesting to study the urban migration, the movement from cities to farms, the 7.2 millions for the six years noted above. We find that these millions are mostly farming people who have previously gone to cities, become disillusioned, and returned to farms. The reasons they give for leaving the cities are various. They believe that the country is healthier, that the cost of living can be reduced thereby, that the farm is a better place in which to rear children, and that there is greater promise for an independent life out in the open spaces.

It would be possible to make a long list of consequences which follow from these population changes, but it will be our privilege to limit the discussion to a few. Two very obvious ones scarcely need mention, namely, the great increment to city increase and the equally great decrease in farm and rural population gains. During the decade 1910-20, over 40 per cent of the city increase was contributed by rural districts. Had the country not donated the 6.5 millions to urban districts, rural districts would have shown a greater rate of increase of population than the cities, whereas the rate of increase was only about a fifth of that of the latter. For the first time in the history of our nation, the nation has suffered an absolute loss in the number of its farming people. The relative decline has been going on since the beginning of the nation. In 1790 about 95 per cent of the population was agricultural, in 1920, about 30 per cent was on farms. But up to that time, there were always more farmers at the end of the decade than at the beginning. Since then, however, the farming population has fallen off several millions, a reduction from 31,400,000, in 1920, to about 27,511,000 in 1928.

Thirty-nine of our states decreased their farm population from 1.9 per cent to 22.4 per cent each during the five years 1920-25.

It must occur to everyone to inquire as to the effects of this great interchange between country and city on the rural or farm population. The writer discussed these in detail in his presidential address before the American Sociological Society last December, which readers may see in the publications of that Society, soon to appear. Here the main points of the discussion can receive only a bare enumeration. Because the statistics of crime, delinquency, insanity, dependency, and morbidity show that urban rates of these pathological phenomena are much higher than those of rural districts, it is rather evident that the backward, delinquent, and sub-normal classes generally are collecting in cities and that in the backward flow of people to the country there is little indication that these classes return to the rural districts. On the other hand, measured by education and achievement of the urban-industrial-commercial brand, urban districts have a much larger percentage of developed leadership than the country, indicating that such leadership courts cities and does not flow back to the country. Thus it would seem that the country population is benefitted by losing many of the pathological individuals and suffers by the loss of developed leaders; that is, it is losing at both ends of its curve of the distribution of ability, the portions where relatively few persons occur, and gaining in the great central part where the preponderating majority are found, the average but normal human beings. What the effect of this may be upon the potential supply of leadership, of inborn capacity out of which leaders might be developed, given the opportunities, cannot receive discussion now, however inviting.

Probably in no aspect of rural life are more pronounced changes taking place than in neighborhood and community affairs. Both specialized investigations and wide observation support the statement that the old local communities are undergoing disintegration and are disappearing in many portions of the nation. Professor J. H. Kolb has found this to be true in Dane County, Wisconsin, and my colleague, Mr. John Johansen, discovers the same trend in the numerous townships he has surveyed in Grand Forks County, North

Dakota. In an address at the University of North Dakota recently, Governor George F. Shafer stressed the revolution going on in our state in that direction. In fact, in this state and neighboring states one may observe the doors and windows of stores and shops boarded up as an indication that the small trade villages have gone out of business. Neighborliness and friendliness, nearby visiting and intimacies of farmers have declined. One of our students from the farm told me that at his home they recently found out that a neighboring farmer had been ill for months without their knowledge, a thing unthinkable in the older days. Farming people are more and more establishing more distant associations for educational, religious, cultural, and recreational purposes. Professor Walter Burr tells of a Kansas farmer who goes fifty miles rather frequently to attend the meetings at a new community hall ("Quality Reaches the Farm," *Nation's Business*, July, 1928). In the district from which this is written, it is the usual thing to find farmers and villagers from fifty to a hundred miles away attending some event in Grand Forks in the evening.

Of course the chief causes of the disorganization of the old plan of local community are the mobilization of country populations, the coming of improved highways, automobiles, auto busses, and radios. Surfaced highways increased from about 61,000 miles in 1918 to 521,000 in 1927. In 1920, nearly 31 per cent of farms had automobiles, but the proportion in 1925 owning motor vehicles was almost 71 per cent, 63 per cent having automobiles. Kansas boasts of 1.5 cars per farm, some farmers having two or three cars. Auto busses are penetrating in every direction. They pick up and let off passengers anywhere along the route. Country people make wide use of them for trading, visiting, school attendance, and other purposes. There were 1,251,000 radios on farms April 1, 1927, an increase of 128 per cent since 1925. It would not be surprising if there were twice that number now. In order to be enjoyed, radios do not require association of people. Owners are inclined to remain at home in the evening and pick their lectures and entertainment out of the air. It was found that 662, out of the 2,384 farmers questioned, listened daily to the lectures given on farming by radio from the State Agricultural College at Manhattan, Kansas.

The tendencies manifesting themselves now in agricultural regions are the formation of larger associations on the basis of interests rather than locality, the dependence on urban and village facilities for cultural and recreational satisfactions, the construction of more good highways and the ownership of more automobiles, and in a few cases resorting to the use of airplanes. Roger Babson's prophecy probably is true that we are bound to come to the use of a helicopter-auto-pontoon airplane for city uses and that farmers will participate in this and become still more independent of locality. There is also a manifest tendency toward better farm homes, better conveniences, and toward electrification of homes and barns. This is noted to be the case in Washington, North Dakota, Kansas, and other states. Kansas contains 900 electrified farms.

It is a well-known fact that marital conditions in the United States have become increasingly unstable for many years. Thus the ratio of marriage to divorce changed from 17.3 marriages to one divorce in 1887, to 6.75 in 1926. It is also noteworthy that urban rates are higher than rural rates, "rural" here meaning village as well as farming populations. As to whether divorce is increasing among farmers we do not have statistical proof, but it is possible to study comparative urban and agricultural rates. While we cannot secure statistics of marriage and divorce for farming people exclusively, we are able to approach them closely by using data from the more agricultural counties, those having a minority population of villagers.

Table I exhibits the results, for the nation and the nine divisions, of our own study we have just completed. The data are too extensive to be given for all the states.

It is observed that the big city ratio is 80 per cent above that of farming districts for the nation as a whole. The greatest difference is found in the South Atlantic division, where divorces are three and a half times as frequent in city as in country. The New England and Middle Atlantic divisions are the only ones where the agricultural rate is higher than the urban. But it is most obvious that farming people are far more stable in family matters than are city dwellers.

In the field of education, there is a great need of improvement

in country schools, and it is possible to record some advances. Consolidation, with its many advantages in plant, grounds, equipment, increased attendance, grading, offering high-school work, and so on, is gradually taking place. Nevertheless, the preponderating majority of the schools of farmers are one-room, one-teacher institutions. The qualifications of the elementary teachers of the nation have varied inversely with the size of the school, the rural schools being located at the lowest point. Even in New York and Pennsylvania,

TABLE I
MARRIAGE AND DIVORCE IN URBAN AND NON-URBAN DISTRICTS OF THE
UNITED STATES AND RATIO OF MARRIAGE TO DIVORCE FOR
THE FOUR-YEAR PERIOD 1922-25*

DIVISIONS	NON-URBAN COUNTIES			LARGEST CITIES		
	Marriages	Divorces	Ratio	Marriages	Divorces	Ratio
New England	63,204	7,713	8 2	164,182	19,833	8 3
Middle Atlantic	21,154	1,488	14 2	409,613	26,290	15 5
East-North Central	12,675	1,705	7 4	399,786	87,473	4 1
West-North Central	11,974	1,196	9 9	183,760	51,799	3 5
South Atlantic	31,058	1,205	25 8	179,582	24,009	7 5
East-South Central	16,053	1,342	11 6	126,340	23,850	5 3
West-South Central	14,121	1,538	9 2	137,687	41,714	3 3
Mountain	15,147	2,597	5 8	70,685	20,024	3 8
Pacific	3,815	659	5 0	103,984	43,780	3 7
Total	189,201	19,443	9 7	1,835,613	338,777	5 4

*Compiled and estimated from United States Census publication, *Marriage and Divorce*, for the years indicated. The estimates for the states were made by O. N. Olson, student in the University of North Dakota.

investigations of a few years ago showed that 10 to 25 per cent of rural elementary teachers had no secondary training and only a small percentage had professional schooling. But during the past few decades there has been a constant tendency to raise the educational prerequisites of such teachers. Most states now demand the completion of high school and two years of college work, a part of which shall be in professional courses. We would expect this requirement to become universal in the near future.

One of the new developments in rural education is the establishment of the liberal arts college. Professor E. S. Bogardus writes me: "We have a number of county junior colleges which are not agricultural colleges, but classified as Liberal Arts institutions. In

one or two instances, two or three counties are going together and establishing a junior college. The rural college thus is following in the footsteps of the rural high school." Probably a far more important trend is the multiplication of agricultural high schools under provisions of the Smith-Hughes Act.

The wages of rural teachers are low. Thus 91 per cent of teachers in one-teacher schools receive less than \$1,000 a year, 22.7 per cent less than \$600; 79.5 per cent of those in two-teacher schools receive under \$1,000 and 35.3 per cent under \$600; 30 per cent of those in three-teacher schools and 9.2 per cent of those in consolidated schools receive under \$600 a year. There has been a recession in many districts from the higher teacher wages which developed during and immediately following war times.

Economically farmers continue to occupy a disadvantageous and dubious position. Their total wealth has been stationary since 1913, on the average, while it registered a 27 per cent loss between 1920 and 1925. To be set over against this is the fact that the national wealth just about doubled between 1913 and 1928, the gains evidently accruing to urban populations. It is made plain by H. C. Taylor and Jacob Perlman that farmers' portion of the national income has approximately been cut in two. In the pre-war period, 1910-14, when farmers formed about one-third of the population, their total net income was over 20 per cent of the "current income" of the nation, but by 1925, when they were about one-fourth of the population, their net income had shrunk to 10.2 per cent of the national income. Had they continued to share the same proportion of the nation's income, their net income would have been over 15 per cent of the total in 1925. ("The Share of Agriculture in the National Income," *Journal of Land and Public Utility Economics*, October, 1927.)

For a long time, farms and farm land in many of our most productive states have ceased to have a commercial selling value. There is almost no movement in farm land. The records of the United States Department of Agriculture inform us that, for the year 1927, only 2.8 per cent of the farms of the nation exchanged owners by means of voluntary sales. The Pacific division was highest in this, with 3.6 per cent, and the West North Central was lowest, with 2.3 per cent of farms so exchanged. Forced transfer of the

land comprised 2.3 per cent of all farms, the Mountain division standing highest with 4.5 per cent, West North Central next with 3.2 per cent and the Middle Atlantic lowest with 1.2 per cent of farms conveyed in this manner. The price of land at forced sales is tragically low. In southern Wisconsin, during 1928, good farms were closed out at cost of improvements. A friend tells me that he could not sell at \$100 an acre his land in Indiana which a few years ago would have brought three times that amount. In the northwest Central States land is static or staggering. Most land owners regard their farms as liabilities rather than as assets.

The critical position of many farmers and farm laborers exhibits itself in another way. In the country they are faced with the results of improved farming, which increases products, and with international competition in agriculture, which keeps down the prices of farm products. These conditions release and reduce the number of farmers and agricultural laborers and tend to drive them to the cities. In the cities they confront unemployment caused by the introduction of improved machinery. Hence there is a lessening demand in cities for the labor of migrants from farms.

There is some drift toward an industrialized system of farming. Larger aggregations of capital are being used in production and distribution. A third or more of Canadian wheat is marketed by the agrarian wheat pool. Professor E. S. Bogardus informs me that the California Fruit Growers' Exchange did nearly a hundred million dollar business for its 206 local units during the year ending October, 1928. The heavy investment of capital in power machinery proceeds apace. As a sample, witness the increased use of tractors from 131,000 in 1920 to over 500,000 in 1925. Kansas has over 30,000 in use and Professor F. R. Yoder writes me from Washington that they are being adopted rapidly in that state. Also note the speed with which farmers resort to harvesting their grains by means of the "combine." Kansas employed 14 of these machines in 1918, 2,796 in 1922, and nearly 12,000 in 1928. That state had invested over fifty million dollars in tractors and combines up to that date. North Dakota used 3 combines in 1925, 30 in 1926, and some 400 in 1928. The use of tractors and combines usually means big farming of the so-called capitalistic sort.

Extensive adjustments to meet changed conditions are being

made all over the United States. In the northwest central area, the trend is away from single crop and small grain systems toward diversification, including stock-raising and dairying. Professor C. C. Taylor of North Carolina writes me that readjustments in his section are away from exclusive cotton culture toward swine and dairy production. Agricultural leaders in North Carolina hope to supplant the cropping system by a well-balanced agriculture.

A letter from Professor Dwight Sanderson contains the announcement of "the appointment by the governor-elect (of New York), Franklin D. Roosevelt, of an Advisory Committee on Agriculture composed of representatives of all the leading farmers' organizations of the state, the agricultural press, and of this institution (Cornell University)." After several meetings where agricultural policies were discussed, measures have been prepared and placed before the Legislature "dealing with roads, rural schools, taxation, etc."

THE FAMILY

ERNEST R. GROVES

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ABSTRACT

The history of the American family for 1928 records nothing spectacular. The statistics reveal that divorce is still increasing and from some cities come reports of a decline in marriage and in births. There has been an increase in scientific investigation of the family and evidences of a growing appreciation among thoughtful people of the difficulties that marriage and the family are meeting in this period of transition. Europe like the United States is feeling the influences of modern life that play upon family experience.

The reporting of the changes that occur in the family has not been very fully developed. The author, however, has endeavored to collect from different sources and with various aids¹ a number of facts regarding the family for the past year in different states, for the nation as a whole, and for certain European countries. These changes are recorded in a number of different groupings in the pages that follow.

STATISTICS

On account of the time that is required to tabulate statistics having to do with the family, the more important tabulations have to be one year behind. Therefore our record for the country as a whole is for the year 1927. An effort has been made to gather the marriage and birth records of 1928 from representative cities. Although the press has reported these statistics, especially in several cities where there is said to have been a noticeable decrease in marriages and births during the year, it has not as yet been possible to obtain official statements and the newspaper reports are of course not acceptable authority.

The Department of Commerce announces that, according to the

¹ The author wishes to thank the correspondents who have reported material from their various sections, especially does he wish to recognize the contributions of Miss Ruth Lindquist, of the Institute for Research in Social Science, University of North Carolina; and of Miss Flora Thurston, of the National Council for Parental Education.

returns received, there were 1,200,694 marriages performed in the United States during the year 1927, as compared with 1,202,574 in 1926. These figures represent a decrease of 1,880 marriages, or about one-fifth of one per cent.

During the year 1927 there were 192,037 divorces granted in the United States, as compared with 180,853 in 1926, representing an increase of 11,184, or 6.2 per cent. There were 4,252 marriages annulled in 1927, as compared with 3,825 in 1926.

The estimated population of continental United States on July 1, 1927, was 118,628,000, and on July 1, 1926, 117,136,000. On the basis of these estimates the number of marriages per 1,000 of the population was 10.12 in 1927, as against 10.27 in 1926, and the

TABLE I

	1927	1926	PER CENT OF INCREASE	NUMBER PER 1,000 OF THE POPULATION	
				1927	1926
Marriage	1,200,694	1,202,574	— 0 2	10 12	10 27
Divorce	192,037	180,853	6 2	1 62	1 54

number of divorces per 1,000 of the population was 1.62 in 1927, as against 1.54 in 1926.

The Department of Commerce announces that birth-rates² for 1927 were lower than for 1926 in 23 of the 33 states for which figures for the two years were complete. The highest 1927 birth-rate (28.8 per 1,000 population) is shown for North Carolina and the lowest (13.6) is for Montana.

Death-rates for 1927 were lower than for 1926 in 28 of the 33 states shown for both years. The highest 1927 death-rate (13.9 per 1,000 population) is shown for Vermont and the lowest (7.1) for Idaho.

Infant mortality rates for 1927 were lower than for 1926 in 30 of the 33 states shown for both years. For states the highest 1927 infant mortality rate (125.8) appears for Arizona and the lowest (47.5) for Oregon.

² For the registration area exclusive of Louisiana, Massachusetts, and Utah, from which complete transcripts for 1927 have not been received.

According to press reports various cities, including New York and Philadelphia, recorded a decline in marriages and in births for 1928. Tables III-V give the only official statements obtainable at this time.

TABLE II

	TOTAL NUMBER RECORDED IN 1927			RATE PER 1,000 ESTIMATED POPULATION				INFANT MOR- TALITY (DEATHS PER 1,000 BIRTHS)	
	Births	Deaths		Births		Deaths		1927	1926
		All Ages	Under 1 Year	1927	1926	1927	1926		
Birth registra- tion area	1,763,035	981,725	113,391	20 4	20 6	11 4	12 1	64 3	73 3

TABLE III
BALTIMORE

YEAR	NUMBER PER 1,000 POPULATION		
	Marriages	Births	Deaths
1924	10 19	22 50	14 41
1925	9 75	21 28	14 63
1926	9 56	20 41	15 12
1927	8 94	19 90	14 14

TABLE IV
CHICAGO

Year	Population	Marriages	Births	Deaths
1924	2,939,605	42,299	58,900	32,918
1925	2,995,239	41,080	59,639	34,318
1926	3,048,000	42,323	60,200	35,623
1927	3,102,800	40,688	60,888	35,758
1928	3,157,400	40,570	59,016	39,562

In 1927 the total number of marriages was 7,323 while in 1928 the total number was 6,680, an absolute decline of about 9 per cent.

BOSTON

The Boston Health Department reports that its birth-rate dropped from 25 per 1,000 in 1927, to 23 per 1,000 in 1928, while infant mortality remained the same—76 per 1,000.

Figures for marriage and divorce are not yet available.

The estimated increases in population from year to year are all made by the United States Bureau of the Census. Of this increase considerably more than half is evidently due to influx into the city from outside, as the average excess of births over deaths is only 24,993 while the average increase in population is 54,449.

TABLE V
MILWAUKEE

Year	Population	Marriages	Births
1924	490,000	4,464	11,793
1925	520,000	4,506	11,706
1926	530,000	4,615	12,027
1927	550,000	4,588	12,373
1928	560,000	4,568	12,495

STUDIES

Among those reports and investigations of special interest published in 1928 are reports concerning the *Investigation of Eugenic Sterilization in California*, by Paul Popenoe; *Domestic Discord*, by Ernest R. Mowrer and Harriet R. Mowrer; *Family Life Today*, edited by Margaret E. Rich, papers presented at a conference in celebration of the fiftieth anniversary of family social work in America held at Buffalo, October 2-5, 1927; *Report of the Home Problems Conference*, held at the Merrill-Palmer School, Detroit, Michigan; *American Marriage and Family Relationships*, by Ernest R. Groves and William F. Ogburn. A study of the Protestant church view of sex, love, and marriage was carried on by the Federal Council of Churches of Christ in America, which was reported early in 1929.

