

## PRESIDENTIAL ADDRESS.

**FIFTY YEARS VITAL STATISTICS IN IRELAND.**

BY

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IRELAND.*[Read on Friday Evening, 6th December, 1918.]*

IN the first place I desire to thank the members of the Council of the Statistical Society for electing me President for the coming year and will do my utmost to follow in the footsteps of so many past distinguished Presidents. I could not let this opportunity pass without on behalf of the Council paying a tribute of gratitude to the memory of the late Dr. Lawson, and being allowed to convey to his family our deep sympathy on the bereavement they have sustained. Dr. Lawson was President for the past three years, and it was owing to his enthusiasm and zeal on behalf of the Society that during that trying time so much interest was maintained and so many important papers contributed in the course of each session. For a long period previous to his becoming President he was one of the Honorary Secretaries, and at all times manifested the greatest interest in pressing public subjects and social reforms, and we feel that the Society and community has lost a true friend, a high-minded citizen, and one whose desire was to further the welfare of those whose condition needed improvement. His memory will always be an inspiration to us to endeavour to follow in his footsteps, knowing that if we do so we may help to solve some of the many social reforms which are present with us at the moment.

With the permission and approval of the Council I am bringing forward for the Presidential Address the subject of Irish Vital Statistics, and as the General Register Office was established for the registration of births and deaths in 1864 the unique opportunity is presented of reviewing the subject for over half a century. It is of interest to know that Registration was established in England and Wales in 1837, and in Scotland in 1855—in the former 27 years and in the latter 9 years before Ireland. It is very much to be regretted that the English Act of 1836 was not made applicable to Ireland. Had such been done we would have had a better record of the sad years from 1846 onwards.

In this retrospect of the marriages, births, and deaths recorded in Ireland, England and Wales and Scotland during the fifty years ending with the year 1915, I have endeavoured to present the facts as shown in the tables, in as concise a manner as possible, and with this object in view actual numbers are, generally speaking, omitted, and only the proportions to the populations are given. Moreover, the information is condensed into ten quinquennial periods, and diagrams will be used to show the variations throughout the fifty years. The figures given are derived from the Annual Reports of the Registrars-General for Ireland, England and Wales and Scotland, and from the Census Reports of the respective countries.

### Marriages.

During the half century under review, 1,172,453 marriages were registered in Ireland, being equivalent to an average annual rate of 4.9 per 1,000 of the population; in the same period 11,445,754 marriages were registered in England and Wales, affording an average annual rate of 7.9 per 1,000, and in Scotland there were registered 1,413,335 marriages, the corresponding rate being 7.0 per 1,000.

In the following statement the rates for each country are given.

TABLE A.—*Showing the number of Marriages per 1,000 of the Population in Ireland, as compared with England and Wales and Scotland during each quinquennial period from 1866 to 1915.*

QUINQUENNIAL PERIOD.	RATE PER 1,000 OF THE POPULATION.		
	Ireland.	England and Wales.	Scotland.
1866-1870	5.3	8.2	7.0
1871-1875	4.9	8.6	7.5
1876-1880	4.5	7.7	6.9
1881-1885	4.3	7.6	6.9
1886-1890	4.3	7.4	6.5
1891-1895	4.8	7.6	6.8
1896-1900	5.0	8.1	7.3
1901-1905	5.2	7.8	7.0
1906-1910	5.1	7.7	6.8
1911-1915	5.3	8.2	7.1

From table A. it will be observed that the marriage rates for Ireland and England and Wales, viz., 5.3 and 8.2, respectively, in the first five-yearly period are identical with those for the last, while the rate for Scotland (7.0) for 1866-70 differs but slightly from the rate (7.1) for 1911-15. Indeed it might be said the curve for Ireland, if put in a diagrammatic form, is almost identical with that for each of the other countries. Generally speaking, the foregoing table discloses the fact that there is a steady fall from the first to the fifth quinquennial period, followed by a steady rise up to the last quinquennial period, varied, however, by a slight decrease in 1906-1910 as compared with 1901-5. The increase in the marriage rate for the period, 1911-15, is to some extent due to the "War Marriages" registered in 1915.

Viewing the figures in the preceding statement, it will not come as a surprise to learn from the Census Reports of 1911 that of the total number of women in Ireland between 15 and 45 years, only 34.4 in every hundred were married, the corresponding percentage for England and Wales being 47.7, and for Scotland 42.6.

I mention the age 15 to 45 years, as that is the age period usually associated with maternity, and as the age at which women marry is important from many points of view, the following table has been compiled in order to show the variations in the ages of married women in Ireland, England and Wales and Scotland according to the Census returns from 1871 to 1911.

The principal feature of table B is the evidence it affords of the postponement of marriage by the women of the three countries, and while the proportions of married women at each age period for England and Wales and Scotland show rather close similarity, especially in the later years, the average age at marriage of the wives in Ireland is appreciably higher than is the case in England or Scotland.

Of the married women in Ireland, according to the Census of 1911, at ages 15-45 years, 7.3 per cent. were 20-25 years, in England and Wales 9.4 per cent. and in Scotland 9.6. In Ireland 43.1 per cent. were between 25 and 35 years, in England and Wales 46.0 per cent. were so circumstanced, and in Scotland 45.0 per cent. The age-period, 35-45 years, contributed 49.2 per cent. of the total for Ireland, the percentage for England being 44.1, and for Scotland 44.7. Married women, in 1911, aged 15 and under 20 years, exhibit only a small proportion of those under 45 years of age, being 0.4 per cent. for Ireland, 0.5 for England and Wales, and 0.7 for Scotland.

TABLE B.—Showing for Ireland, England and Wales and Scotland, the proportion per cent. of Wives 15-20, 20-25, 25-35, and 35-45 years, according to the Censuses from 1871 to 1911.

## IRELAND.

CENSUS YEAR.	PROPORTION PER CENT. OF WIVES AGED				Total 15-45 years.
	15-20	20-25	25-35	35-45	
1871	1.1	11.0	46.7	41.2	100.
1881	0.8	10.0	42.2	17.0	100.
1891	0.7	9.3	42.4	47.6	100.
1901	0.5	8.9	44.9	45.7	100.
1911	0.4	7.3	43.1	49.2	100.

## ENGLAND AND WALES.

1871	1.3	13.9	45.5	39.3	100.
1881	1.1	13.7	45.6	39.6	100.
1891	0.9	12.8	46.0	40.3	100.
1901	0.7	11.8	46.8	40.7	100.
1911	0.5	9.4	46.0	44.1	100.

## SCOTLAND.

1871	1.1	12.0	46.2	40.7	100.
1881	0.9	12.5	45.5	41.1	100.
1891	0.7	11.4	46.0	41.9	100.
1901	0.8	11.5	46.1	41.6	100.
1911	0.7	9.6	45.0	44.7	100.

*Births.*

It is probable that in the earlier years shown in the following table, registration was not so complete as it might have been, owing to the registration in Ireland not being long in existence, but how far defections occurred it is not possible to say definitely. Caution must therefore be exercised with reference to the use of figures for the earlier years.

There were registered in Ireland during the fifty years 5,860,422 births, being equivalent to an average annual rate of 24.3 per 1,000 of the average estimated population of these

years; in the same period the births recorded for England and Wales numbered 44,137,102, affording a rate of 30.3 per 1,000 of the average population, and in Scotland the number of births amounted to 6,246,457, or 30.8 per 1,000 of the population arrived at in a similar way. The facts for these countries for each of ten quinquennia are given in the following table.