Some of the important research projects on the family in progress during 1928-29 are the following:

- "The Cost of Babies," by MARY LOUISE MARK, Department of Sociology, Ohio State University, Columbus, Ohio.
- "The Development of New Attitudes toward Marriage and Divorce as Revealed in Soviet Russia, and in the Rise and Revolt of Modern Youth in Germany, England, and the United States," by V. F. CALVERTON, Editor of the *Modern Quarterly*, 2110 E. Pratt St., Baltimore, Md.

- "The Factors which Make for Success in Family Life: A Study of the Family Background of Two Hundred and Fifty Successful Men and Women," by MRS. CHASE GOING WOODHOUSE, Bureau of Home Economics, United States Department of Agriculture, Washington, D C
- "Methods of Getting a Contraceptive Technique to Rural Communities in England," by NORMAN E. HIMES, 23 Holden Green, Cambridge, Mass.
- "The Pecuniary Valuation of Housewives' Services," by HILDEGARDE KNEELAND, Bureau of Home Economics, United States Department of Agriculture, Washington, D.C.
- "Personality Problems in the Coeducational College," by WILLIAM KIRK, 705 Indian Hill Blvd., Claremont, Calif.
- "The Revolutionary Effect of the Work of a Massachusetts Doctor upon the Decline of the British Birth Rate," by NORMAN E. HIMES, 23 Holden Green, Cambridge, Mass.
- "A Study of the Problems and Practices in Home Management and Child Development as seen by a Selected Group of Homemakers," by RUTH M. LINDQUIST, Institute for Research in Social Science, University of North Carolina, Chapel Hill, N.C.
- "A Study of Successful Families " "Successful" family is defined as one in which the husband and wife have worked out a satisfactory all round adjustment to each other, to the children, and to the community. By MRS CHASE GOING WOODHOUSE, Bureau of Home Economics, United States Department of Agriculture, Washington, D.C.
- "Successful Marriage," by ERNEST R GROVES, Chapel Hill, N.C.
- "Use of Time by Homemakers," by HILDEGARDE KNEELAND, Bureau of Home Economics, United States Department of Agriculture, Washington, D.C.

MOVEMENTS FOR FAMILY CONSERVATION AND EVENTS OF INTEREST FOR STUDENTS OF THE FAMILY

Although returns are slow in coming in from correspondents at distant points, the widespread interest in family and marriage problems makes it difficult to select the activities and events occurring in 1928, concerning the family, of greatest interest to students.

A Parents' Exhibition, the first at least in the United States, was held in New York in the spring of 1928. This was largely attended and demonstrated the rapidly developing resources available for those concerned with home, child, and parenthood responsibilities.

In April in New York City, there was a conference of those interested in the organization of a family consultation service. Mrs. Anna Garlin Spencer was made chairman of a committee which is

continuing to study the possibility of organizing some sort of family clinic.

In October at Washington was held a conference under the auspices of the National Committee on Employer-Employee Relations in the Home. A permanent committee was established to promote research.

An important event during the year was the inauguration of the work of the Institute of Women's Professional Relations, with Mrs. Chase Going Woodhouse managing director, with headquarters at Greensboro, North Carolina.

A most interesting and perhaps unique experiment in family reconstruction was made by the Mount Pleasant Congregational Church at Washington, in its Life Adjustment Institute, which offered free to the citizens of Washington an opportunity to receive expert counsel in personal and family problems from medical, psychiatric, social, and educational experts.

The fortieth anniversary of the Child Study Association was celebrated in New York in a program that attracted national attention and illustrated the development in child care that has taken place during the activities of that organization.

The Social Science Research Council appointed a committee on the study of family and sex with Mr. Clark Wissler, chairman. This committee held in December at Detroit a conference devoted to research in the family and sex.

Important contributions were made during 1928 by Better Homes in America, James Ford, Executive Director, with headquarters at Washington; The Smith College Institute for Co-ordination of Women's Interests, Ethel Puffer Howes, Director, Northampton, Massachusetts; the National Congress of Parents and Teachers, Mrs. A. H. Reeve, President, Washington, D.C.; the National Council of Parental Education, Flora M. Thurston, Executive Secretary, New York City.

PARENTHOOD CONFERENCES DURING 1928

Special Evening Conference Series held by the Child Study Association of America at its headquarters in New York City:

January 9, Subject, "Discipline," leader, DR. L. G. LOWREY

January 16, Subject, "The Use of Money," leader, DR. E. A. KIRKPATRICK

- January 23, Subject, "Self-Reliance and Responsibility," leader, DR. LEONARD BLUMGART
- January 31, Subject, "Sex Education," leaders, DR. F. E. WILLIAMS and DR. B. C. GRUENBERG
- February 6, Subject, "The Parent-Child Relationship," leader, DR. BERNARD GLUECK

Other Conferences held by the Child Study Association of America are:

- January 10, Subject, "Character—What Factors Determine It?" leader, DR. HUGH HARTSHORNE
- January 24, Subject, "Teaching Music to Little Children," leader, MRS. SATIS N. COLEMAN
- February 7, Subject, "The Gestalt Theory of Psychology," leader, DR. KURT KOFFKA
- February 14, Subject, "Thumbsucking and Its Allied Habits—Their Relation to the Problem of Nervousness in Children," leader, DR. DAVID M. LEVY, Chief of Staff at the Institute of Child Guidance, New York City
- February 21, Subject, "Mental Hygiene of College Students," leader, DR. KARL A. MENNINGER, Washburn College, Topeka, Kansas
- Progressive Education Conference, New York City, March 5-10, 1928
- Parents' Exposition, April 16-28, 1928
- Nursery School Conference at Vassar College, February 6 and 7, 1928
- Teachers College Conference on "Parental Education and the Public Schools," July 24, 25, and 26, 1928
- Special Conference, Child Study Association, New York City, March 20, 1928: Subject, "Nature as a Part of the Child's Education," leader, DR. BERTHA C. CADY
- Conference, Child Study Association, New York City, March 27, 1928 Subject, "Religious Training for Children," leader, MRS. R. J. LEONARD
- Conference, Child Study Association, New York City, Subject, "Youth Movement in Europe," leader, DR. ELIZABETH ROTTEN
- Fortieth Anniversary Conference and Dinner, Child Study Association of America, November 20, 1928, at Hotel Pennsylvania, New York
- National Council of Parent Education, Atlantic City, New Jersey, November 14-17, 1928, leader, MR. E. C. LINDEMAN

LEGISLATION

Only a few of the state legislatures met during 1928. In New York two bills were passed making the annulment of marriage possible on the grounds of incurable insanity and lunacy. The minimum marriage age was raised for boys from fourteen to sixteen and for girls from twelve to fourteen in the Philippines, by a new law that went into effect early in 1928.

The most important ecclesiastical legislation was that of the Methodist Episcopal Church North, allowing the remarriage by the church of persons who obtained divorces on grounds that in the opinion of the minister are the full moral equivalent of adultery.

Legislation was proposed which expressed what appears to be an increasing desire for further restriction of those who may marry and those who may solemnize marriages. This will appear in bills introduced in the state legislatures during 1929.

EUROPEAN CONDITIONS

Germany.—The transition through which the family is passing in Europe is perhaps most impressive in Germany. Lindsey's *Companionate Marriage* has had a large popular reading and is calmly spoken of as the American marriage solution. A book by Charlotte Buchow Homeyer entitled *Temporary Marriages* has also excited interest. She suggests that temporary wives be paid a salary in addition to their keep, this money to accumulate and become the wife's absolute property in case the union is dissolved.

Italy.—Benito Mussolini has during the year stated that the Italian policy is utterly opposed to divorce, any form of experimental marriage, and birth-control. In Italy, the only country which has compulsory maternity insurance, the number of insured women has increased from 640,000 in 1922 to 900,000 in 1927. In 1927 the number of women receiving benefits was more than 40,000.

France.—Provisional figures for the infant mortality rate in France for 1927 show the lowest rate ever recorded in that country—83 per 1,000 live births. The rate for 1926 was 97. The provisional birth-rate in France for 1927 is 18.1 per 1,000 population, as compared with 18.8 in 1926.

England.—Divorce has continued to increase. Over three thousand divorces were granted in 1927, the greatest number recorded except in 1921 when many war unions were dissolved. In the mining regions there has been much suffering of families, leading both to temporary aid and to the effort of the government to transfer workers to other places and train them for new occupations.

Turkey.—Turkey requires health certificates for marriage, and

the law, which is enforced by the governors of the provinces, is exacting in its details.

COMMENT

The welfare agencies report that unemployment has been a major family problem during the last year.

In Massachusetts there has been some agitation for the adoption of a popular policy with reference to birth-control, but little progress has been made in any open recognition of birth-control or in any trend toward more favorable legislation.

The newspapers revealed during 1928 an increasing interest in marriage and family matters by their willingness to print such material, and on the whole there appears to be a more constructive attitude on the part of the press toward marriage and family affairs.

Although general interest in the Lindseyan marriage scheme has abated, it is the belief of correspondents that there has been in some of our cities an increase in sex alliances of more or less permanent character as a substitute for matrimony, and this opinion is shared by the author.

There has been no decrease in the interest of mothers in the science of child care, and there is some indication that more fathers are becoming concerned with problems of parenthood.

Outside of a few colleges and fewer churches, there is little interest shown in marriage and parenthood preparation by the unmarried.

It is with regret that we record the death of Mary E. Richmond, whose long-continued interest in family matters, especially along the line of legislation, gave her in her generation the same commanding leadership that Dr. Samuel Dyke had in the preceding period.

CRIME

C. E. GEHLKE

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ABSTRACT

Developments in the field of statistics of crime and criminals—Figures issued by the U. S. Bureau of the Census show an increase of 7 per cent in the number of admissions to prisons in 26 states in 1927 over 1926, and an increase of 8 per cent in the population of prisons January 1, 1928, over January 1, 1927. Further statistical studies of the operation of criminal courts in New York, Illinois, Pennsylvania, Cincinnati, and Milwaukee reveal tendencies already noted in earlier surveys. The basic studies for a system of police statistics are making headway. New York State improved its system of collecting statistics of crimes and criminal justice. *Crime Commissions*.—In New York and Pennsylvania the commissions appointed by the legislatures were active in study of the conditions accompanying crime. The Illinois Association for Criminal Justice has practically completed its survey. *Probation*.—Slow but noticeable progress is being made in the fields of federal and state probation systems.

Much of the material relating to crime in 1928 is at the date of writing (late in February) still unavailable in printed form. Reports and publications for a given year do not usually appear within two months of the close of that year.

I. DEVELOPMENTS IN THE FIELD OF STATISTICS OF CRIME AND CRIMINALS

The United States Census of Prisoners.—On February 27, 1929, the Census Bureau had issued summaries for twenty-six states in the form of newspaper releases. The complete report was not yet published. The tables here presented (Table I and Table II) indicate the tendencies probably as well as the completed data will, since a large part of the population of the United States is here included.

The significant parts of Table I are obviously columns *d*, *e*, *f*, and *g*. The change from 1926 to 1927 seems by no means to be in one direction. Of the twenty-six states, twelve show a decrease in the number per 100,000 from 1926 to 1927; fourteen an increase. The maximum increase is in New Hampshire (with only fifty ad-

missions during the year) where the ratio of 1927 to 1926 is 151.5 to 100.0.; the minimum South Dakota, with 78.6 to 100.0. Of the five largest states (in 1920), Illinois (104.2), Ohio (112.5), Pennsylvania (112.6) show increases in the per 100,000 rate; Massa-

TABLE I
PRISONERS RECEIVED FROM THE COURTS DURING THE YEAR

State	Number Received			Per 100,000 of General Population			Percentage Column d is of Column e
	a	b	c	d	e	f	
	1927	1926	1923	1927	1926	1923	
California	2,050	1,840	1,570	46 2	42 8	40 4	107 9
Illinois	1,821	1,728	1,387	25 0	24 0	20 2	104 2
Iowa	760	665	753	31 3	27 4	31 2	114 2
Louisiana	755	765	559	39 0	39 9	30 0	97 7
Maine	182	210	202	23 0	26 6	25 9	86 5
Maryland	2,239	1,882	1,390	140 2	119 1	91 6	117 6
Massachusetts	752	826	693	17 7	19.7	17 1	89 8
Michigan	3,510	3,040	1,996	78 2	69 2	49 4	113 0
Minnesota	827	822	659	30 8	31 0	26 1	99 3
Missouri	1,758	1,609	912	50 1	46 0	26 4	108 9
Montana	273	277	243	38 2	39 9	38 9	95 7
Nevada	112	123	75	144 7	158 9	96 9	91 1
New Hampshire	50	33	35	11 0	7 3	7 8	151 5
New Mexico	230	193	164	58 7	49 7	43 7	118 1
New York	2,917	3,290	2,666	25 5	29 1	24 5	87 6
Ohio	3,640	3,180	2,264	54 2	48 2	36 6	112 5
Oklahoma	2,078	1,680	1,711	87 2	71 7	78 1	121 6
Oregon	368	332	262	41 3	37 9	31 5	108 9
Pennsylvania	1,739	1,531	1,256	17 9	15 9	13 7	112 6
Rhode Island	196	197	294	27 8	28 4	45 0	106.2
South Dakota	236	297	185	33 9	43 1	27 8	78 6
Utah	145	155	186	27 8	30 2	38 5	92 1
Virginia	904	844	608	35 5	33 5	25 1	106 0
Washington	789	827	750	50 5	53 8	51 7	93 8
West Virginia	853	854	772	50 3	51 2	49 2	98 2
Wisconsin	783	817	532	26 8	28 3	19 3	94 5

chusetts (89.8) and New York (87.6) show declines. Throughout any consideration of figures of this kind, it should be kept clearly in mind that the number admitted to prisons is not an indicator of the amount of crime, nor of the number of convictions. For example, of the five largest states New York and Massachusetts are generally regarded as using probation most effectively of all the states in the Union: they show a decline in the proportion received from the courts.

It is impossible, therefore, from these figures to show any clear tendency one way or the other. The total received by these states in the year 1927 was 29,967; in 1926, 28,026; in 1923, 22,124. The ratio of 1927 to 1926 is 106.9 to 100.0. But this does not take into

TABLE II
PRISONERS PRESENT JANUARY 1

State	Number Received				Per 100,000 of General Population				Percent- age Column e is of Column f
	a	b	c	d	e	f	g	h	
	1928	1927	1926	1923	1928	1927	1926	1923	
California	6,328	5,898	5,285	3,837	140 6	134 8	124 4	100 5	104 3
Illinois	6,379	6,038	5,293	4,416	86 8	83 3	74 0	64 9	104 2
Iowa	2,157	2,044	2,018	1,794	88 9	84 3	83 4	74 3	105 5
Louisiana	1,743	1,686	1,575	1,593	89 7	87 5	82 5	86 1	102 5
Maine	384	412	432	379	48 4	52 1	54 8	48 7	92 8
Maryland	2,095	1,921	1,886	1,483	130 3	120 9	120 1	98 4	107 8
Massachusetts	1,886	1,923	1,769	1,448	43 7	45 6	42 4	36 0	95 8
Michigan	6,338	5,168	4,687	3,641	139 4	116 3	108 0	91 3	119 9
Minnesota	2,167	2,240	1,906	1,634	80 1	83 9	72 4	65 3	95.5
Missouri	3,624	3,442	3,059	2,205	103 0	98 2	87 6	64 0	104 9
Montana	471	437	420	331	85 8	62 0	61 4	54 0	138 4
Nevada	190	232	203	174	245 5	299 7	262 5	224 8	81 9
New Hampshire.	126	133	150	138	27 7	29 3	33 1	30 8	94 5
New Mexico	381	358	353	239	96 7	91 8	91 5	64 1	105 3
New York	7,531	7,298	6,820	6,316	65 5	64 2	60 7	58 4	102 0
Ohio	7,531	6,209	5,398	4,234	111 2	93 3	82 6	69 1	119 2
Oklahoma	3,278	2,677	2,513	1,799	136 2	113 3	108 4	83 1	120 2
Oregon	629	572	478	406	70 2	64 7	54 9	49 2	108 5
Pennsylvania	4,505	4,170	3,960	4,298	46 0	43 1	41 5	47 2	103 5
Rhode Island	364	388	315	466	51 2	55 5	45 9	72 0	92 2
South Dakota	420	469	445	326	59 9	67 7	65 0	49 2	88.4
Utah	208	210	206	200	39 5	40 5	40 5	41 8	97 5
Virginia	2,135	1,979	1,920	1,960	83 3	78 2	76 7	81 6	106 5
Washington	1,484	1,552	1,504	1,010	94 2	100 1	98 7	70 3	94 1
West Virginia.	1,561	1,799	1,768	1,628	91 2	106 9	106 9	104 8	85 3
Wisconsin	1,601	1,494	1,356	1,158	54 5	51 5	47 3	32 2	105 8

consideration the increase in population, which would probably reduce this figure somewhat. It is not probable, however, that the population of these twenty-six states grew in one year 6.9 per cent. So it is likely that the number per 100,000 for the twenty-six states did increase slightly.

In sixteen out of the twenty-six states the number per hundred thousand of the population in prison on the 1st of January, 1928, was greater than a year before. The range of the ratio of 1928 was

from 81.9 (in Nevada) to 138.4 (in Montana). In 20 cases out of 26 the ratios for admissions change and for population change were in harmony; i.e., either both were above 100 or both were below 100. In thirteen of the states, the population ratio (of 1928 to 1927) was greater than the admissions ratio (of 1927 to 1926), and in thirteen, it was equal or smaller. Only Massachusetts, of the five

TABLE III
COMPARATIVE TABLE OF DISPOSITIONS OF FELONY CASES IN
SIX JURISDICTIONS (1925 AND 1926)

	New York State 1926 (Six Months)	New York City 1926 (Six Months)	New York City 1925*	Pennsylvania (4 large cities) 1926	Illinois State 1926	Chicago and Cook County 1926	Milwaukee 1926	Cincinnati 1925-26
Total arraigned . .	12,147	8,144	19,084	31,439	16,812	13,117	1,838	1,445
Percentage eliminated pre- liminary hearing	52 6	58 7	58 1	74	43 7	48 5	17 4	55
Percentage eliminated grand jury	10 7	10 3	12 5	3	12 1	11 5		12
Percentage eliminated trial court	18 6	20 0	8 5	10	23 7	20 4	19 0	8
Percentage in which guilt was established	18 1	11 0	21 0	12	20 6	19 7	63 6	25
Percentage sentence sus- pended . .	5 4	1 7	5 3	4	5 1	4 7	27 6	10
Percentage punished .	12 7	9 3	15 7	8	15 5	15 0	30 0	15

* Report of the Crime Commission of New York State. Report to the Commission of the Sub-Commission on Statistics (1927), p. 111

largest states, showed a decline in the population of prisons in 1927 to 1928.

The total prison population in 1928 was 65,496; in 1927 was 60,749, an increase of 8 per cent.

Recent Studies by Crime Commissions.—The Crime Commission of New York State analyzed the results in 12,147 cases of felony charges arraigned in the second half of the year 1926.¹ Some of these figures may be compared with those of the preceding study of cases for the whole year 1925 in New York; with the *Summaries by the Pennsylvania Crime Commission* (published January 1, 1929²);

¹ Crime Commission of New York State. *Report of the Commission of the Subcommission on Statistics* (1928), pp. 21, 59.