TABLE C.—*Showing the number of Births per 1,000 of the Population in Ireland, as compared with England and Wales, and Scotland, during each quinquennial period from 1866 to 1915.*

QUINQUENNIAL PERIOD.	RATE PER 1,000 OF THE POPULATION.		
	Ireland.	England and Wales.	Scotland.
1866-1870	26.8	35.3	34.9
1871-1875	27.1	35.5	35.0
1876-1880	25.5	35.3	34.7
1881-1885	23.9	33.5	33.3
1886-1890	22.8	31.4	31.5
1891-1895	23.0	30.5	30.5
1896-1900	23.3	29.3	30.0
1901-1905	23.2	28.2	29.2
1906-1910	23.3	26.3	27.6
1911-1915	22.7	23.6	25.4

It will be seen from this table that the highest rate recorded for the three countries was in the period 1871-5, during which Ireland shows an average annual rate of 27.1, England and Wales 35.5, and Scotland 35.0. In 1911-15 the respective birth-rates were 22.7, 23.6 and 25.4. Thus the fall in the crude birth-rate for England and Wales in the last quinquennial period as compared with the second amounted to 11.9 per 1,000 of the population, or 33.5 per cent.; in Scotland it was 9.6 per 1,000, or 27.4 per cent., while in Ireland the reduction was only 4.4 per 1,000, or 16.2 per cent. It will be observed that the fall in Ireland is subject to some fluctuations. The curve for Ireland follows those for England and Wales and Scotland up to the period 1886-90, the similarity of the fall for the three countries from the period 1876-1880, being very marked, but from the point (1886-1890) while the other countries continue their downward course, the curve for Ireland shows a slight tendency upwards.

The fall in the birth-rate in England and Wales and Scotland is due largely to the decreased fertility of married women; reduction in illegitimacy, and postponement of marriage (see Table B), also contribute to the fall. In Ireland the reduction in the birth-rate was due almost entirely to the decrease in the married women of maternity ages (15-45 years) in the population, increased age at marriage being also a factor.

This aspect of the question will be discussed under the heading "Fertility of Marriages."

#### *Illegitimate Births.*

In arriving at the illegitimate birth-rate two methods are usually employed; one based on the total births registered, the other on the number of unmarried women and widows age 15 and under 45 years of age in the population.

The latter method gives the more accurate results, because one of the numbers employed in the calculation, viz., the number of the unmarried and widowed is a constant whereas in the first-named method both the total births and the illegimates are variables. The following statement shows the results of the calculation on the total births.

TABLE D.—*Showing the number of Illegitimate Births per 1,000 of all Births registered in Ireland, as compared with England and Wales, and Scotland, during each quinquennial period from 1866 to 1915.*

QUINQUENNIAL PERIOD.	ILLEGITIMATE BIRTHS PER 1,000 BIRTHS REGISTERED.		
	Ireland.	England and Wales.	Scotland.
1866-1870	31	58	99
1871-1875	25	52	91
1876-1880	24	48	85
1881-1885	27	48	83
1886-1890	28	46	80
1891-1895	27	42	74
1896-1900	26	41	68
1901-1905	26	39	65
1906-1910	26	40	71
1911-1915	29	43	72

The above Table shows somewhat different results from those shown in the following Table, although the respective curves, in so far as they are comparable, follow the same general direction.

TABLE E.—*Showing the number of Illegitimate Births per 1,000 of Unmarried and Widowed women between the ages of 15 and 45 years in Ireland, as compared with England and Wales and Scotland during the periods 1870-1872, 1880-1882, 1890-1892, 1900-1902 and 1910-1912.*

PERIOD.	ILLEGITIMATE BIRTHS PER 1,000 UNMARRIED AND WIDOWED WOMEN 15-45 YEARS.		
	Ireland.	England and Wales.	Scotland.
1870-1872	5.6	16.9	24.5
1880-1882	4.4	14.0	21.4
1890-1892	3.9	10.5	17.1
1900-1902	3.8	8.5	13.4
1910-1912	4.4	7.9	13.8

Table E shows that the illegitimate birth-rate per 1,000 unmarried and widowed women, 15 to 45 years of age, fell in Ireland from 5.6 in 1870-2 to 3.8 in 1900-2, but rose to 4.4 in 1910-12.

The rate for England and Wales fell steadily from 16.9 in the first period to 7.9 in the last, or 53 per cent., while in Scotland the rate which was 24.5 per 1,000 in 1870-2 fell to 13.4 in 1900-2, but rose slightly to 13.8 in 1910-12, the latter showing a decrease of 44 per cent. as compared with the figure for 1870-2.

In consequence of the uncertainty of intercensal estimates of the number of the unmarried and widowed women 15 to 45 years of age in the population, it has been considered more satisfactory to obtain results by triennial periods with the year of the Census as the middle year. Thus while the number of births for a period of three years is quite large enough in order to secure reliable results, possibility of error that might be expected to result from more or less doubtful estimates in intercensal years is thereby reduced to a minimum.

#### *Fertility of Marriage.*

It will be noted that the rates for the total births have been given in terms of the total population, in other words, the crude birth-rates were presented. They serve as a measure of the increase in a population, and they have the advantage of being readily calculated, moreover, the total population and the total births are in many localities the only statistics available on which to base this calculation.

As the proportion of married women of maternity age in the population varies in different countries, it is easy to see

that a comparison of the crude birth-rates between one country and another may be misleading. A comparatively low crude birth-rate may be expected when the proportion of wives 15 to 45 years of age is low in comparison with other countries, and *vice versa*. More reliable results will, therefore, be obtained when the birth-rate is stated in terms of legitimate births in proportion to the number of married women aged 15 and under 45 in the population. This is done in the following table by triennial periods from 1870 to 1912 the middle point in each of the periods being the Census year.

TABLE F.—Showing the number of Legitimate Births per 1,000 Married Women between the ages of 15 and 45 years, in Ireland, as compared with England and Wales and Scotland, during the periods 1870-1872, 1880-1882, 1890-1892, 1900-1902 and 1910-1912.

PERIOD.	LEGITIMATE BIRTHS PER 1,000 MARRIED WOMEN, 15-45 YEARS OF AGE.		
	Ireland.	England and Wales.	Scotland.
1870-1872	306.6	291.1	319.4
1880-1882	282.9	285.3	311.5
1890-1892	287.6	262.1	296.4
1900-1902	289.4	235.0	271.8
1910-1912	292.7	197.1	233.2

It was shown in Table C that the highest crude birth-rate in the fifty years covered by that table was reached in Ireland as well as in Great Britain during the period 1871-5. The proportion of legitimate births per 1,000 married women aged 15 to 45 was also highest in the period 1870-2, viz., 306.6 for Ireland, 291.1 for England and Wales, and 319.4 for Scotland. The rate for Ireland would appear to fall from 306.6 in 1870-2 to 282.9 in 1880-2; the rate for England and Wales shows a smaller reduction from 291.1 to 285.3, and for Scotland from 319.4 to 311.5.

But while the proportion for Ireland continued to rise steadily from 282.9 in the period 1880-2 to 292.7 in 1910-12, showing an increase of 3.5 per cent., the rate for England and Wales fell continuously from 291.1 in 1870-2 to 197.1 in 1910-12, a fall equivalent to 32.3 per cent., and that for Scotland during the same period shows a reduction from 319.4 to 233.2 or 27.0 per cent.

It will also be observed that the greatest decrease in any one period as compared with the preceding, as shown by the





Table G is interesting in that it shows the average number of legitimate births registered per 1,000 married women 15 to 45 years of age in Ireland by county and provincial areas. Co. Dublin comes lowest on the list with 208.8, and Co. Mayo highest with 359.2. It is a well-known fact that from Co. Dublin a number of births take place in the lying-in or other hospitals in the city of Dublin in which area they are registered, therefore, the figure mentioned for the county is lower than it should be, and hence the rate shown for the Dublin County Borough is overstated. A rate for the combined county and city would be more satisfactory, and that is found to be 272.0 per 1,000. The next lowest on the list is Belfast Borough with 250.4 per 1,000 as compared with 359.2 per 1,000 for Mayo, the latter showing a rate 43 per cent. higher than that for Belfast. It is also to be noted that the six counties with the highest rates are on the western seaboard, the five lowest areas on the eastern seaboard, and the five in centre of the list are all inland counties. The difference between the provinces is not so marked, viz., Connaught with 344.7 per 1,000 as against Ulster with 276.0, the former figure being about 25 per cent. higher than the latter.