² Commonwealth of Pennsylvania, *Report to the General Assembly Meeting in 1929 of the Commission appointed to study the laws, procedure, etc., relating to crime and criminals* (January 1, 1929).

with certain summary data from the survey of the *Illinois Survey of Criminal Justice* (in press); and with data from the *Cincinnati Study*.³

These figures (the most recent in this field of study) indicate clearly one uniformity: the very great importance of the preliminary hearing in weeding out felony cases; (excepting the case of Milwaukee, which deviates at every point); and a considerable diversity in the percentage found guilty, ranging from 11 to 25 per cent, again excepting Milwaukee's 63.6 per cent. A startling change in the New York City figures is the reduction of guilt established from 21.0 per cent in 1925 to 11 per cent in 1926.

Juvenile Court Statistics.⁴—The plan of the Federal Children's Bureau for uniform juvenile court statistics is going forward. An increasing number of juvenile and children's courts are using the uniform statistical cards and report blanks first put into use in 1926. In April, 1928, it was reported that 74 courts were using the cards, and 30 more were believed to be using them; a total of 104. The Children's Bureau proposes to publish reports based on these cards.

Police Statistics.—The Committee on Uniform Crime Records of the International Chiefs of Police presented as the first fruits of its research a pamphlet entitled, *A Uniform Classification of Major Offenses*. Four groups of major offenses—felonious homicide, rape, robbery, and burglary—were selected as a beginning. The statutes of thirty states were carefully analyzed with reference to these types of offenses, and under each of the four classes were grouped those which it seemed best there to allocate. The purpose of this procedure was to secure, not an absolute uniformity, but a rough approximation, so that it would be known what was included in any state under the general heading of, e.g., burglary. For each of the thirty states studied the report presents just what charges are to be classified under each heading. This scheme is to be extended to all

³ *What Happens to Felony Cases in Cincinnati?* Cincinnati Bureau of Municipal Research (May, 1928), p. 7.

⁴ Alice Scott Nutt, *Report on Progress of the Children's Bureau Plan for Uniform Juvenile Statistics: Proceedings of the National Probation Association* (1928), pp. 168-78.

the states. The ultimate use will be found in keeping and publishing of records of criminal complaints and data concerning persons taken into custody, with such a degree of uniformity that the significance of such data will be as great as possible.

The committee has also published a suggested form for a uniform annual report of a department of police.

Improvement of New York State Criminal Statistics.—In New York State the Crime Commission was able to secure the enactment of a law (Chapter 875, Laws of New York, 1928) providing in a very specific way for the improvement of the identification of all persons arrested, charged with a felony or with certain other offenses, and for the collection, analysis, and publication of statistics of crimes reported, arrests made, bail, trial and disposition, probation, parole, commitments and releases from penal institutions, etc., involving the mandatory co-operation of local officials by a regular reporting system.

II. CRIME COMMISSIONS

New York.—Reference is made, in the section on criminal statistics, to the results of the study of 12,147 felony cases in New York in the second half of the year 1926, and in the section on probation, to the passage of acts improving the administration of probation. Altogether the Commission secured the passage of thirteen acts, touching on receiving of stolen property, bail, parole, the state department of correction, criminal identification, records and statistics, and probation (see below).⁵

In addition to these the Crime Commission (continued by the Legislature of 1927) has published other studies, such as those on the causes of juvenile delinquency, and the state of the penal institutions.

In a conference with the Crime Commission, Governor Smith recommended taking away from judge and jury all authority relative to the sentencing of persons convicted, leaving them only the ascertainment of guilt. Treatment of convicts should be determined by a highly paid impartial board of experts, including psychiatrists,

⁵ Crime Commission of New York State, *The Crime Laws*, advocated by the Crime Commission of New York State (Albany, 1928).

alienists, lawyers, and students which would also determine parole and release.⁶

Pennsylvania.—The General Assembly of the Commonwealth of Pennsylvania appointed May, 1927, a "commission to study the laws, procedure, etc., relating to crime and criminals." Its activities are recorded in a *Report to the General Assembly Meeting* in 1929. They consisted in calling a conference of those judges of the state having contact with criminal cases, which formulated certain procedural and penal recommendations to the legislature; the convocation of a similar district attorneys' conference; a discussion of the need of adequate judicial statistics; recommendations on parole administration and on legislation concerning firearms and fourth offenders. An important part of the work of the commission consisted of a statistical analysis of what happened to 43,919 criminal cases resulting from arrests made in 1926 for 29 major crimes in the 67 counties of the state, some results of which are discussed in the section on criminal statistics.

The Illinois Association for Criminal Justice.—This body continued its survey, which was scheduled to go to press early in January, 1929.

III. PROBATION

The year 1928 marked the fiftieth anniversary of probation in the United States. By that year all states except Wyoming had adopted juvenile probation, and thirty-three states and the District of Columbia now have adult probation laws. However, only nine states can be said to have state-wide systems of adult as well as juvenile probation. The Secretary of the National Probation Association, Mr. Charles L. Chute, estimates the number of persons placed on probation in 1928 at 200,000. The number of salaried probation officers in the courts of the United States is 3,191.⁷

The development of probation in the Federal Courts since its introduction in 1925 has been slow. Only six probation officers in six District Courts are being employed, the result of lack of appropriations by Congress.

⁶ *Report of the Crime Commission of New York State* (1928), p. 13.

⁷ *Probation*, Vol. VII, No. 4 (December, 1928).

In New York State the State Crime Commission supported, and secured the passage of three measures concerning probation:

1. Increased the powers and staff of the State Probation Division, a part of the State Department of Correction.
2. Raised the qualifications for probation officers, providing that hereafter they must be high-school graduates; and that cases must be investigated before being placed on probation.
3. Gave power to judges in four county courts to appoint and fix salaries of probation officers.

Advanced probation legislation was introduced in New Jersey, but postponed till 1929. In Massachusetts, legislation to limit probation was killed in committee. The report of the secretary of the National Probation Association (in the 1928 proceedings of that organization) indicates widespread activity in the extension and improvement of probation in states which have already adopted it.

RELIGION

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ABSTRACT

Diversity and decentralization are the notable characteristics of American religious life. Freedom for marginal groups to develop in accordance with their own genius is more to be cherished than any kind of standardization. The United States Census of 1926 shows both processes—increasing diversity and increasing centralization—at work. There are new sects not appearing before, there is a growth of the larger denominations, which are absorbing some of the smaller ones. Both processes are to be encouraged. The largest growth in numbers is in the South, a condition to be attributed to the advantage which a religious group has where the population is homogeneous and the birth-rate fairly high. An increasing religious group consciousness and an increasing participation of religious groups in social action characterized this last year.

The statistical picture of American religious life which has during the past year come from the census bureau is published here without deletion. It is customary to lift out of such a picture the Roman Catholics, Jews, and certain major Protestant denominations and on the basis of these discuss tendencies in American religion. Such procedure is entirely erroneous. The picture loses richness of color. It falsifies the very genius of the American religious culture. It is customary on the basis of an assumed ideal unity to discuss the almost infinite diversity in this picture as though it represented human perversity; as though somewhere in the background there had been a Garden of Eden unity from which the American religious man had been cast out because of his sin and after being cursed by God, like Cain of old, he became the father of them that dwell in denominations. There never was such a religious Garden of Eden. American religious life has come up out of the woods, off the farms, and out of the cities. Unity, if it ever comes, will be an achievement built out of a conflict situation by those who have social imagination. Protestantism will always be ragged behind and in front. It is more likely to achieve standardization through competition than through overhead manipulation.

Any one reading this article is urged to read and pronounce aloud the whole list of American religious groups. It is necessary to do this to get the picture. Read over the list of Mennonite groups slowly enough to catch something of the meaning of that old European social protest group with the shaven upper lip—the protest against the military mustache—the loyalty to their agricultural economy, the acceptance of all of the processes of nature—the taboos on life insurance, lightning rods, and birth-control—or turn to see the church of the Latter Day Saints, severing all connection with other American groups, building up an empire out of a desert and making one of the greatest contributions ever made in America to the social ownership of a natural resource—water in the river for irrigation purposes. Read these and then realize that there are still foolish people in America whose ideal for American religious life is an economy standardized out of Washington or New York City. Let us thank God that the marginal areas of American religious life have still left enough freedom even sometimes to do foolish things.

The American religious economy is the product of the free self-chosen parish, the backwoods character of many of our groups, the black-land deep-rooted growth of others, the respectable minority groups, the spontaneous organization of new groups unmanipulated by overhead political organization, the survival of old European protest groups like the Mennonites and Brethren, and the gradual emergence of certain trunk-line groups which by their more rapid percentage growth promise to survive in the struggle for existence. The figures are given from the 1926 United States Census and the 1916 Census figures are given as basis of comparison. Thirty-two new denominations appear which were not enumerated in 1916. On the other hand, a number of significant mergers are under way.

As one studies the data, he is impressed with the fact that affiliation with some religious organization is a widespread phenomenon in American life. The 54,624,976 in most cases represents church membership, and, if we add the population which is the legitimate constituency of the membership, a very large section of American life is represented. Of the fifty-four million, 18,605,003 are Catholics and 4,087,357 are Jews, leaving 31,932,616. From these must

TABLE I

UNITED STATES CENSUS OF RELIGIOUS BODIES: SUMMARY OF MORE IMPORTANT
STATISTICS BY DENOMINATIONS, 1926*

DENOMINATION	CHURCHES		MEMBERSHIP	
	1926	1916	1926	1916
All denominations	231,983	226,718	54,624,976	41,926,854
Adventist Bodies:				
Advent Christian Church	444	534	29,430	30,597
Seventh-day Adventist Denomi- nation	1,981	2,011	110,998	79,355
Church of God (Adventist)	58	22	1,686	848
Life and Advent Union	7	13	535	658
Churches of God in Christ Jesus (Adventist)	86	87	3,528	3,457
African Orthodox Church	13		1,568	
African Orthodox Church of New York	3		717	
American Ethical Union	6	5	3,801	2,850
American Rescue Workers	97	29	1,989	611
Apostolic Over-Coming Holy Church of God	16		1,047	
Assemblies of God, General Council	671	118	47,950	6,703
Assyrian Jacobite Apostolic Church	3	15	1,407	748
Baha'is	44	57	1,247	2,884
Baptist Bodies:				
Northern Baptist Convention	7,611	8,319	1,289,966	1,244,705
Southern Baptist Convention	23,374	23,580	3,524,378	2,708,870
Negro Baptists	22,081	21,071	3,196,623	2,938,579
General Six Principle Baptists	6	10	293	456
Seventh Day Baptists	67	68	7,264	7,980
Free Will Baptists	1,024	750	79,592	54,833
United American Free Will Baptist Church (Colored)	166	160	13,396	13,362
Free Will Baptists (Bullockites)	2	12	36	184
General Baptists	465	517	31,501	33,406
Separate Baptists	65	46	4,803	4,254
Regular Baptists	349	401	23,091	21,521
United Baptists	221	254	18,903	22,097
Duck River and Kindred Associa- tions of Baptists (Baptist Church of Christ)	98	105	7,340	6,872
Primitive Baptists	2,267	2,142	81,374	80,311
Colored Primitive Baptists	925	336	43,978	15,144
Two-Seed-in-the-Spirit Predestina- rian Baptists	27	48	304	679
Independent Baptist Church of Amer- ica	13		222	
American Baptist Association	1,431		117,858	
Brethren, German Baptists (Dunkers):				
Church of the Brethren (Conserva- tive Dunkers)	1,030	997	128,392	105,102
Old German Baptist Brethren	62	67	3,036	3,399
The Brethren Church (Progressive Dunkers)	174	201	26,026	24,060

* Used by permission of World Almanac Publishing Company

TABLE I—Continued

DENOMINATION	CHURCHES		MEMBERSHIP	
	1926	1916	1926	1916
Brethren, German Baptists (Dunkers)— <i>Continued</i>				
Seventh Day Baptists (German, 1728)	4	5	144	136
Church of God, New Dunkers	9	13	650	929
Brethren, Plymouth:				
Plymouth Brethren I	166	161	4,877	3,896
Plymouth Brethren II	307	129	13,497	5,928
Plymouth Brethren III	24	17	684	476
Plymouth Brethren IV	47	72	1,663	1,389
Plymouth Brethren V	83	80	2,152	1,820
Plymouth Brethren VI	6	10	88	208
Brethren, River				
Brethren in Christ	81	72	4,320	3,805
Old Order or Yorker Brethren	10	9	472	432
United Zion's Children	28	31	905	1,152
Catholic Apostolic Church	11	13	3,408	2,768
Christadelphians	134	145	3,352	2,922
Christian and Missionary Alliance	332	163	22,737	9,025
Christian Church (General Convention of the Christian Church)	1,044	1,263	112,795	118,737
Christian Science Parent Church	29		582	
Christian Union	137	220	8,791	13,692
Church of Armenia in America	29	34	28,181	27,450
Church of Christ, Holiness	82		4,919	
Church of Christ, Scientist	1,913		202,098	
Church of God	644	202	23,247	7,784
Church of God (Headquarters, Anderson, Indiana)	932		38,249	
Church of God and Saints of Christ	112	92	6,741	3,311
Church of God in Christ	733		30,263	
Church of the Nazarene	1,444	866	63,558	32,259
Churches of Christ	6,226	5,570	433,714	317,937
Churches of God, Holiness	29		2,278	
Churches of God in North America (Gen- eral Eldership)	428	440	31,596	28,376
Churches of the Living God				
Church of the Living God, "The Pil- lar and Ground of Truth"	81	38	5,844	2,009
Church of the Living God, Christian Workers for Fellowship	149	154	11,558	9,626
Churches of the New Jerusalem				
General Convention of the New Je- rusalem in U.S.A.	85	108	5,442	6,352
General Church of the New Jeru- salem	13	15	996	733
Communitic Societies.				
Amana Society	7	7	1,385	1,534
United Society of Believers (Shak- ers)	6	12	192	367
Congregational Churches	5,028	5,900	881,696	809,236
Congregational Holiness Church	25		939	

TABLE I—Continued

DENOMINATION	CHURCHES		MEMBERSHIP	
	1926	1916	1926	1916
Disciples of Christ	7,648	8,396	1,377,595	1,226,028
Divine Science Church	22		3,466	
Eastern Orthodox Churches:				
Albanian Orthodox Church	9	2	1,993	410
Bulgarian Orthodox Church	4	4	937	1,992
Greek Orthodox Church (Hellenic)	153	87	119,495	119,871
Roumanian Orthodox Church	34	2	18,853	1,994
Russian Orthodox Church	199	169	95,134	99,681
Serbian Orthodox Church	17	12	13,775	14,301
Syrian Orthodox Church	30	25	9,207	11,591
Evangelical Church	2,054	2,592	206,080	210,530
Evangelical Congregational Church	153		20,449	..
Evangelical Synod of North America	1,287	1,331	314,518	339,853
Evangelistic Associations:				
Apostolic Christian Church	53	54	5,709	4,766
Apostolic Faith Mission	14	24	2,119	2,196
Christian Congregation	2	7	150	645
Church of Daniel's Band	4	6	129	393
Church of God as Organized by Christ	19	17	375	227
Hephzibah Faith Missionary Association	14	12	495	352
Metropolitan Church Association	40	7	1,113	704
Missionary Church Association	34	25	2,498	1,554
Missionary Bands of the World	11	10	241	218
Pillar of Fire	48	21	2,442	1,129
Church of God (Apostolic)	18		492	..
Federated Churches	361		59,977	
Free Christian Zion Church of Christ	5	35	187	6,225
Free Church of God in Christ	19		874	
Friends				
Society of Friends (Orthodox)	715	805	91,326	92,379
Religious Society of Friends (Hick-site)	128	166	16,105	17,170
Orthodox Conservative Friends (Wilburite)	41	50	2,966	3,373
Friends (Primitive)	1	2	25	60
Holiness Church	32	33	861	926
Independent Churches	257	613	34,501	56,757
Jewish Congregations	2,953	1,615	4,087,357	357,135
Latter Day Saints:				
Church of Jesus Christ of Latter Day Saints	1,275	965	542,194	403,388
Reorganized Church of Jesus Christ of Latter Day Saints	592	565	64,367	58,941
Liberal Catholic Church	39		1,799	
Liberal Churches	3	..	358	..
Lithuanian National Catholic	1	7	492	7,343
Lutheran Bodies:				
United Lutheran Church in America	3,650	3,559	1,214,340	763,596
Evangelical Lutheran Augustana Synod of North America	1,180	1,165	311,425	204,417

TABLE I—Continued

DENOMINATION	CHURCHES		MEMBERSHIP	
	1926	1916	1926	1916
Lutheran Bodies—Continued				
Evangelical Lutheran Synodical Conference of America	4,752	3,620	1,292,620	777,701
Evangelical Lutheran Synod of Missouri, Ohio and Other	3,917		1,040,275	
Evangelical Lutheran Joint Synod of Wisconsin and Other	709		229,242	
Slovak Evangelical Lutheran Synod of the U S A	55		14,759	
Norwegian Synod of American Evangelical Lutheran Church	71		8,344	
Norwegian Lutheran Church of America	2,554	2,740	496,707	318,650
Evangelical Lutheran Joint Synod of Ohio and Other States	872	826	247,783	164,968
Lutheran Synod of Buffalo	41	42	9,267	6,128
Evangelical Lutheran Church in America (Eielsen Synod)	15	20	1,087	1,206
Evangelical Lutheran Synod of Iowa and Other States	873	977	217,873	130,793
Danish Evangelical Lutheran Church in America	96	101	18,921	14,544
Icelandic Evangelical Lutheran Synod in North America	14	14	2,186	1,830
Finnish Evangelical Lutheran Church of America Suomi Synod	185	134	32,071	18,881
Lutheran Free Church	393	376	46,366	28,180
United Danish Evangelical Lutheran Church in America	190	192	29,198	17,324
Finish Evangelical Lutheran National Church of America	70	64	7,788	7,933
Finnish Apostolic Lutheran Church	138	47	24,016	6,664
Church of the Lutheran Brethren in America	26	23	1,700	892
Evangelical Lutheran Jehovah Conference	3	6	851	831
Independent Lutheran Congregations	50		11,804	
Mennonite Church				
Mennonite Church	295	307	34,039	34,965
Hutterian Brethren, Mennonites	6	17	700	982
Conservative Amish Mennonite Church	7	13	691	1,066
Old Order Amish Mennonite Church	71	88	6,006	7,665
Church of God in Christ (Mennonite)	26	21	1,832	1,125
Old Order Mennonite Church (Wisler)	19	22	2,227	1,608
Reformed Mennonite Church	31	29	1,117	1,281
General Conference of Mennonite Church of North America	136	113	21,582	15,407
Defenseless Mennonites	10	11	1,060	854
Mennonite Brethren in Christ	99	108	5,882	4,737

TABLE I—*Continued*

DENOMINATION	CHURCHES		MEMBERSHIP	
	1926	1916	1926	1916
Mennonite Church— <i>Continued</i>				
Mennonite Brethren Church of North America	61	53	6,484	5,127
Krimmer Brueder—Gemeinde	14	13	797	894
Mennonite Kleine Gemeinde	4	3	214	171
Central Conference of Mennonites	29	17	3,124	2,101
Conference of the Defenseless Mennonites of North America	9	15	818	1,171
Stauffer Mennonite Church	4	5	243	209
Unaffiliated Mennonite Church	5		348	
Methodist Bodies:				
Methodist Episcopal Church	26,130	29,315	4,080,777	3,717,785
Methodist Protestant Church	2,239	2,473	192,171	186,908
Wesleyan Methodist Connection (or Church) of America	619	579	21,910	20,778
Primitive Methodist Church in the United States of America	80	93	11,990	9,353
Methodist Episcopal Church, South	18,096	19,184	2,487,694	2,114,479
Congregational Methodist Church	145	197	9,691	12,503
Free Methodist Church of North America	1,375	1,598	36,374	35,291
New Congregational Methodist Church	26	24	1,229	1,256
Holiness Methodist Church, Lumbec River Conference	7	6	459	434
Reformed Methodist Church	14		390	
African Methodist Episcopal Church	6,708	6,633	545,814	548,355
African Methodist Episcopal Zion Church	2,466	2,716	456,813	257,169
Colored Methodist Protestant Church	3	26	533	1,967
Union American Methodist Episcopal Church	73	67	10,169	3,624
African Union Methodist Protestant Church	43	58	4,086	3,751
Colored Methodist Episcopal Church	2,518	2,621	202,713	245,749
Reformed Zion Union Apostolic Church	48	47	4,538	3,977
Reformed Methodist Union Episcopal Church	25	27	2,265	2,196
Independent African Methodist Episcopal Church	29		1,003	
Moravian Bodies:				
Moravian Church in America	127	110	31,699	26,373
Evangelical Unity of Bohemian and Moravian Brethren in North America	34	23	5,241	1,714
Bohemian and Moravian Brethren Churches	3	3	303	320
New Apostolic Church	25	20	2,938	3,828

TABLE I—Continued

DENOMINATION	CHURCHES		MEMBERSHIP	
	1926	1916	1926	1916
Old Catholic Churches in America				
Old Catholic Church in America	9	12	1,888	4,700
American Catholic Church	11	3	1,367	475
North American Old Roman Catholic Church	27		14,793	
The (Original) Church of God	50		1,869	
The Pentecostal Assemblies of the World	126		7,850	
Pentacostal Holiness Church	252	192	8,096	5,353
Pilgrim Holiness Church	441	169	15,040	5,276
Polish National Catholic Church	89	34	60,974	28,245
Presbyterian Bodies				
Presbyterian Church in the United States of America	8,947	59,773	1,894,030	1,625,817
Cumberland Presbyterian Church	1,097	1,313	67,938	72,052
Colored Cumberland Presbyterian Church	178	136	10,868	13,077
United Presbyterian Church of North America	901	991	171,571	160,726
Presbyterian Church in the United States	3,469	3,365	451,043	357,769
Associate Synod of North America (Assoc. Presbyterian Church)	11	12	329	490
Associate Reformed Presbyterian Church	143	133	20,410	15,124
Synod of the Reformed Presbyterian Church of North America	89	103	7,166	8,185
Reformed Presbyterian Church in North America, General Synod	13	14	1,929	2,386
Protestant Episcopal Church	7,299	7,345	1,859,086	1,092,821
Reformed Bodies				
Reformed Church in America	717	715	153,739	144,929
Reformed Church in the United States	1,709	1,758	361,286	344,374
Christian Reformed Church	245	226	98,534	38,668
Free Magyar Reformed Church in America	11		3,992	
Reformed Episcopal Church	69	74	8,651	11,050
Roman Catholic Church	18,940	17,375	18,605,003	15,721,815
Salvation Army	1,052	742	74,768	35,954
Scandinavian Evangelical Bodies:				
Swedish Evangelical Mission Covenant of America	357	324	36,838	29,164
Swedish Evangelical Free Church of the U S A.	107	102	8,166	6,208
Norwegian and Danish Evangelical Free Church Assoc. of North America	41	32	3,781	2,444
Schwenkfelders	6	6	1,596	1,127
Social Brethren	22	19	1,214	950
Spiritualists				
National Spiritualists' Association	543	343	41,233	23,197
Progressive Spiritual Church	9	11	7,383	5,831

TABLE I—*Continued*

DENOMINATION	CHURCHES		MEMBERSHIP	
	1926	1916	1926	1916
Spiritualists— <i>Continued</i>				
National Spiritual Alliance of the United States of America	59	.. .	2,015	
Temple Society . . .	2	2	164	260
Theosophist Society of New York:				
Theosophist Society of Indiana	1	1	55	72
American Theosophist Society .	223	157	7,448	5,097
United Brethren & Theosophist Society	1		50,000	
Unitarians	353	411	60,152	82,515
Unitarian Brethren:				
Unitarian Brethren in Christ	2,988	3,481	377,436	348,828
Unitarian Brethren in Christ (Old Consolidated)	372	408	17,872	19,106
Unitarian Christian Church	15		577	
Universalists	498	643	54,957	58,566
Vedanta Society	3	3	200	190
Volunteers of America . . .	133	97	28,756	10,204
Other denominations . .		144		30,492

be deducted about a million for the Eastern Orthodox church and Church of Latter Day Saints, and the Protestant membership remains about 30,640,000. Difference in methods of computing prevents the Catholic and Protestant from being comparable, since the Catholics include all baptized children and the Protestants only

TABLE II

Denomination	Percentage of Increase
Southern Baptist Convention . . .	30.1
Northern Baptist Convention . . .	36
Methodist Episcopal (South)	17.6
Methodist Episcopal (North) . . .	97
Presbyterian Church (South)	22.1
Presbyterian Church (North) . . .	164

such as are members. Of the Protestant group eleven major groups account for about 80 per cent of the total.

The relative rates of growth from 1916 to 1926 of the various groups is shown in the following comparisons: Roman Catholic, 18.3 per cent; average of major Protestant groups, 19.5 per cent.

The difference in the rate of growth of the southern branches and the northern is very noticeable in every case; the growth of Protestantism in the South seems more rapid (Table II).

The difference in rate of growth between the large and small denomination in the same area is interesting: Methodist Episcopal (North), 9.7; and Congregational Churches, 8.9.

The rate of growth exhibited in these data raises the whole question as to why churches grow. Without denying that zeal and a firm belief in correctness of doctrine may play a part, it seems pertinent to point out that sociological factors play as large a part as theological factors in governing rate of growth. All the larger denominations seem to be growing at greater rate than the small denominations similarly placed. But this greater rate of growth can easily be accounted for by the fact that given the same rate of social mobility, the loss of the small denomination will be greater than that of the large well-distributed organization because the more adequate distribution of the large denomination guaranties against the loss of its members through moving. The homogeneous character of rural and urban population in the South would also account for the high rate of growth of the denominations in the South fully as much as the reported orthodoxy of the South.

Most of the major denominations show fewer churches and more church members, which is a favorable sign. We are evidently moving toward fewer and better churches. The same condition accounts for the continued abundant supply of ministers even though there is a percentage decrease in the relative number of students studying for the ministry.

The amount expended for salaries, repairs, payment on debts and benevolences was \$328,809,999 in 1916 but, in 1926, had risen to \$814,371,529, a more than one hundred per cent increase. The value of church edifices in 1916 was \$1,676,600,582, while in 1926 this had risen to \$3,842,577,133. The per capita giving increased 41.6 per cent more than cost of living. These sums could hardly have been anticipated when the churches renounced state aid and relied on the voluntary support of the people. The churches are growing more rapidly than the population. From 1915 to 1927, the population increase is estimated as 20.01, while the increase in Protestant church membership for the same period was 23.39 per cent.

ORGANIZATION OF PROTESTANT CHURCHES

During the past year the Federal Council of Churches of Christ in America held its quadrennial meeting in Rochester, New York. This gave a chance to assess again the Protestant movement toward union. Twenty-eight denominations representing by far the larger part of the Protestant church membership are represented in the Federal Council. In addition to this delegated representation, the Council co-ordinates the activities of certain home and foreign missionary agencies, such as the following: Federations of Women's Boards for Foreign Missions, the Council of Church Boards of Education, the Home Missions Council, the International Council of Religious Education. The American Bible Society, the National Council of the Y.M.C.A., the National Board of the Y.W.C.A. have co-operative or consultative relationship to the Federal Council. The Council is also represented in local areas by state or county or city federations.

In order to understand the nature of Protestant unity, it is necessary to understand the difference between a hierarchy and a federation. The distinctive difference lies in the fact that a hierarchy has executive authority in itself and can assume the allegiance of all its parts, whereas a federation is compelled continually to re-define its objectives, since unity and authority are dependent upon common consent and common agreement. Many writers refer to the Federal Council of Churches in the same terms that they would use in referring to a hierarchy, but in doing so they completely ignore the social realities in the case.

SOCIAL AND POLITICAL ACTION OF RELIGIOUS BODIES IN 1928

The year 1928 saw a participation of religious bodies in social and political action which will make the year noteworthy. It will be sufficient here to call attention to these and to emphasize certain characteristics of this movement.

The nomination of a Roman Catholic by one of the major parties at the national election introduced the religious issue in the campaign. The political leaders appealed to religious prejudice with a zeal not less than that of the clergy who asserted it. Democratic candidates shouted defiance in the face of religious prejudice

and thereby consolidated their own religious following back of themselves. The campaign abundantly demonstrated that when religion becomes a political red herring, it easily leads human beings astray in their pursuit of the goal of human welfare.

Of another character has been the participation of major religious groups in various kinds of social action both local and national. Here it is necessary to distinguish between direct and indirect participation on the part of religious bodies. It is also necessary to distinguish that kind of participation which seeks the advantage of the religious group and that participation which seeks the furtherance of some social cause. Most of the participation which has attracted public attention has been the indirect participation of Protestant groups, acting through federations and non-partisan leagues, which have sought the advancement of some social cause.

The above statement needs amplification. If the nature of this participation were better understood there would be fewer newspaper editorials about "Clerical Dictatorship in Politics."

The limits of this article do not permit of adequate exploration of this subject, but the following facts are to be kept in mind. There has grown up in this country a series of non-partisan, non-denominational agencies like the Anti-Saloon League, the Better Government Leagues, the Industrial Welfare Leagues, which are self-perpetuating; they have no organic relationship either to the churches or to the political parties, they have no authority except as they express and focus public opinion, they go out of existence when they have performed their function. These agencies are a part of the working economy of a free church in a free society; they have no authority except their ability to gather and focus public opinion. They can bludgeon and appeal to fear, but this is bad action on their part and it is not a necessary characteristic of them.

Because these organizations have been organized around a social betterment cause, they have not except in the case of the Ku Klux Klan sought the direct advantage of any religious group. This kind of action is to be distinguished from any historic attempts at ecclesiastical domination of the state; it is entirely consistent with the theory of a free church in a free society where both church and other institutions exercise autonomy.

Most of these non-partisan organizations have some kind of liaison relationship with Protestant, Jewish, and sometimes Catholic churches. Their authority is very intangible, they are continually compelled to redefine their objective, and maintain themselves only by their ability to commend themselves to that body of religious opinion alongside of which they exist. As one looks at the diversity of American religious life represented in the statistical chart, he feels confident that no agency will be able to make good on the claim that it represents fifty-four million church members unless its cause is of such a fundamental nature that it appeals to a vast majority of the American people.

RACE RELATIONS

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ABSTRACT

The problems of race which confront this country may be divided for consideration into three sections: the Indian, the immigrant, and the Negro. All of these must be recognized as being deeply imbedded in the historical past of the United States. In the case of the Indian, the most important development during the past year has been the publication of an investigation of the Bureau of Indian Affairs and its methods of dealing with the Indians. As a result of the inadequacy of the Bureau's management, radical changes were suggested, which, however, have not been instituted as yet. The attitude toward immigration represents the response of the descendants of the original English stock to the challenge of the more recently arrived peoples, and has taken the form of more and more severe restrictions as to who shall settle in this country. The "National Origins" provision, unless postponement by Congress is brought about, will go into effect July 1, 1929. The matter of Negro-White relationships stands about where it has stood for the past few years, little change toward greater tolerance or toward more severe oppression being noticeable. In all, only those tendencies which might have been predicted are to be noticed in changing race relations in this country.

It is well to recognize that the problems of racial relations in this country lie deeply imbedded in our historical development. The descendants of aboriginal Indian tribes, of white settlers, and of Negro slaves, all contribute to the perplexing puzzles of integration with which we are confronted, while to these have been added problems introduced by the advent of vast groups of persons more recently arrived from Southern and Eastern Europe and the Scandinavian peninsula. The supremacy of the descendants of the earliest group of whites had never been seriously challenged until recent times. Intrenched as the first to come, their ideals and traditions eagerly accepted by those who came after, it is only lately that they have taken alarm and have attempted to consolidate their position. That it has been challenged by the Germans, the Irish, and the peoples from the littoral of the Mediterranean; that the descendants of the slave population of earlier times have developed until they are claiming a kind of recognition which the whites are most reluctant to concede; and that the contemporary representa-

tives of the aboriginal inhabitants of this continent present problems which now press for solution, are the outstanding developments in the field of racial relations in this country during the past decade. In discussing any changes which have occurred during the past year, therefore, the historical background must be kept in mind; and since the problems naturally fall into a threefold division, they will be taken up separately.

THE INDIAN

Realization that the Indian population of the United States is greater at the present than it ever has been comes with a shock to most of us. Yet we place the number of these people living in this country today at between 300,000 and 350,000, and the most liberal estimates for the time of the discovery of America arrive at a figure considerably below this. In the main, the Indians have been removed from the locale of their aboriginal habitations. As the pressure of population became greater and the lands went by right of conquest to the better-equipped whites, the vast stretches of territory necessary to a nomadic hunting-folk, and the large areas required by primitive agricultural communities, were preempted by the invading aliens. Falling short of extermination, the Indians were removed to lands especially reserved for them. That these lands were perhaps the least valuable available, that they comprise mainly desert or other regions difficult to work, has contributed to the resulting breakdown of the aboriginal civilizations.

The attitude that these people are "wards of the government" has come more and more to prevail and this, actually, is the legal status of vast numbers of them. The administration of their property, which in the case of a few individuals and tribes on whose land mineral resources have been discovered, amounts to considerable fortunes, has been left in the hands of civil service employees who are under the jurisdiction of the Department of the Interior, and more directly under the Bureau of Indian Affairs. Persons who have visited reservations and have had contact with the Indians have, from time to time, issued statements of a disquieting nature regarding the manner in which the government has discharged the obligations of its guardianship. Stories, some of in-

competence and others more serious in their nature, began to be heard, and the announcement in 1926 that Secretary Hubert Work had requested the staff of the Institute for Government Research to make an impartial investigation into the administration of the Bureau of Indian Affairs came as welcome news.

The publication of this report¹ on February 21, 1928, must be regarded as the major event of the year on this phase of the race problem. It more than confirms our worst fears of the manner in which Indian affairs are handled; the very detached and cautious nature of its wording gives added weight to the conclusions. First in summary, and then in detail, its findings are discussed. The poverty of the Indian resulting from unsatisfactory lands allotted to him, the fact that where land is of possible fertility through irrigation, and irrigation has been carried through, this land has been acquired by whites, and the remoteness of the reservation from sources of employment, are all discussed as basic. The manner in which the Indian has been pauperized by the short-sighted policy of rationing, by the lack of vigor in teaching adequate agricultural methods, by allowing lands to be sold or leased with the result that the Indian lives on the unearned increment, as well as the evils resulting from the handling of the Indians' funds by the agents, are set forth. The lack of any considered, broad educational program is stressed, as also the utter inadequacy of the Bureau's attempt to cope with the serious incidence of trachoma and tuberculosis.

The Indian boarding school, with its policy of attempting to stamp out aboriginal civilizations by rearing children in an environment foreign to their tribal cultures; the manner in which the Indian children in these schools are exploited or underfed (11 cents a day for rations besides what the farms, worked by the children themselves, produce, is all that is allowed in some cases); and the poor adjustment of the Indian child when he is returned to his parents are all described. That language as strong as this is used: "The survey staff finds itself obliged to say frankly and unequivocally that the provisions for the care of Indian children in boarding schools are grossly inadequate," is an earnest of the seriousness

¹ Lewis Meriam and Associates, *The Problem of Indian Administration*. Report of a Survey made at the Request of Honorable Hubert Work, Secretary of the Interior, and submitted to him February 21, 1928. Baltimore, 1928.

of the findings. The lack of appreciation on the part of the government, "of the fundamental importance of family life and community activities in the social and economic development of a people" gives rise to serious disturbances in the social life of the Indians, while "both the government and the missionaries have often failed to study, understand, and take a sympathetic attitude toward Indian ways, Indian ethics, and Indian religion."

Present space does not allow us to go into the details of the situation, but the recommendations of the investigators call for fundamental changes in the Bureau of Indian Affairs. A "scientific and technical Division of Planning and Development," controlling permanent and temporary positions is advised so that further study may be made; an adequate statistical division so that the Indian Bureau may know the facts that are being dealt with; the strengthening of the personnel in immediate contact with the Indians by raising the present insufficient salaries; changes in the school system and the institution of an adequate medical service, are all held imperative needs. It is regrettable that this commission included no ethnologist, and failed to recommend one for the staff of the Bureau as envisaged. The experience of colonizing governments as to the value of a trained student of aboriginal cultures as an expert adviser in matters of policy dealing with the natives is not to be disregarded, and many of the problems which puzzled the excellent staff gathered to make this study would without doubt have been clarified had an ethnologist been included in its number.

It need only be added that Dr. Work, to my knowledge, did nothing to carry out the recommendations submitted to him. Certainly unsavory accusations such as are contained in the Barnett affair, now under investigation by a committee of the Senate, point to exploitation of the Indian not only by the government but perhaps also by one of the mission societies, and emphasize the need of a drastic revision of our methods of dealing with our "wards."

THE IMMIGRANT

Immigration, strictly speaking, is not a "race problem." Indeed, the misuse of the term "race" and the manner in which it is applied to national groups, persons coming from various geographical divisions, or linguistic stocks is notorious. This is never

so apparent as when we read the minutes of the meeting of the various committees which have held hearings on the problem as to what groups are to be regarded as desirable for citizenship in the United States and what ones undesirable. However, the current misuse of the term is so deeply rooted in everyday speech that a discussion of immigration must inevitably be a part of any consideration of the race problem in America.

In 1928, 500,631 aliens were admitted to this country compared to 538,001 the previous year. In 1928 274,356 aliens departed, as against 253,508 in 1927, leaving a net gain of 284,493 foreigners to our population for 1927, to be compared with one of 226,275 for 1928. During both years the males outnumbered the females except in the case of some countries of Southern Europe, where wives of foreign-born American citizens were admitted as non-quota immigrants. There were 73,154 persons admitted from Canada, and 59,016 from Mexico. There are no quota restrictions for either of these countries, and their contributions totalled 43 per cent of the entire immigration for the year, 153,513 persons having come from Europe during this period. The drop in number since 1913, when there were practically no restrictions and Russia alone sent us 291,040 immigrants, is striking. During 1928 11,625 aliens were deported.