In the Census of 1911, for the first time, particulars regarding marriages as existing at the date thereof were obtained and the results are given in the General Report of that Census—ages of Husband and Wife, duration of existing marriage, number of children born alive and the number who had died. In the preceding tables, allowance was not made for the age of Wife at marriage, nor for the duration of marriage, simply average annual births to every 1,000 married women (15-45 years) were given for different periods of time, the population having been taken from the Census Reports and the births from the Registrar-General's Annual Reports.

I now propose to supply more precise information regarding fertility in Ireland, England and Wales, and Scotland, by (a) ages of wives at marriage, and by (b) durations up to 20 years, which information, as before referred to, has been derived from the Census Reports of the three countries. I may observe here that it would not be possible within the ambit of this paper to give the full results of a study of the Census figures as published; indeed one's difficulty in a paper on Vital Statistics such as this lies in curtailment rather than in amplification. Suffice it to say that a close investigation of the Census figures by the diligent student will be amply awarded.

TABLE H.—*Showing, by Ages of Wives at Marriage, for Ireland, England and Wales, and Scotland, the average number of Children born alive per Married Woman, in the cases of Marriages (as existing at the date of the Census of 1911) under 5 years' duration, 5 and under 10 years, 10 to 15, and 15 to 20 years [Derived from the Census Reports of the respective countries].*

AGES OF WIVES AT MARRIAGE.	DURATION OF MARRIAGE—UNDER 5 YEARS.		
	Average number of Children per Married Woman.		
	Ireland	England and Wales.	Scotland.
15-20 years	1.26	1.28	1.36
20-25 "	1.14	1.03	1.21
25-30 "	1.01	0.80	0.97
30-35 "	0.90	0.69	0.82
35-40 "	0.63	0.51	0.59
15-40 "	1.01	0.92	1.07
DURATION OF MARRIAGE—5 AND UNDER 10 YEARS.			
15-20 years	3.20	2.92	3.19
20-25 "	3.12	2.44	2.84
25-30 "	3.01	1.98	2.37
30-35 "	2.58	1.70	2.01
15-35 "	2.98	2.27	2.63
DURATION OF MARRIAGE—10 AND UNDER 15 YEARS.			
15-20 years	4.94	4.38	4.87
20-25 "	4.80	3.61	4.24
25-30 "	4.35	2.85	3.44
15-30 "	4.64	3.47	4.05
DURATION OF MARRIAGE—15 AND UNDER 20 YEARS.			
15-20 years	6.47	5.69	6.31
20-25 "	6.24	4.61	5.42
15-25 "	6.30	4.84	5.61

It would appear from the preceding table that during the first five years of married life among women 15 to 40 years of age at marriage, the average number of children per marriage was 1.01 for Ireland, 0.92 for England and Wales, and 1.07 for Scotland. Thus Ireland shows a rate slightly over England and Wales, but a fraction under that for Scotland. In the next duration (5-10 years) for women 15-35 years at marriage it will be seen that Ireland shows an increase over the other countries not alone in the total but at each age period. A similar increase also occurs with reference to the duration 10 to 15 years for women aged 15 to 30 years of age at marriage, and for marriages 15 to 20 years in duration the ages of the wives at marriage being from 15 to 25 years. In the latter category the average number of children to a marriage was, for Ireland, 6.30, for England and Wales 4.84, and for Scotland 5.61.

A feature in Table H is the light it throws on the comparative effects of delayed marriage in Ireland, England and Wales and Scotland. In Ireland it will be noted, the fertility among married women in the successive quinquennial age periods up to 30 years of age does not show any very material difference, while in the other countries this difference is appreciable.

As this subject is of public importance I have elaborated somewhat on the first and last sections of this table by showing particulars relating to the size of families in the three countries.