Nothing could be more significant, when we consider the development of attitudes in this country toward foreigners and especially toward immigration, than the increasing general conviction that the time has come when this country may no longer regard itself as one in which those seeking new settings for their lives are welcome. Indeed, the feeling is such that, to quote Albert Johnson, chairman of the Immigration Committee of the House of Representatives, ". . . we are rapidly approaching the time when a suspension of immigration will be demanded." "The country wants more and more restriction," he says. "Both Senate and House will give substantial majorities to a long-time suspension bill."

For many years there has been a gradual tightening of the requirements for admission, but no very serious bars were raised until the end of the war, when a quota system was devised for restricting the number of immigrants who might come to this coun-

try in any one year. At first based on the principle that 3 per cent of the 1910 population of the foreign-born representatives of any country of Europe (Orientals being entirely barred, and there being no restriction on immigrants from the independent nations of the Americas) might be admitted to the United States in any one year, the law was further tightened in 1924 so as to admit only "2 per cent of the number of foreign-born individuals of such nationality resident in continental United States as determined by the United States Census of 1890," with a minimum quota of 100 for any one country. This, of course, shifted the percentages from the "Alpine" and "Mediterranean" stocks to the North European groups, the East and South European immigrants not having reached any appreciable number by 1890. However, objections were raised to the time-base which had been chosen, and, therefore, the "National Origins" provision was incorporated in the bill to become effective July 1, 1927.

Postponed until 1928 and again until 1929, this measure should, unless action is taken for further postponement, become operative on July 1, 1929. As this is being written, President Hoover, who is known not to favor the clause, is seeking advice on whether proclamation of its provisions is mandatory or not. As passed, it is as follows, and deserves quotation:

The annual quota for any nationality for each fiscal year shall be a number which bears the same ratio to 150,000 as the number of inhabitants in continental United States in 1920 having that national origin bears to the number of inhabitants in continental United States in 1920, but the minimum quota of any nationality shall be 100.

The problem, obviously, is that of determining the "national origin" of the present population. As directed by law, a committee was appointed, composed of the Secretaries of State, Commerce, and Labor, each of whom selected two representatives on another committee which actually did the work. In their first report, dated January 3, 1927, the Secretaries state:

Although this is the best information we have been able to secure, we wish to call attention to the reservations made by the committee and to state that in our opinion the statistical and historical information available raises grave doubts as to the whole value of these computations as a basis for the purposes intended. We therefore cannot assume responsibility for such conclusions under these circumstances.

And in transmitting their second, a year later:

We wish it clear that neither we as individuals nor collectively are expressing any opinion on the merits or demerits of this system of arriving at the quotas. We are simply transmitting the calculations made by the departmental committee in accordance with the act.

The effect of the findings, if carried out, will be materially to increase the proportions of immigrants admissible from Great Britain and northern Ireland, to decrease those from the Irish Free State, Germany, and Scandinavia, and, although increasing by small amounts some of the quotas from other countries when they are compared to the numbers they are allowed at present, to restrict the immigration from each of the Eastern and Southern European nations to a few thousands annually, as a maximum. Agitation is now being carried on to extend the quota restrictions to immigration from Mexico and the South American countries.

The facts are too well known to need exposition here. The point of interest to the student of social processes is the attitudes behind the passage of this measure and the mechanisms by which these attitudes have come to prevail. I feel that in this legislation there are manifested to a surprising degree the effects of a movement which, for lack of a better term, may be called the Nordic agitation, which has been outstanding in the discussions of race in this country in late years, and which is associated in the lay mind with the term "Anglo-Saxon." Backed by patriotic societies, eugenists, and other similar groups, the doctrine of the special adaptability of the North European, particularly the "Anglo-Saxon," for the culture of this country became widely accepted. The findings of the army psychologists, who, by the use of what is termed "intelligence" tests, found that late comers to this country tested lower than did the descendants of the original inhabitants, and newly-arrived British and Scandinavians higher than recent immigrants from Southern and Eastern European countries, gave this doctrine the validity of scientific truth. Nor is it strange that these results should constitute persuasive arguments, for the figures are decisive, and require some analysis before the factors of opportunity and differential environmental background become apparent as the decisive ones in making for the results, rather than innate "intelligence."

As we have seen at the beginning of this paper, it is only within the last generation that the supremacy of the descendants of the earliest settlers has been challenged. We are dealing with economic imponderables as well as purely social forces, and the members of non-North European nations who have obtained substantial footholds undoubtedly affected, albeit unconsciously, the traditional attitude of the dominant descendants of the English colonists that the United States should be a land where anyone might come to settle. Further, the heightening of the emotional tone of our feeling for our country and against the foreigner and "hyphenate" which resulted from the war and the "Red hysteria" strengthened the belief in "America for the Americans," and we thus arrive at the present situation.

Whatever the socio-economic merits or demerits of the case, it is well to recognize that the forces involved are so intricate, and the problems to be solved so complex, that further study of them will do no harm. From a strictly anthropological point of view, any correlation of physical stock with cultural ability is inadmissible. However, the general tendencies remarked above are so strong, and the trend so obvious, that we look with certainty to the proclamation, sooner or later, of some form of quota restriction which will favor the North Europeans and follow the popular feeling that the East and South Europeans—the so-called "Alpines" and "Mediterraneans"—are unfitted to provide the "racial" basis for our future stock.

THE NEGRO

On the subject of Negro-white relationships, nothing has occurred during the past year which would disturb the opinions of those who are either optimists or pessimists. Perhaps the only generalization that might be permitted would be the statement that a shade more liberality is apparent in the South, and a shade more slackening of the traditional feeling in the North that the rights of the Negro should be recognized. It must not be forgotten that, unlike other problems arising out of differences of cultural background or language, or of submission to the conqueror, there is the further factor of skin-color in the case of the Negro. It is quite true that there are many sociological Negroes who cannot be dis-

tinguished from whites—from blond Europeans, perhaps, but certainly not from Spaniards or Italians. But for the majority, skin-color instantly marks the Negro, and it may perhaps be laid down as a principle that whenever increasing numbers of this readily identifiable group threaten the economic position of the dominant whites, prejudice will increase.

Certain facts of Negro-white relationships in the South may be mentioned. There were fewer lynchings during 1928 than for many years—eleven in all. One of them, occurring as it did during the assembling of the Democratic National Convention at Houston, Texas, created an unusual stir, but unfortunately had no effect in rousing that party from its traditional position on the Negro. On the other hand, certain legal decisions are to be noted. Segregation ordinances in several cities were declared illegal. The attempt of the Democratic party in Texas to make the Democratic primary, victory in which is tantamount to election, a matter for whites alone, was frustrated, and similar decisions regarding primary voting in Richmond and other cities followed the decree of the Supreme Court. Interracial groups continue to function, and white southern writers seem to have reached a point where they attempt to portray the Negro as he actually lives and do not caricature him in the traditional manner. On the other hand, grave charges have been made regarding the conduct of the Red Cross in discriminating against Negroes in relief after the Mississippi flood of the spring of 1927, charges which have not been seriously denied. The Ku Klux Klan, torn by internal feuds and disclosures of unpleasant dealings, has apparently lost the tremendous hold which it had a few years ago.

In the North, the story comprises a similar balancing. The complete indifference, if not open hostility, of organized white labor to attempts to form Negro labor unions or to the attempts of individual Negro workers to join existing unions continues. In Negro labor circles, the outstanding event of the year was the virtual collapse of the Pullman Porters' Union, following a strike threat which was withdrawn on the eve of the strike. It illustrates again the difficulty of organizing a calling where the psychology of servitude bulks as large as it does among these men, and where in-

grained habits of obedience and assured social position among the Negroes themselves must contend against discontent with an economic situation. The "strike" of the white students in the Emerson High School of Gary, Indiana, against Negro students attending this school occurred in the fall of 1927. It resulted in victory for the strikers, and the promise of the school board to build a separate school for Negro students. Early in 1928, however, the building of this school was stopped by an injunction, giving temporary victory to those who oppose segregation. In Cleveland there has been agitation against a Negro's owning a house in a white neighborhood, comparable to the famous Sweet case in Detroit, although not so serious. In Chicago, the death of Congressman Madden made available a place in the House of Representatives which was filled by a Negro, Mr. Oscar de Priest, the first of his group to be elected to Congress for many years. In New York, the Sloane Maternity Hospital refused a Negro graduate nurse the opportunity of taking its post-graduate course because of her color, and in the same city the opening of the Dunbar apartments, a co-operative venture in Harlem housing, and of a Negro bank, the Dunbar National, both financed by Rockefeller funds, are to be remarked.

The establishment of elementary schools throughout the South under Rosenwald grants has continued, as well as the drive of the Negroes for higher education. This, of course, reflects the increased social surplus and the added social leisure of the Negroes, as does the manner in which a small but significant number of younger Negroes have taken to literary production in the past five years. There was an increase in the enrollment of Negro colleges of 10,567 in 1928 over that of 1927, in addition to the substantially larger numbers of Negroes attending white universities. A new Negro hospital in Nashville, which will give much-needed facilities for clinical training for Negro medical students, is another incident in the development of Negro education to be signalled. In December, 1928, a National Interracial Conference was held in Washington, largely attended by those who are interested in attempts to solve the Negro problem, or particular phases of it. There was frank discussion of such topics as health, industry and agriculture, law

observance and the Negro, housing and recreation. No permanent organization was effected, but the consensus of opinion seems to be that a stimulating interchange of opinion resulted. Another conference, much smaller and more concerned with research than amelioration, met in the same city in March. It was called jointly by the National and Social Science Research Councils, and was occupied entirely with discussions of the problems of racial differences and the manner in which they may be scientifically investigated.

It would be futile to evaluate gains or losses for the year as far as the conflicts of racial groups are concerned. Certainly that our attention has been directed to the wretched conditions of the Indians is clear gain, and a step in a new direction. For the rest, it may merely be stated that predictable tendencies continued as might have been expected.

EDUCATION

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ABSTRACT

The control of education in the United States is local. It was demonstrated during the past year, however, that it is possible for the federal government to co-operate in the promotion of education without encroachment on local autonomy or authority.

Two outstanding examples of such co-operation were nation-wide surveys conducted by the Bureau of Education, one of Negro universities and colleges, financed through private sources, the other of land-grant colleges, the cost of which was defrayed through federal funds provided by Congress. Encouraged by the success of these two undertakings, a survey by the Bureau of Education of secondary education was initiated and Congress has appropriated the necessary money.

The Bureau's survey of Negro universities and colleges revealed the tremendous progress being made in Negro higher education in the United States and emphasized the need for the development of teacher-training. The land-grant college survey is significant for the extensive co-operation developed in the collection of data under the leadership of the Bureau of Education. The study of secondary education is to be the most widespread ever undertaken, touching directly or indirectly every community in the country.

Progress has also been made during the year in the co-ordination of fiscal and educational conditions in the states, largely through the state departments of education. Another significant development was the severe criticism of the formal standards set up by regional accrediting agencies at the meeting of the North Central Association, which is undertaking to study the situation for the purpose of improving educational service.

In the field of the organization of the educational process, Professor Thorndike's studies of adult learning ability as compared with the learning ability of youth were of vital importance as they tended to indicate the need of a complete revision of the present program not only for adult education but for the period of youth as well.

The resignation of Dr. John J. Tigert as United States Commissioner of Education in September, 1928, gave occasion for renewed emphasis upon the fact that administration and control of education in the United States is essentially local. That the United States Commissioner of Education should see opportunities for greater influence and usefulness as the head of a state university than as the head of the Federal Bureau of Education is entirely consistent with allegiance in the United States to the principle of local responsibility in education. Nevertheless, certain sections of the

educational press took the opportunity to lament that this relative emphasis is still the fact.

Regrets on this score came alike from advocates of a federal department of education after the European model and from educators who are not interested in the special form of the federal educational office but who feel the need for the aid that co-ordinated study under national auspices may give in the solution of local educational problems. Congressmen and federal budget directors are likely to fear that advocates of a federal department of education are inspired by desire to dip their fingers into the honey pots of the federal treasury. They have been likely to regard those who seek federal aid upon the problems of educational administration and theory as visionary, impractical and, of course, as relatively unimportant vote-makers. Since, however, the leaders in Congress are not uninterested or unintelligent in regard to education from any standpoint other than that of the professional educator, Dr. Tigert's greatest service as United States Commissioner of Education was probably the contribution made under his administration to the definition and the demonstration of functions that may be performed by the United States Bureau of Education without encroachment upon local autonomy and without money subsidy to local activity. Three examples of such service belong to the year 1928. They are named in the message of former President Coolidge to Congress delivered upon December 4, 1928. He said in his message:

While this province [education] belongs peculiarly to the States, yet the promotion of education and efficiency in educational methods is a general responsibility of the Federal Government. A survey of Negro colleges and universities in the United States has just been completed by the Bureau of Education through funds provided by the institutions themselves and through private sources. The present status of Negro higher education was determined and recommendations were made for its advancement. Following the invitation of the Association of Land-Grant Colleges and Universities, the Bureau of Education now has under way the survey of agricultural colleges authorized by Congress. The purpose of the survey is to ascertain the accomplishments, the status and the future objectives of this type of educational training. It is now proposed to undertake a survey of secondary schools, which educators insist is timely and essential.

The importance of these activities to better definition of legitimate federal activities in education becomes manifest by consideration of their significance in the restricted areas of educational interest immediately affected.

NEGRO EDUCATION

Almost 10 per cent of the population of the United States is colored. "The total accumulated wealth of the Negroes of the country now amounts to \$2,000,000,000. There are 700,000 Negroes who own homes, 232,000 who own farms, 1,000,000 who have the full responsibility of operating farms, and 70,000 who either own or conduct business enterprises." The welfare of this "educationally disadvantaged" portion of our citizenry concerns the nation as a whole. To relegate the solution of this phase of our educational problem to missionary effort is an impertinence. Yet almost the only facts about Negro educational conditions available to educators, until the *Survey of Negro Colleges and Universities* by the United States Bureau of Education, were the facts collected over ten years ago.

The responsibility for educating 5,000,000 Negro youths under nineteen years of age rests upon approximately 47,000 Negro teachers; less than one teacher to every 1,000 pupils. More teachers and better training for those already employed are needed. The only place where teacher-training can be secured is in the Negro colleges and normal schools of the South and in the institutions of the North. The Negro colleges of the South must have teachers with graduate training if they are to perform their task. Admission to graduate schools or even to advanced undergraduate standing is now a highly technical and safeguarded process. It is fundamentally based upon the standing and rating of the institutions from which students come. Students who came in recent years from the Negro colleges and normal schools seeking admission to more advanced work found their way blocked or made difficult since the universities and colleges that offer the better type of training still rated the preparation of Negro students upon the basis of what the Negro colleges were doing in 1915. The Bureau's survey of 79 Negro universities and colleges, published in 1928, attempted to bring

up to date the information that the universities and colleges must have if high standards of admission are to be maintained. Many registrars and other admission officers are now using the *Survey* report as a guide in determining the qualifications of those who come from the Negro colleges of the South. The Negro colleges themselves have clearly before them a disinterested presentation of what must be done if they are to provide training that will open further educational opportunities to their graduates. Agencies which control financial resources are enabled to determine better where expenditures and support will accomplish the most.

At least two years of college work in an institution of accepted educational standards is a prerequisite to admission to medical schools in the United States. There is one colored physician to every 3,343 Negroes, as compared with one white physician to every 553 white persons. In large sections of the country no physician is called in or available for attendance at the birth of Negro children. Unscrupulous white "Docs" prey upon the need and thrive upon the ignorance of uneducated Negroes. There is only one Negro dentist to every 10,540 Negro inhabitants. The need for Negro physicians and dentists is evident. It would seem that educators and the medical profession would have recognized the pressing need of providing for entrance, as rapidly as possible, of able Negroes to medical colleges. The American Medical Association recognized this need and classified the Negro colleges for purposes of admission to medical school into Classes I, II, and III. Class I ranking meant that the work of the college would be accepted year for year for purposes of admission; Class II rating meant that students coming from these institutions would be required to present 50 per cent more work for admission than would those from Class I; while Class III rating made it necessary for students to present twice as many credits for admission as those from Class I institutions. Yet at the beginning of 1928 this classification was based for the most part, on the facts concerning Negro colleges as they existed in 1915, and there were but two Negro colleges with Class I rating. One purpose of the *Survey of Negro Colleges* was to provide the information which would enable rating agencies to reclassify Negro colleges for the purpose of preparation for medical schools, to bring

the classification into better accord with the facts and to remove the handicap imposed on students in Negro colleges that, since 1915, had raised their standards of equipment, personnel, and instruction. In harmony with this purpose the American Medical Association in the summer of 1928 designated a committee to reclassify Negro colleges. Two of the members of the committee are members of the Bureau's survey staff and the third is a well-known member of a great Southern university. Few would question that the *Survey of Negro Colleges* by the Bureau of Education is a practical demonstration of the exercise of legitimate federal functions in the educational field or that the *Survey* itself and the action of the American Medical Association are of significance in the field of Negro education.

SURVEY OF LAND-GRANT COLLEGES

There are 69 land-grant colleges in the United States. They range in size and importance from those like the Universities of Wisconsin and Minnesota to the small agricultural and mechanical colleges for Negroes in Kentucky and Delaware. The survey of this group of institutions now being carried on by the Bureau of Education is not mentioned because of any important influence that the survey itself has exercised as yet upon these universities and colleges. It is merely in process. Its importance for this discussion lies in the fact that it marks a step in the further definition and development of the functions of the federal Bureau of Education in national educational life.

As noted by former President Coolidge, the survey of Negro colleges and universities was conducted by the Bureau's regular staff and from its current funds supplemented by the contributions of the institutions surveyed and by private funds. Congress made no special appropriation for the purpose. The land-grant college survey, however, was undertaken upon the request of the association of these institutions and is financed by means of funds specifically requested of Congress by the Bureau and set aside for the purpose. This fact represented a new development in the relations of the federal government to local educational agencies. It opened the way to national co-operation upon specific educational projects

desired by important factors in our national educational life. Although the appropriation was made to the Bureau of Education and is entirely subject to its direction, the actual organization of the survey preserves and emphasizes the essentially co-operative character of the enterprise. Approximately seventy committees consisting of over 700 persons drawn from every state in the Union and in large part from the land-grant colleges themselves are engaged upon the survey. The institutions are contributing services that in terms of money would be many times more than the amount appropriated by Congress for the work. In other words, the congressional appropriation is merely a fund that serves to release and to co-ordinate the energy of the local and institutional agencies interested in the survey.

SURVEY OF SECONDARY EDUCATION IN THE UNITED STATES

The appropriation of money by Congress for the land-grant college survey was a practical demonstration of the fact that necessary funds could be secured from the federal government for studies and projects requested by a considerable group of educators in the interest of their local educational welfare. The organization of the survey as a great co-operative venture under the direction of the commissioner of education demonstrated that the Bureau had no desire to utilize money thus secured to approach such work in the spirit of superior inspection or governmental investigation.

The organized educational agencies of the country, therefore, following the suggestion and leadership of the North Central Association of Colleges and Secondary Schools, in 1928 requested that Congress appropriate funds for a three-year study of secondary education in the United States. The North Central Association of Colleges and Secondary Schools, the Association of Colleges and Secondary Schools of the Southern States, the Association of Colleges and Secondary Schools of the Middle States and Maryland, the Northwest Association of Secondary and Higher Schools, the New England Association of Colleges and Secondary Schools, the National Education Association, the National Council of State Superintendents and Commissioners of Education, the American Council on Education, the American Association of Teachers Col-

leges, and the Department of Secondary School Principals joined in this request for a national study of secondary education. Never before had so many agencies of so wide geographical distribution, so authoritative in the educational life of the nation, united to demand leadership and co-ordination of effort under the Bureau of Education. Former President Coolidge referred favorably to it in his message of December, 1928, and the Congress that he addressed made provision for the study. The fact is significant with reference to the development of federal functions in education in the United States. It is far more significant in that the study will touch directly or indirectly every community in the United States and bring together in a common co-operative effort more interests, more educational ability, and more institutions than have ever before been united upon solution of a definite series of educational problems.

UNITY OF EDUCATIONAL DEVELOPMENT

No feature of the political life of the United States is more interesting than the maintenance of a common social culture and of a dominant national loyalty under forty-eight separate political units, each exercising, independently of the others and of the national government, powers of direction and control within areas that largely determine trends of social character. National control of the schools and of the educational system is, in Europe, quite generally regarded as essential to maintenance of unified culture and of national consciousness. In the United States educational development and direction are among the powers of government reserved to the states. That this fact has not resulted in wide divergence of social development and attitude between the states or even in great differences in school organization and methods is due to a number of causes. Migration from state to state is easy; a single lifetime habitation seems essential to the happiness of a relatively small proportion of our people. Voluntary educational and professional organizations cut across state lines and provide interchange of ideas and knowledge between those who are actually carrying on teaching and school administrative functions. The state educational offices themselves are associated in such a voluntary relationship

and for many years the chief educational officers of the state governments have met to exchange news, views, and ideas. Further, the federal government without exercising control does exert considerable influence upon development and unity by means of direct promotion of certain types of education and by assistance rendered to voluntary state efforts at co-ordination and standardization. The year 1928 was marked by important measures that illustrate these two types of federal influence.

FEDERAL SUBSIDIES

Through special grants of money to the states the federal government has for many years sought to encourage agricultural extension work in the land-grant colleges and vocational education in the public schools. Acceptance of these aids is entirely subject to state determination but acceptance carries with it compliance with certain conditions. The most important of these conditions are appropriation by the state of an amount equal to the federal grant and submission to approval by the agents of the federal government of the plans for the expenditures of the joint fund thus provided. It is frequently asserted that the so-called 50-50 provision tends to distort the educational programs of individual states because it tempts states to devote money to aspects of education for which federal aid is provided that should be spent upon other phases of educational development. Whatever the validity of this objection, it has not as yet secured sufficient public backing to effect a change in the federal policy with respect to grants for the encouragement of vocational and agricultural extension education. Congress has passed two measures that were before it in 1928 which provide additional sums for these two activities in the states upon the 50-50 basis. One of the acts authorized for the further development of vocational education "for the fiscal year ending June 30, 1930, the sum of \$500,000 and for each year thereafter, for four years, a sum exceeding by \$500,000 the sum appropriated for each preceding year." The other act provides \$20,000 per year for each state and in addition, after the first year, \$500,000 per year for distribution among the states for the further development of agricultural extension work.

STATE AND FEDERAL CONFERENCES

Of quite different character is the influence of the federal government exercised through association and co-operation with the voluntary efforts of the state educational offices to profit from exchange of experience and from common counsel on the problems of standardization and stabilization. In December, 1928, the chief educational officers of the states and representatives of their offices met upon their own request with the United States Bureau of Education to consider methods of standardizing the collection of educational statistics and to discuss the desirability of asking the Bureau to undertake a nation-wide study of the methods of financing public education in the states. It is significant for the development and maintenance of national unity through such unforced and voluntary means that the state officers voted to meet regularly in this way every alternate year with the Bureau of Education. There was thus established in 1928 an extra-legal, but permanent and effective instrument through which state and federal governmental agencies of education may co-operatively develop broad policies and practical procedures of national significance. It is probable that this relatively unknown action will have wider influence upon the future educational life of the nation than will other more spectacular and immediate accomplishments of the year.

PUBLIC EDUCATION IN THE STATES

Discussion of the dominance of local control over education in the United States quite frequently assumes that the state educational office exercises power over the schools of the state comparable to that of national departments of education in some European countries. In fact, although the authority of the chief state educational officers varies greatly, the principle of town, city, and school district responsibility is in general maintained. Nevertheless a tendency to greater centralization about the state educational office is evident. The complication of the educational organization and of educational processes accounts in large part for this trend.

In order to meet their educational problems, local school units need increasingly professional aid and guidance that can best be furnished by the central state office serving all the local districts.

In meeting this need the influence of the state educational office has been exercised during 1928 as in preceding years, by careful studies of the curricula, frequently of such co-operative character as to enlist the interest and aid of local school officials; by studies of measures to promote the effectiveness of supervision of school activities; and to a rather unusual degree by attention to facilities and standards for the training of teachers. Studies and measures of this kind in many states have tended to promote the influence of the state educational office.

The outstanding instrument in the development of centralized state influence over local school units, however, is state control of funds intended to equalize educational opportunities within the state. This tendency is illustrated during 1928 by the extensive plans for such financing developed by Connecticut and Alabama. These plans tend to increase the influence of the state education offices and are also significant as practical demonstrations of how adjustment may be provided for the unequal abilities of local communities to furnish public educational opportunities. The situation in Connecticut is chosen for brief description.

In 1907 the state of Connecticut was paying through grants to local communities, approximately 17 per cent of their current school expenses. By 1927 the towns were meeting approximately 94 per cent of the expense and the state only 6 per cent. Differences in the abilities of the local communities to provide similar educational opportunities had become, during the twenty years, more and more striking, while the contributions of the state, intended to adjust these differences of ability, had become less and less important. In 1927 the wealth of the towns as measured by "the grand list" varied from \$1,400 to \$80,000 per child. During the same year the federal government collected \$29,000,000 of income tax from Connecticut, which was \$7,000,000 more than the entire cost of the elementary and secondary school program. In other words, as compared with the general tax power, the towns could do little more than tap by taxation the resources of the state.

Connecticut attacked the situation by careful study to determine fair and legitimate measures of the educational need and of the ability of the local political school units to meet this need. A

reasonable minimum amount required for the education of each child was determined. "Child" in this case does not represent a census figure but is, as expressed by Dr. A. B. Meredith, Commissioner of Education in Connecticut, "a measure of the educational task which considers in addition to average daily attendance, the fact that it costs more to educate a pupil in small than in large schools and to educate a pupil in high than in elementary schools." Estimate of the ability of the local school to provide the funds needed to furnish this minimum support for the education of each child is based upon the proportion of the total tax income.

Under the Connecticut plan, if application to school purposes of 34 per cent of a local unit's average tax income fails to provide the minimum amount per equated child adopted as standard, the state will grant enough additional to assure the standard support. The fact that this aid is a means of increasing state influence rather than state control is evident since participation in the benefits is entirely voluntary on the part of the local school units.

Commissioner Meredith indicates the general importance of the plan briefly in the following statement: "The proposal . . . represents a co-ordination of fiscal and education conditions, based upon fact and scientific procedure with the aim of developing a simple and comprehensive plan for the support of public education." Although political and school organizations and units, legal restrictions and tax systems vary greatly between the states, the situation in Connecticut exists in essentially the same form in other states and the measures adopted by Connecticut will probably strengthen the hands of other state educational officers who seek solutions to similar problems.

EDUCATIONAL STANDARDS

The federal and state educational organizations exercise considerable influence upon and make important contributions to educational development. These agencies are more or less familiar. But the general public knows little about a third factor that exercises a kind of professional overlordship with reference to the educational standards of our high schools and colleges. Five regional and one national accrediting association determine the standards

that secondary and higher educational institutions must maintain if they are to be admitted into the company of the educationally respectable. For a high school not to be upon the accredited list of one of the regional accrediting associations makes difficult admission of its graduates to standard colleges and universities. For a college or university not to be accredited by one of these associations or by the Association of American Universities makes difficult the transfer of its students to another institution and the admission of its graduates to the graduate and professional schools.

The standards set up by these associations have exercised far reaching influence in stabilizing and raising the character of high-school and college educational opportunities. These standards are for the most part purely objective and tend to become entirely formal. In recent years, therefore, they have been subjected to severe criticism.

The number in the faculty and the number of organized departments, the number of units of credit for graduation, minimum permissible operating income, the number of volumes in the library, and similar definite means of measurement have been the basis upon which colleges have been accredited. To many, these matters have seemed entirely inadequate tests of the educational quality of institutional service. Since the adoption of these standards much new knowledge of the educational processes has been gained and means of testing the effectiveness of these processes have been devised. With this new knowledge has developed a tendency to experiment with new forms of teaching organizations and with new teaching methods. The traditional in organization, curricula, and method is being broken down all along the line from the elementary to the professional school. The formal standards of the accrediting associations no longer provide adequate measures for the work that the schools are doing to accomplish their real task of educating boys and girls.

Under these conditions it is of great significance that at its meeting in March, 1928, the North Central Association of Colleges and Secondary Schools, the largest and most powerful of the regional accrediting associations, faced the situation squarely. Dr. Charles H. Judd stated in an address before the association:

Such associations as our own have certainly outgrown the methods and standards which were adequate a few years ago. When the North Central Association began to approve high schools and later when it prepared the first approved list of colleges there were no studies to guide its action. The Association did what was rational under the circumstances and formulated into standards the best experience that was available.

Time has passed and the educational situation has become enormously complex; a new era has arrived. Today no one has a right to say that a class of 30 is of the maximum size which can safely be tolerated. No one has a right to say that endowment is the safest indication of financial efficiency of a college. No one knows how many students are essential before an institution can properly conduct college work. The reason why these matters are in doubt is that we know more than we did when we originally adopted standards.

Dr. Judd's statement is a reflection of the tone and spirit adopted by the Association commissions on both higher and secondary education.

Powerful organizations firmly established and strongly entrenched in social respectability too infrequently show a disposition to take the lead in breaking down the rules that have become maxims in their guidance of affairs. The fact that this great educational organization thus recognized the inadequacy of its old rules is significant for education in the United States. Even more significant is the fact that the Association did not set its face in conservative or reactionary opposition to change, but rather turned to assumption of leadership in the quest for standards that will measure present and future educational utility. The dam erected by the Association to restrain the floods of quack or insecure educational ventures has not been swept away, but the organization at its meeting in 1928 definitely laid plans to utilize in an orderly and scientific way the energy of idea and experience that has developed both within and outside the customary tributaries to educational resources.

ADULT EDUCATION

Matters thus far mentioned are primarily concerned with educational administration and organization. They are important but their importance consists largely in providing the means for the operation of the psychological processes of learning and for the practice of methods of instruction. In the realm of psychology and

method education, the year 1928 has been marked by considerable activity but there are few outstanding and striking discoveries. Experimentation in the extension of the application of psychological principles already known and, indeed, the stretching of the boundaries of psychological knowledge have engaged much of the attention of school people and of education research. Of this work the most striking is that of Professor Thorndike and his colleagues, who completed in 1928 a three year study of adult learning.

Professor Thorndike carried on an extensive series of tests and reached conclusions which considerably modify the accepted conception of the curve that the ability to learn takes during life. If Professor Thorndike's conclusions are valid, and there seems to be every reason to believe that they are, the curve of learning ability rises to its height at about the age of 25 and then slowly drops until by 45 it corresponds to what it was at 18. Although Professor Thorndike's experiments did not fully establish the fact, it seems that the rate of decline after 45 is not much more rapid than the rate of rise from 5 to 18. In other words, it would seem that persons from 25 to 45 have about the same learning ability as people from 18 to 25 and that learning abilities before and after these two limits are not greatly dissimilar. Common experience has always afforded practical evidence of ability to learn after the first flush of youth, but Professor Thorndike's studies now afford the consolations of science to the uncertainties of common knowledge.

The importance of Professor Thorndike's *Adult Learning* lies not primarily in the field of adult education, which is now receiving so much attention, but in the emphasis it gives to the necessity of readjusting our conception of the profitable organization of the education process during life. We have in the past, because of our belief that youth was the best and easiest and most effective period for learning, concentrated our educational efforts largely in continuous periods during early life. Since this was supposed to be the period for learning, we have insisted that students learn a great many things that could not have immediate use. We have proceeded upon the assumption that if we did not teach the student when he was young, he would never be able to acquire the information and knowledge that in later life he would need. If the conclusions of

Adult Learning are accepted, the logical result will be an entire reorganization of the content of the material which is presented for learning to youthful students and the spreading out of the process in accordance with some rough plan whereby the individual will systematically continue to study and to acquire intellectual furniture throughout life. The time of acquisition will come very shortly prior to use. In other words, we will treat the mind less as a warehouse which must be filled for a lifetime, and organize the system of education more in analogy with the method through which we acquire meat and shoes and bedsteads as our need for them arises. Although it is, of course, an extreme view to suppose that this result will grow from the adult learning study in the immediate future, the way is opened for developments in this direction. If the first step should be, as current tendencies indicate is probable, provision of increased facilities for learning by adults and removal of the inferiority complex from which adults have frequently suffered because of age, the next and logical step will be to raise the question of "why give our children great portions of the formal training that we now acquire as we need it?" Popular forms of curricula construction look to analysis of life-activity for guidance. Unfortunately the life-activity is usually that of mature age, while the period of preparation for that life-activity is now concentrated in a period separated from use by many years. The limits of a brief review of this type do not permit a systematic analysis of the consequences of Professor Thorndike's experiments, but it should be apparent that they remove important barriers to revolutionary revision of every phase of educational life and activity.

As is evident, this review does not present a microcosmic picture made up of a mass of statistical data and recorded events derived from New Year's Day reviews of the Old Year. The choice of topics for discussion is entirely subjective. If someone with other experience and contacts had made the selection, it probably would have been different. There has been an attempt to record significant events of the year for educational progress. This review, therefore, has attempted to do no more than discuss these events from the standpoint of their influence upon restricted fields of education and to provide such interpretation as will be desired by persons who customarily browse in other intellectual pastures.

GOVERNMENT

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ABSTRACT

The few states in session in 1928 show administrative devices applied in a period of development. The new field of jurisdiction, the air, seems to be falling under federal control in respect of air traffic as the legislation of 1927 showed to be the case in respect of radio. Centralization of state government shows advances, but, notably in those departments in which the sociologist is interested, the administrative or advisory committee persists as an instrument of administration. Judicial councils, representing the reaction against ineffective administration of the courts, were created in three states, an evidence of the seriousness with which is taken the demand for reform in court administration as necessary to any effective improvement in securing the rights of individuals through the judges. The movement for the centralization and better keeping of criminal records for the purpose and the use of that agency to aid local police officials in the detection of crime, found expression in the year under review.

Interesting as it is, and important as is the rôle it plays in society, government is not an end in itself but is merely a means to an end. What that end is appears in other articles in this survey, discussing changes in social and economic interests during the year. All law, whether it deals with government or with private rights, should be envisaged as a solution of social difficulties, taking the word "social" in its broad sense. The social need or the social problem develops with the progress of society, and when the social groups affected, it may even be the whole of the community, believe that the solution of the problem must be established by public action through law and enforced through government, the legislature or the courts as lawmaking bodies are justified in trying to find the popular legal setting for the reform proposed.

It is in this sense that changes in government must be regarded, especially by students of social sciences; the efficiency of the governmental devices must be tested, not in the narrow field of administrative convenience or theoretical perfection, but in the broader field of giving satisfaction to recognized wants of the public. For example, the budget is socially important, not just to save money or

to offer a convenient way of bettering state administration, but as showing the objects for which the state is using its money and securing greater economy in state expenditure, in order that there may be more income left: to remedy great social needs, like social insurance, it would be argued by one group; or by another, to leave more money in the pockets of its citizens as the best social solution of the question of division of the income available to the people of the state.

FEDERAL LEGISLATION

The Federal legislation for 1928, while containing no fundamental changes in the administrative structure of the country, emphasizes interestingly some of the administrative devices used in the federal government. There are many instances of a technical commission being appointed to advise the president upon the facts in a situation prior to his taking action, and the seventieth Congress adopted this method to solve a difference which had arisen as to the plan for flood control on the Mississippi. The chief of engineers of the army reported a project which had been approved by the secretary of war and the president, providing for control of floods by means of spillways, flood ways, levee construction, and channel stabilization. The Mississippi River Commission had also prepared a plan which differed in important engineering details from that of the chief of engineers. Congress by 45 Stat. 534, adopted the engineers' project, but had its doubts in respect to the differences between the engineers' and the Commission's plans. It, therefore, appointed a board to consist of the chief of engineers, the president of the Commission, also an army engineer, and a civil engineer chosen from civil life by the president and Senate to study and, if necessary, to make further surveys and then to recommend to the president the action which it deemed necessary in respect to these differences. The president was then to make final decision. In fact, the Board unanimously indorsed the plan of the army engineers, so that there was nothing left for the president to decide. The prosecution of the project was committed to the Mississippi River Commission acting under the direction of the secretary of war and the chief of engineers. The Commission, created in 1879, consists of seven members appointed by the president and Senate. Three of

them are army engineers, one of whom is designated president, one an engineer of the Coast and Geodetic Survey, and three persons appointed from civil life, two of whom shall be engineers, so that technical men are put in control of the operations. The chief debate on the act arose from the difference over the amount which should be contributed by the states affected. Congress finally declared its adherence to the principle of local contribution, but in view of the large amount of money already expended by the Mississippi Valley people, the whole cost of the project is to be defrayed from the federal treasury, if the states or levee districts give satisfactory assurance that they will maintain the works and provide all rights of way for levee foundations and levees on the main stem of the river.

Another evidence of the use of technical advisory boards is contained in 45 Stat. 1011, directing the secretary of the interior to appoint a board of five engineers and geologists to advise him in respect to the proposed Boulder Dam site on the Colorado River.

The use of existing human facilities to carry out new enterprises is rather strikingly illustrated in the new Workmen's Compensation Act for the District of Columbia. The United States Employees' Compensation Commission, established to administer compensation to employees of the government, and subsequently vested with the administration of the Longshoremen's and Harbor Workers' Compensation Act, is made the Compensation Commission for the District by 45 Stat. 600. The act is interesting in its brevity. It simply applies the Longshoremen's and Harbor Workers' Act to employers and employees in the District. No state public fund is provided for the insurance of employees. The field is left open to private companies. Owing to the small size of the District, it would have been impractical to have any other than an exclusive public fund as in Ohio. The proponents of the bill wisely avoided setting up a competing public fund, such as exists in New York, California, and other states.

The device of corporations whose capital stock is owned wholly by the United States, a device much used during the war, has evidently proved of worth under some conditions. In 45 Stat. 978, the stock of the Inland Waterways Corporation was trebled and the

corporation directed to extend existing carrier service on inland waterways. The policy of congress, however, was declared to be to continue the government service only until private persons engaged in common carrier service on the rivers on which the corporation operates. The power of the Interstate Commerce Commission, furthermore, was extended over common carriers on the Warrior or Mississippi Rivers, or their tributaries. The protection of invested capital and going concerns is assured by the well-known device of requiring certificates of convenience and necessity from the Commission.

The shoe of the comptroller general has given much evidence of pinching till it hurts. In recent years his close control over expenditures has proved very trying to administrative officers and sometimes quite hampering to the carrying out of the law. Congress by 45 Stat. 248, authorizing the postmaster general to enter into contracts for airmail to foreign countries and insular possessions, expressly directed that, in the awarding and interpretation of the contracts, the decision of the postmaster general is to be final and not subject to review by the comptroller general. This will result from the words of the Act forbidding "review by any officer or tribunal of the United States, except the President or the Federal Courts." Another way to loosen the tight rein which the comptroller holds over public expenses is adopted by 45 Stat. 413 authorizing him to submit to congress a recommendation in respect to claims that may not lawfully be adjusted by the use of appropriations already made, but which "contain such elements of legal liability or equity as to be deserving of the consideration of Congress."

THE CONTROL OF THE AIR

In the review of 1927 legislation, attention was called to the "debatable land" of the air where separate jurisdiction of the federal government and the states might cause conflict. In respect to the operation of aircraft, there is a tendency among the states to give the practical control over airmen and aircraft to the United States as in 1927 the control of radio seemed to be passing to Congress. One group of states goes the whole distance—New York (Ch. 233), New Jersey (Ch. 63), Mississippi (Ch. 208), Illinois

(Special Session, p. 85). They require all aviators and aircraft flying in the state in any kind of aviation for which licenses would be required by the government, if the flying were interstate, to have federal licenses. "The public safety requiring, and the advantages of uniform regulation making it desirable, in the interests of aeronautical progress" that this be so is given as a reason by New York and New Jersey. These two states in their identical acts also introduce to the dictionary of statutes the word "avigation" as a substitute for "aerial navigation," but the purists of Illinois stick to simple "aviation."

The curious combination of Massachusetts (Ch. 350), and Virginia (Ch. 463), stood for modified state's rights. The "Old Dominion" allows a person with a federal license to "avigate" in their jurisdiction, but also provides for state registration. Massachusetts limits the right to fly with federal licenses in their jurisdiction to non-commercial flyers, and requires commercial flyers to have licenses from the registrar of motor vehicles, or, if licensed in another state, to file a declaration with the registrar if they fly in the state for more than ten days. There will probably be a general approval of the provision of Massachusetts that foreign aviators must appoint the registrar attorney to receive service in the event of any suit against them for damages caused by negligence in aviation, a provision quite common in respect to foreign automobilists. Airmen can get away quicker and farther than motorists, so that it is the more important that the injured Yankee find some way of bringing suit in his own state, if he is to have any redress.

STATE LEGISLATION

Consolidation and concentration.—The state of New York has continued the reorganization of its state government under close control by the governor on the general plan of a single-headed chief of a department whose commission runs for the same term as that of the governor who appoints him. Thus, the executive holds the control of the department through its chief and a clean slate of heads of departments is given to each new governor to fill out with men he trusts. True to type is the Department of Conservation (Ch. 242). Its chief is a commissioner appointed by the governor

with the advice and consent of the Senate, to hold office till the end of the term of the appointing governor. The principle of responsibility within the Department is observed through the power given the commissioner to appoint his secretary and deputy and other employees, especially the heads of each of the five divisions created in the department, and to fix their compensation within the amount appropriated therefor. Again, the insistence on responsibility of the chief and his independence within his department is observed by conferring upon him, subject to civil service law and regulations, the power of removal of all officers in the department, except the heads of the Division of Water Power and Control. This division is headed by an *ex officio* commission composed of the commissioner himself, the superintendent of public works and the attorney general, which in its turn has control of its subordinate appointees so that the power of the commissioner in respect to water power is only that of the *primus inter pares*. It is a general rule in the state reorganization to allow the head of a division to appoint his subordinates; for instance, in conservation, the chief game protector has this appointive power, so that here again he can fairly be made responsible for his division, since he is given the disciplinary power within it.

The Division of Parks is under an executive officer named by the commissioner, who is secretary of the Council of Parks, which makes the rules, acts as an advisory and planning body, and recommends a budget to the commissioner. The Council of Parks includes the chairmen of the different local park commissions in the state, including two county park commissions, the president of the American Scenic and Historical Preservation Society, and the superintendent of Lands and Forests. The local interests were too strong to permit a central park authority fixing the budget and controlling the actions of the special park boards.

The Executive Department is built around the governor himself (Ch. 676). It has four divisions—the Budget, Military and Naval Affairs, Standards and Purchase, and State Police. The governor may establish, consolidate, or abolish additional divisions or bureaus. He appoints, to serve during his pleasure, the heads of the divisions of the Budget and of Standards and Purchase, thus keep-

ing within his hands the reins of these important financial bureaus. The adjutant general is the head of the military and naval affairs, and the head of the State Police is appointed by the governor, by and with the advice and consent of the Senate, removing him a little farther from the direct control of the chief. To administer relief to sick and disabled New York veterans, a bureau is continued in the Division of Military and Naval Affairs under the supervision of the adjutant general, who, subject to the approval of the governor, appoints the employees and also in each Assembly District of the State, a veterans' relief commission to investigate applications for relief and to fix the amount to be given. These officers serve without pay—a testimonial to the reliance on voluntary help in carrying out the relief functions of the state so common in this country.

The Department of Public Service (Ch. 732) has a hybrid organization. Its administrative head is the Chairman of the Public Service Commission, but its important judicial function is performed by two commissions: one for the City of New York, to consist of three members appointed by governor and Senate, who must be residents of the city and are appointed for nine-year terms; the other, the state division, consists of five members appointed by the governor and Senate, one of them designated as chairman, for ten-year terms. The independence of the Commission is emphasized by the length of the terms of its members, and by the fact that they are appointed for overlapping periods, so that at no one time is an opportunity given to an ambitious governor to impose his own point of view on the decisions of the commission which controls the utilities.

In the reorganization of the Charities Department (Ch. 859), the effort to isolate state aid from political influence is evident in setting up as its head a State Board of Charities composed of twelve members appointed by the governor and Senate for overlapping terms of eight years. Another interesting characteristic of many American commissions appears in the geographical distribution of membership, so that each section of the state will be represented in the body that manages the state welfare functions. The Board appoints its subordinates, a chief executive officer, the director of state charities, and the heads of divisions. The members

of the Board are paid a per diem instead of the regular salary which the Public Service Commission receives. Local rights as in the Division of Parks are respected through the local boards which still control particular institutions, but the superintendents of these institutions are appointed by the state board and are protected by civil service. They can effectively manage their own institutions through the power of appointment of subordinates.

The comptroller general of the state is properly not a member of the Executive Department of the government, but is the watchdog of the legislature upon it. In the reorganized state government of New York, this function is recognized by the election of the comptroller and his complete power of appointment and organization of the Department of Audit (Ch. 590).

Virginia has adopted the principle of the single head of the department in its Labor Department, which is under a commissioner. Chapter 19 extends his term of office from two to four years. In Chapter 140, the same state consolidates under the corporation commissioner the Bureau of the Commissioner of Insurance and other officials controlling banks and insurance. The corporation commissioner is authorized to exercise his new power over banks and insurance, through a commissioner of banking and insurance whom he may appoint in his department.

Boards and commissions.—The states that took action in 1928 other than New York and Virginia showed little respect for the theory of centralization of governmental functions. In a great industrial state like New York, the need for bureaucratic organization with responsibility in the chiefs of the departments to the governor and the public, and with that responsibility made possible through their power over their subordinate officers under civil service, has overcome the American reluctance to vesting power in a few hands. The need for a strong, well-organized body of permanent officers and clerks under responsible chiefs is not felt to the same degree in smaller communities. The tendency to make government more efficient and economical by grouping the state officers in a few great departments on the model of the federal government develops as government extends, and interferes more and more in the business of individuals, so that as taxpayers and as persons who

must conform to the orders of a state official, the citizens become more and more interested in efficiency in government. This need has not influenced deeply the laws of the less industrially developed communities. The old custom of creating boards and commissions to perform various duties of the state government, to make each one independent of the others and as independent as possible of the chief executive, still prevails. The legislatures reflect, furthermore, the opinion that the head of a department need not be a professional official, giving all his time to his work, and paid a salary, but that a group of well-disposed persons meeting a few times a year may direct many branches of the state service. This is particularly so in welfare work. Even in New York the State Department of Charities is under a large board with the executive control lessened by the interesting device of the overlapping term, and the power of appointment within the department. A certain degree of control will come from the governor's budget power in states which have introduced the budget system and in his power of investigation and discipline, but the governor can scarcely be held responsible for the administration of departments which are isolated so carefully from direct exercise of his authority.

The Louisiana Board of Health, Act No. 126, appointed by governor and Senate, is composed of the president and eight members with overlapping terms. It incorporates in addition the principle of geographical representation, as one member must be from each congressional district. Representation of interest, as well as geographical units, is evident since the Board contains five doctors, one dentist, one registered druggist, and one educator, who is in the public school system, the latter probably on account of the school medical service. A very important change in the finances of the Board was made in the reorganization. In addition to its independence of the executive through the method of appointment of its members, the old Board had a considerable income from taxes and fees which were by statute devoted to its use, so that it had economic independence. The new law makes all these fees and taxes payable into the state treasury, so that the Board will henceforth be dependent on annual grants from the legislature. Kentucky (Ch. 17), continued the care for children under a com-

mission of nine for overlapping terms, and requires not more than five of the nine members to be from any one political party. Perhaps one might say that the professional element is represented by requiring four of the members to be women. Mississippi (Ch. 149), and Louisiana (Act No. 101) create commissions for the blind containing at least one blind person. The commissioners are appointed for overlapping terms. It is interesting that in Louisiana the chairman is to be superintendent of the State School for the Blind, whereas in Mississippi the state superintendent of education and the secretary of the Board of Health are the official representatives. Virginia, by Ch. 220, changed her Department of Game and Fish from a single-headed department to one controlled by a commission of five members on a per diem, the chairman to be the administrative head with the right of appointing a paid executive secretary.

A few *ex officio* commissions were set up, notably one in Louisiana (Act No. 95), composed of the commissioner of agriculture, the president of the State Board of Health and the dean of the State College of Agriculture to make and administer rules as to the sale of milk; South Carolina (No. 623), which gives the Board of Trustees of the Clemson College, a state school, power of regulation over poultry, a control which they already exercised over other livestock. Thus direct political influence was again here widely removed from an important branch of the state administration.

Guild control.—Another form of the commission appears in the curious kind of modified guild organization which is rapidly increasing in different lines of occupation in this country, varying from doctors and lawyers to cosmeticians and barbers. The various groups are organized by the process of licensing by a commission composed of members of the group, and the discipline of the group is confided into the hands of the same body through their power to suspend and even take away licenses, with the right of an appeal to the courts. Mississippi (Ch. 133), sets up a state board of architecture of five practicing architects appointed by the governor for overlapping terms; and in Rhode Island (Ch. 1235), a state board of optometry of five members engaged in the practice of the profession, appointed for five years, one going out each year,

controls the profession. Mississippi (Ch. 131), and Louisiana (Act No. 253), create state boards of dentistry, each of five dentists, for overlapping terms; Kentucky, by Ch. 123, sets up a board of chiropractic examiners of three members for three-year overlapping terms, to be appointed from chiropractors now holding a license. Subsequent members must be graduates of chiropractic colleges giving a specified number of hours of instruction. The act defines chiropractic and authorizes the board to license and discipline chiropractors.

An interesting case of advance of guild control is the modified board of cosmetic therapy in Louisiana. The new board (Act 245), contains two licensed cosmeticians appointed by the governor, whereas the old board had but one. The president of the state board of health, and a member appointed from the employees of the board, show that the guild of cosmeticians has not yet freed itself from the control of the public health authorities, but it has made a step in that direction. The barbers in Louisiana run their own craft (No. 247). The three members of the board must be practical barbers. In most cases such boards have a per diem pay, but in Louisiana, one of the members may be elected secretary and will receive a regular salary. It may be doubted if the disciplinary function of these professional boards is very vigorously exercised, but the principle of democratic control of a profession through its own members, one of the oldest forms of social organization, in place of bureaucratic control, is evidently still in vigorous life.

Investigating committees.—The average American legislature sits only for a short time every two years, or even where it sits annually, it has little opportunity during its session to investigate carefully the questions presented to it for action. It is, therefore, quite common to have committees of investigation created which are sometimes members of the legislature, but frequently contain persons appointed by the governor from the public at large. These commissions are valuable, not only to collect information and digest it for the benefit of the hurried session of the legislature, but almost as much so as a means of finding out popular sentiment and, if that sentiment is vague or unformed, to lead it by discussion and hearing to a real consideration of a novel subject of legislation. In

Virginia four such commissions were created in 1928, all containing members appointed by the governor, one (Ch. 216), a commission to investigate freight rates, composed of citizens appointed by the governor, one from each congressional district, one from the state at large. Another (Ch. 509), was set up to study the extension of the principle of compensation to automobiles. It is usually wise to put members of each house of the legislature on such investigating commissions, so that their proposals will have informed and convinced friends among the lawmakers, but it is more essential that the governor have the appointment of experts who will force the work of the body. Mississippi (Ch. 352), created a number of these commissions, notably the one to investigate the tax system of the state, and another to recommend means of additional revenue, while Kentucky (Ch. 596), sets up a commission to investigate the Workmen's Compensation Act, but this time all the members are appointed by the speaker or the president of the Senate.

Judicial councils.—Three states set up judicial councils, Rhode Island (Ch. 1038), Virginia (Ch. 7), Kentucky (Ch. 20). In Virginia the president of the Supreme Court summons the Council, to consist of not less than three nor more than five circuit judges, not less than two nor more than three judges of other courts of record, and ten members of the Bar, one from each congressional district. The president of the Supreme Court is the presiding officer. Each judge must report annually the condition of business in his court to the Council. A report is made to the governor and the Supreme Court reviewing judicial business and recommending improvements, particularly needed changes in rules of practice and procedure. Kentucky puts on her Council the judges of the Court of Appeals and the circuit judges. She requires the Council to meet annually to study the judicial system, especially its procedure and practice and administration. The circuit judges must report to the Council, which itself reports biennially to the General Assembly. Rhode Island agrees with Virginia in joining members of the Bar to the Bench. Its Council is composed of the chief justice of the Supreme Court, a justice or associate justice of a District Court, and three attorneys appointed by the governor with the same powers as the other councils, except that in Rhode Island, the judges are

not required to make reports from the Council. The move to create a better judicial organization is bearing all over the country first fruits in setting up an organization for the purpose of preparing and carrying out reforms and in creating that organ as a guild organ of the lawyers of the state.

Penal.—The value of a State Bureau of Criminal Identification and Investigation is being realized over the country. Louisiana (Act No. 99), creates such a bureau under a board of managers, the governor as chairman, a chief of police, and a sheriff. The Bureau is to be managed by a superintendent appointed by the governor with the approval of the other members. The superintendent is given considerable freedom. He makes rules with the approval of the Board and appoints, also with the approval of the Board, the assistant superintendent, while the other members of the Bureau, including three investigators, he appoints himself. The Bureau collects and keeps a permanent record of photographs, descriptions, and fingerprints of all persons convicted of a felony and of all well-known and habitual criminals. The important position in modern criminology of the receiver of stolen goods, innocent or not, is emphasized by the fact that the superintendent must require pawnshops and second-hand dealers to file with him daily a complete description of all articles bought or taken in pawn, including the serial number on the article, and a description of the persons "negotiating the deal." He also is required to broadcast by radio, mail, or in other ways information relative to lost property or fugitives wanted. Louisiana strikes out a new line by directing the superintendent to provide instruction for police officers in their powers and duties and in the use of approved and scientific equipment and methods for the detection of crime.

New York reorganizes its state system for probation and parole. By Ch. 313, it puts at the head of the Division of Probation a director to be appointed by the commissioner of correction. The director is protected by putting him in the competitive class of the civil service, and he is authorized to appoint three probation examiners who must also be in the competitive class. The director is given general control over probation in the state, including probation in the children's courts. The state was unwilling to let the

director operate without some control, so it continued the State Probation Commission of seven members, four to be appointed by the commissioner with the advice and consent of the governor, to hold office during the term of the commissioner, the other three to be the commissioner of correction, the director of probation, and one member of the State Commission of Correction designated by the commissioner. The duty of the Commission, which is unpaid, is to consult with the director. To pass on applications for parole, a semi-judicial duty, a Parole Board of three is created (Ch. 490), consisting of the warden of the prison in which the candidate for release is held, the commissioner of correction, and a full-time, paid member who shall be second assistant commissioner of correction. This officer is appointed by the commissioner for a term coterminous with his own, so that the same degree of professionalization resorted to in the case of the Division of Probation is not set up in the Parole Board.

Public finance.—Two states have taken interesting action in the field of public finance. New York (Ch. 232), which has lately adopted the executive budget, adds a control over the money which may be received by a department. It requires the head of each department to submit a statement of sources, amounts, and disposition of all money received by or through the Department to include any fund under the control of the department. A summary of the statements is to be transmitted to the legislature by the governor with the budget. Thus the annual financial project of the state will show the amount which has been received by any department, through fees, fines, or special taxes. The retirement and pension funds of state employees are exempted. New Jersey (Ch. 189), provides a way for discriminating between worthy and unworthy bidders for public work. Any branch of the government may require a prospective bidder to answer a standard form of questionnaire and financial statement before furnishing him with plans and specifications. If it is dissatisfied with his answer, it may refuse to furnish the plans and specifications and his bid may be disregarded. No action of any nature out of any court shall lie because of any such decision by the public authority.

OCCUPATIONS

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ABSTRACT

The statistics of occupations in the United States since 1850, 1870, 1910, and 1914 show cross-sections of our civilization and tell a story of the changes that are taking place. They show the changes in family life, the growth of recreation, the development of agencies of diffusion of knowledge, changes in our artistic, intellectual, and moral life, new habits and necessities, old habits that are being lost, the great growth of manufacturing and the decline of agriculture, the growing dependence on the machine, the rise of the higher-class services, and the decline of lower types of the service occupations

The statistics of occupations as they are reported from time to time throw much interesting light on the social changes that are taking place. Changes in consumption are shown, for instance, by the fact that the numbers occupied in producing silk goods in the United States are increasing much faster than are the numbers producing cotton goods.¹ Changes in habits of life are illustrated by the rapid increase in the number of plumbers. Occupation statistics provide us new facts concerning our social classes; the "white collar" class as measured by the professions and the clerical occupations is increasing more rapidly than the laboring class. The figures reflect changes, also, in certain of our social institutions. The domestic servants are becoming less numerous, while waiters are increasing in number.

It is apparent that some of our economic institutions are undergoing change as well. Public servants are increasing more rapidly than persons employed in private enterprises. Indeed, the

¹ Statistics of occupations are, however, quite difficult at times to interpret. For instance, diminishing numbers of employees might not mean reduced consumption of the commodity produced if power and machinery were taking the place of labor. This particular difficulty can, of course, be checked by production figures and power consumption, when such figures are available. Exports and imports must also be considered

changes in occupations are interesting in themselves. Clergymen are failing to keep pace with the population in numbers, while dentists are outrunning it. Some trades, like that of the cooper and the cabinet-maker (hand), are disappearing. The losing struggle of the handicrafts is shown by the invasion of machinery into the tailoring trade, where the number of persons of that calling is decreasing.

These periodic statistics of occupations apparently indicate quite a variety of social changes. These changes will be shown more specifically in the paragraphs that follow.

THE OCCUPATION CLASSES

The trend away from agriculture.—We all know that men are leaving the farms for the cities; but how rapidly this movement is proceeding is not generally appreciated. In 1880 about half (49.4 per cent) of our gainfully occupied population were engaged in agriculture (plus lumbering and fishing), while forty years later only about one-quarter (27.2 per cent) were so occupied. In the decade ending with 1920, the population of the United States increased some 14 per cent, and yet there was an actual decline in the number of farmers and farm-laborers. From the point of view of our daily activities, we are far from being a nation of farmers when three-fourths of us follow activities that are not agricultural. This could hardly have been visualized by Thomas Jefferson. The census of 1920 showed that for the first time manufacturing claimed a larger part of the working population than did agriculture. About one-third of all who work are in manufacturing, mining, or mechanical pursuits.

The great growth of the middleman.—It is customary to think of our great occupations as agriculture and manufacturing. Our food is produced by farmers and the other commodities we use are produced by manufacturers. Forty-five years ago these two great fields of production employed 75 per cent of our working population. But today 40 per cent of us are occupied along other lines. What are these other occupations? They are largely trading, transporting, and clerical work. These three groups employ five times as many persons today (1920) as they did forty years ago, while all other occupations have just doubled. This is a reflection

of the greater specialization in industry, which makes for greater dependence upon trade and transportation. In addition we as consumers are demanding more speed and convenience in having brought to us the products of farms, mines, and factories, perhaps a good indication of a rising standard of living.

Changes in two kinds of service.—Domestic and personal service has barely held its own in the competition for workers. During the last half-century the percentage of all occupied persons who are in this field has remained about stationary. In the most recent decade for which figures are available (1910 to 1920) there was an actual decline in the numbers engaged in domestic and personal service. This decline should probably be attributed to the increase in the use of the machine and the decline of the family rather than to any curtailment of wants in these respects. While we have been releasing other people from rendering these lower-grade services, we have been availing ourselves to a greater extent of the higher-grade services which we call those of the professions. The ranks of those engaged in professional service increased three and one-half times between 1880 and 1920, and about 25 per cent between 1910 and 1920. This remarkable growth has been greater than in manufacturing, in trade, or in transportation since 1910. But the clerical occupations have outrun even the professions, with an increase of 80 per cent in a decade. Many of these clerical occupations, associated as they are with record taking and efficiency, represent higher skilled services. The advance of civilization is making us, therefore, more dependent on the highly trained, expert, and specialized services. There is every reason to think that this is a trend of civilization with its increasing wealth.

The general trend.—The movement in all of our great occupation groups may be seen in Table I, which shows the percentages of all the gainfully occupied who are in each occupation group. The three columns represent the percentages for 1880 and for 1920, and the percentage increase over the intervening period.² Table I shows the general trends over nearly half a century as they were previously indicated. Table II shows similarly the change within the decade 1910–20, with more refined and consequently

² *Commerce Yearbook*, United States Department of Commerce, 1928, p. 16

more accurate classifications.³ Certain adjustments were necessary in both cases in order to make the years comparable, and hence the two tables do not lend themselves to precise comparison.

TABLE I
CHANGES IN OCCUPATIONS 1880-1920

OCCUPATIONS	PERCENTAGE OF THE OCCUPIED IN EACH GROUP		PERCENTAGE INCREASE 1880 TO 1920
	1880	1920	
All occupations	100 0	100 0	141
Agriculture, lumbering, and fishing	49.4	27.2	34
Manufacturing, mining, and mechanical pursuits	25.6	33 0	208
Trade, transportation, and clerical pursuits	12 2	24 8	389
Professional service	3 5	5 0	252
Domestic and personal service	9 3	9 9	156

TABLE II
CHANGES IN OCCUPATIONS 1910-20

OCCUPATIONS	PERCENTAGE OF THE OCCUPIED IN EACH GROUP		PERCENTAGE INCREASE 1910 TO 1920
	1910	1920	
All occupations	100 0	100 0	109
Agriculture, forestry, and animal husbandry	33 2	26 3	87
Extraction of minerals	2 5	2 6	113
Manufacturing and mechanical pursuits	27 8	30.8	121
Transportation	6 9	7 4	116
Trade	9 5	10 2	115
Public service	1 2	1 9	168
Professional service	4 4	5 2	127
Domestic and personal service	9 9	8 2	90
Clerical occupations	4 6	7.5	180

THE GREATER DEPENDENCE ON MACHINES

Our growing dependence on the machine has led some observers to say that we are all parasites of it, that the machine is dominating our whole social and moral life. More optimistic persons see no loss of liberty in this phenomenon, but evidence rather that man is gaining mastery over nature. The observation that we are using many machines is made every day. Measurement tells us how much and, when made over time, shows us trends.

³ *Handbook of Labor Statistics*, 1924-26, p. 417.

The most striking phenomenon, of course, is the growth of manufacturing, which is largely the use of machines. We have seen that the numbers engaged in this pursuit have trebled since 1880 while agriculturalists have increased only a third. Most machines are operated by other than human power, and it is noted that there were twelve times as many miners in 1920 as there were in 1850, while the population was only 4.8 times as great.⁴ But we use some coal to keep ourselves warm, and oil and hydro-electricity help to turn our machines. Engineers and firemen are thirty-three times as numerous today as in 1850, and the machinists have increased at a like rate. Nearly all machines are made from steel and iron, though much of these commodities is used for other purposes such as building. There were in 1920 some seventy-one times as many iron and steel workers as in 1850, an increase of 7,000 per cent.

These figures give some idea of the enormous growth in the use of machines since the middle of the last century, a growth little realized because few of us were living in 1850. While it is interesting to observe this long-time trend, we wish also to know what has been occurring in very recent years. Is the movement slowing up or exhibiting continued acceleration? There seems to be little evidence of any decline in this growing use of machinery. Workers engaged in the production of all kinds of machines (plus those employed in producing other parts of transportation equipment) have increased from 1914 to 1925 by 70 per cent, while the population increased less than 15 per cent. Many of these machines are used to make more machines. That is to say, machinery is replacing men not only in the production of the commodity to be consumed, but also in the manufacture of machines which will make other machines to produce the article for consumption. Hence the statistics of occupations showing men engaged in making machinery give an underestimate of the growing use of machines. Thus, while the increase in manpower making machines was

⁴ Most of the figures showing comparisons with 1850 are taken from the *Handbook of Labor Statistics*, 1924-26, Bulletin No. 439 of the United States Bureau of Labor Statistics. Other figures are taken from the volumes of the United States Decennial Census. The comparisons since 1914 are from the Biennial Census of Manufacturers, United States Bureau of the Census.

about two-thirds, the increase in the value of the machines produced was about two and a third times, in money of the same value. The increase in the numbers making machines was about twice as great (1914-25) as the increase in the numbers engaged in manufacturing, which is to say that the growth in the number making machinery is double the growth in the number using machinery. This is again indicative, apparently, of the extent of the replacement of men by machines.

It is interesting to note that the increase in those employed in making scientific instruments and instruments for the professions has increased at the same rate as in the production of the grosser machinery. All of these changes just mentioned have come about within one decade plus one year. Whatever may be the effects of machines, apparently we like them.

The machines are continuing to destroy particular trades and to reduce the number of craftsmen in a special trade by the substitution of machines. The boot- and shoe-workers, for example, have increased only about one-half as fast as the population. And so with the stone-cutters, whose comparative rate of increase has been about the same. Stone-cutting is now done increasingly by machines at the quarries.

HIGHER STANDARDS OF LIVING

The great wealth in the United States finds expression in more expensive standards of living. Our pioneer fathers were scarcely familiar with such things as dentists, bathrooms, refrigerators, and newspapers. Today we feel that they are necessities. The statistics of occupations reveal some striking trends of this nature. Since 1850 the number of plumbers, gas- and steam-fitters has increased 11,000 per cent, indicating wide diffusion today and but little in 1850. Dentists, having increased about four times as fast as the population, are nineteen times as numerous as they were in 1850. Barbers, manicurists, and hairdressers are so in demand that they have increased eight times as rapidly as the population over the same period. Upholstered furniture was rare in 1850, and the number of upholsterers has increased twenty fold. Since 1870 (to 1920) nurses (trained and otherwise) and midwives have increased 2,400 per cent. From 1910 to 1920 trained nurses alone

increased 100 per cent, partly no doubt because of the stimulus of the war. The number of physicians and surgeons has, however, fallen slightly behind the rate of increase of the population.

Between 1910 and 1920 the general population increased 14 per cent. The makers of soap, however, augmented their numbers by 40 per cent, the glove-makers by 1,000 per cent, the paper and pulp mill-laborers by 60 per cent, the plumbers, gas and steam fitters by 40 per cent, and the upholsterers by 46 per cent. Some soap was manufactured in the early days on the farm, and likewise gloves were knitted there. But the passing of such activities from the home would hardly account for such an increase in the decade ending in 1920.

During the eleven years from 1914 to 1925 there were some rather interesting increases in numbers of wage-earners in certain industries, indicating the development of tastes and needs that add to the family budget. In this period the number of wage-earners engaged in producing dental goods increased 72 per cent. At the same time the population probably did not increase more than 15 per cent. The workers engaged in making paints and varnishes became 59 per cent more numerous, and those in refrigerator factories increased 67 per cent. Furs have greatly increased in popularity. The wage-earners in the industry (fur goods and dressed furs) increased 100 per cent. There were three times as many wage-earners producing perfumes, cosmetics, and toilet preparations in 1925 as in 1914. The growth of export trade does not account for such increases.

The higher plane of living is even apparent in the greater expense of death and burial. From 1870 to 1920 the number of undertakers increased two and one-half times as rapidly as the general population.

These changes are indicative of higher levels of living, larger incomes, and consequently added ability of the people to satisfy their wants. Some of this new income goes for health and some for display; no doubt a fair picture of human behavior.

THE INTELLECTUAL AND ARTISTIC LIFE

With the effective expansion of human wants, which has been ascribed to the growth of income and the development of culture,

how have intellectual and artistic wants fared? Statistics of occupations throw a small amount of light on this question. In days gone by schooling and reading were interpreted as an intellectual advance. Strictly speaking, though, the advance depends upon what people read and how they read. The statistics do show an increase in our reading habits. From 1870 to 1920 the newspaper carriers and newsboys increased 1,300 per cent, but the increase was not notable during the last decade of that period. The number of librarians during this time grew 8,000 per cent. Musicians and teachers of music were seven times as numerous in 1920 as in 1870, and artists and teachers of art are ten times greater in number. But there were only four times as many school teachers. However, the population in 1920 was only 2.7 times as great as in 1870. The increase in the number of clergymen just about kept pace with the growth of the population, there being two and nine-tenths times as many in 1920 as in 1870.

Within the decade from 1910 to 1920, artists, teachers of art, musicians, teachers of music, and the clergy have not grown numerically as fast as the population, but the librarians and the school teachers have. Compositors, linotypers, and typesetters have increased only 10 per cent, but the laborers and the semi-skilled in the printing and publishing industries have grown 21 per cent, perhaps an indication of a greater distribution. There were 55 per cent more persons engaged in making printers' ink in 1925 than in 1914. There were 11 per cent more wage-earners engaged in making phonographs.

NEW HABITS

New inventions and new wealth teach people new habits. The most conspicuous are those associated with the recently invented automobile. There were 500 per cent more chauffeurs in 1920 than in 1910, and 700 per cent more garage-keepers and managers.

It is also to be inferred that the consumption of sweets and candies is increasing greatly, for those who make confectionery have increased 23 per cent between 1914 and 1925 and the candy and confectionery dealers increased 26 per cent between 1910 and 1920. The number of wage-earners making ice cream increased 122 per cent in the last census decade.

The rapid growth of the use of electricity is shown by the fact that the number of wage-earners making electrical machinery doubled from 1914 to 1925. In 1925 there were very nearly 3,000 wage-earners making aeroplanes, indicating a sizeable industry. The use of rubber and oil continues to grow, partly owing to the automobile demand, the increase in wage-earners from 1914 to 1925 being 90 per cent and 157 per cent respectively. Aluminum ware is coming more and more into use in our lives, and as a result there were three times as many persons manufacturing it in 1925 as in 1914. The increased wealth may be responsible for more than doubling the number of stock-brokers from 1910 to 1920.

The spread of another interesting social habit is indicated by the great growth of social work and welfare work. There were 16,000 religious, charity, and welfare workers in 1910, and by 1920 the number was 41,000.

HABITS THAT ARE BEING LOST

Inventions bring new occupations, of course, but at the expense of others, and the course of events inevitably leaves many diminishing occupations. Such, for instance, are the blacksmiths, who declined 16 per cent from 1910 to 1920; midwives, who declined 23 per cent; carriage- and hack-drivers, 74 per cent; hostlers and stable hands, 70 per cent. The old-time boarding-house is giving way to the restaurant, for the number of boarding- and lodging-house keepers declined 20 per cent in this period.

Apparently we are using fewer firearms, for the number engaged in fabricating them in 1925 was 37 per cent less than the number in 1914.

The radio and the phonograph, it is supposed, are replacing the piano, for the decrease in the occupation of piano-making was 16 per cent in this period ending in 1925.

Statistics of occupations record the changes in styles of dress also. For instance, the numbers making combs and hairpins decreased 53 per cent between 1914 and 1925. Corset-makers dropped off 30 per cent, and the dressers of feathers and plumes 80 per cent.

The ancient occupation of wheelwright has almost disappeared, there being only about 12 per cent as many of them in

1920 as in 1850. Certain other woodworking crafts have fared likewise. The coopers during this time decreased 60 per cent. We use wooden barrels less, owing to the adoption of other types of containers. Cabinet-makers are meeting a similar fate, having increased only one-quarter as fast as the population. Cabinets are now being made in factories and of steel. Division of labor and new materials destroyed the old hand trade.

THE GROWTH OF COMMUNICATION

Data on occupations again and again reveal evidence of that most striking of modern social phenomena, the tremendous growth of the agencies of rapid and distant communication. Among the indices of this development is the increase in the number of telephone- and telegraph-operators. They were thirty-one times as numerous in 1920 as they were in 1870, while the female telephone-operators doubled in the last census decade. Stenographers increased in number 1,740 per cent within thirty years. The number of wage-earners employed in making typewriters and typewriter supplies was 35 per cent larger in 1925 than in 1914. The printing and publishing trades were five times as large in employees in 1920 as in 1870. The phenomena of the radio and the air mail are well known, while previous statistics show the rate of increase of the automobile and the newspaper. The increase in transportation by railroads has not been especially noticeable in recent years.

THE COMMERCIALIZATION OF RECREATION

In a highly developed money economy it is to be expected that recreation may be had for a price; indeed, that it should become organized like the trade in articles of commerce. Occupational data do not give a complete picture of this phenomenon, but they do point out the trend. For instance, those engaged in making playground equipment, toys, and games have increased rapidly in recent years, the growth amounting to 80 per cent in the eleven-year period ending in 1925. There were 56 per cent more makers of athletic and sporting goods in 1925 than in 1914. Between 1910 and 1920 the keepers of dance halls, skating-rinks, and billiard-rooms grew nearly 50 per cent in number. In the same period teachers of athletics and dancing increased 147 per cent.

Ushers in theaters of all kinds increased 129 per cent in that time, while the wage-earners making theatrical scenery and stage equipment grew 344 per cent over the eleven-year period covered by the census of manufactures. The number of actors grew, from 1870 to 1920, nearly three times as fast as the population. These statistics may not mean an expansion of recreation, though we might guess that such was the case because of larger income and more leisure. It may only mean a growing demand for costly recreation, which in turn may be a shift in the manner of spending leisure time.

CHANGES IN THE FAMILY

From the changes in occupations may be read the story of what has happened to family life on its productive side, at least in part, in recent years. The home is no longer the center of production, particularly in the cities. The factory, the shop, and the office have taken its place. These functional losses are by no means completed. In the twenty-year period from 1900 to 1920, the general population increased 39 per cent and the urban population 49 per cent, yet the number of waiters increased 113 per cent. During the latter half of this period, the number of restaurant-keepers increased 158 per cent. The decline of the boarding- and lodging-houses may have accounted for some of this shift, yet the absolute increase in the number of restaurants was greater than the decrease in both boarding- and lodging-houses. Many of the lodging-houses have changed their names to hotels. The delicatessen dealers increased about three times as fast as the population since 1910. Employees engaged in canning and preserving fruits and vegetables increased 37 per cent from 1914 to 1925, despite the growing use of machinery.

Power laundry operatives increased 25 per cent in the same time. The number of wage-earners making sewing-machines for factory and home use declined since 1919 (to 1925) about 25 per cent.

The growth of the number of school teachers is an evidence of the influences changing the home, for these school teachers are substitute parents for a time, and keep the child away from the

home. The number of parents has trebled since 1870, but the number of school teachers has increased six times.

The effective system of policing developed in modern times removes in part from the father and the adult sons and relatives a protective function that was very important for the family in American pioneer days and in feudal times in Europe. In 1910 there was 1 policeman (constable, sheriff, or detective) for every 240 families, while in 1920 the ratio was 1 to 220. The total increase in such police, guards, inspectors, soldiers, marines, firemen, and officials was 70 per cent from 1910 to 1920. Insurance is another form of protection which was formerly provided by members of the family. The number of insurance agents and officials has grown enormously in recent times. During the decade from 1910 to 1920, the increase was 36 per cent.

SUMMARY

A study of the statistics of occupations during the last seventy years and during the last decade yield much evidence of the changes that are taking place, and, when due regard is taken of the substitution of machines and of exports, rates can be measured with a fair degree of accuracy. We see the decline of agriculture, the great growth of the middleman, the decline of the lower grades of personal and domestic service, the rise of the higher paid services such as those of the professions, and the increase in governmental employees. There is no slackening in our growing use of machines. Our budgets are including more and more expensive items. With the new inventions we are acquiring new habits and losing old ones. Agencies of more rapid communication are developing at a phenomenal rate. The family continues to lose its functions to industry and the state, one of these functions being recreation, which is becoming a large commercial activity. These are some of the general trends, most interesting details of which are shown by the data of specific occupations.