With reference to Wives who were under 5 years married at the date of the Census, and aged 15 to 35 years at date of marriage it will be seen that 34.6 per cent. of these married women in Ireland were childless during that period of married life, the corresponding percentage of childless women in England and Wales being 35.2, and 29.6 in Scotland.

Regarding the children born, the table shows in this short duration the tendency in Ireland to "long" families, for 22.1 per cent. of the Irish children occurred in families of 3 and upwards as against 15.2 per cent. of the English and 20.0 per cent. of the Scottish.

The children who died are represented by 83.3 per 1,000 born in Ireland among these families, as compared with 97.0 per 1,000 in England and Wales. Similar information for Scotland is not available. In Ireland among every thousand children born alive to mothers, 15-35 years of age at marriage and under 5 years married, 916.7 survived at the date of the Census, and, under the same conditions in England and Wales, 903.0 survived.

TABLE I.—Showing for England and Wales, Ireland and Scotland, in relation to Wives 15 and under 35 years of age at Marriage, the duration of which was under 5 years at the date of the Census of 1911, the number of Children Born Alive according to size of family, with particulars regarding the Mortality and the Survivors among these children.

## IRELAND.

Size of Family	Wives Aged at Marriage, 15-35 years.		Children (Mothers, 15-35 Years of Age at Marriage. Duration of Marriage, under 5 years.)						
			Children Born Alive.		Children Dead.		Survivors in 1911.		
	No.	Per-centage of Total.	No.	Per-centage of Total.	No.	Per 1,000 Born Alive in each class of Family	No.	Per 1,000 Born in each class of Family	Per-centage of Total.
0	26,925	34.6	.	.	.	.	.	.	.
1	26,535	34.1	26,535	32.5	1,538	58.0	24,997	942.0	33.4
2	18,581	23.9	37,162	45.4	2,963	79.7	34,199	920.3	45.6
3	5,226	6.7	15,678	19.2	1,875	119.6	13,803	880.4	18.4
Over 3	573	0.7	2,378	2.9	431	181.2	1,947	818.8	2.6
Total	77,840	100.	81,753	100.	6,807	83.3	74,946	916.7	100.

## ENGLAND AND WALES.

0	355,937	35.2	.	.	.	.	.	.	.
1	415,862	41.1	415,862	43.9	25,380	61.0	390,482	939.0	45.7
2	193,766	19.1	387,532	40.9	40,198	103.7	347,334	896.3	40.6
3	41,247	4.1	123,741	13.1	21,012	169.8	102,729	830.2	12.0
Over 3	4,833	0.5	19,816	2.1	5,262	265.5	14,554	734.5	1.7
Total	1011645	100.	946,951	100.	91,852	97.0	855,099	903.0	100.

## SCOTLAND.

0	33,991	29.6	.	.	.	.	.	.	.
1	44,967	39.2	44,967	35.7	—	—	—	—	—
2	27,848	24.2	55,696	44.3	—	—	—	—	—
3	7,110	6.2	21,330	17.0	—	—	—	—	—
Over 3	912	0.8	3,738	3.0	—	—	—	—	—
Total	114,828	100.	125,731	100.	—	—	—	—	—

On the same lines the following tables relating to married women 15 to 25 years at marriage, and 15 to 20 years married are constructed.

TABLE J. (i.)—Showing for Ireland, in relation to Wives 15 and under 25 years of age at Marriage, the duration of which was from 15 to 20 years at the date of the Census of 1911, the number of Wives, and the number of Children Born Alive according to size of family, with particulars regarding the Deaths and the Survivors.

## IRELAND.

Size of Family	Wives Aged at Marriage, 15-25 years.		Children (Mothers, 15-25 Years of Age at Marriage, Duration of Marriage, 15-20 years)						
			Children Born Alive.		Children Dead.		Survivors in 1911.		
	No.	Per-centage of Total.	No.	Per-centage of Total.	No.	Per 1,000 Born Alive in each class of Family	No.	Per 1,000 Born in each class of Family	Per-centage of Total.
0	1,836	5.5	.	.	.	95.0	.	905.0	.
1	1,032	3.1	1,032	0.5	98	95.0	934	861.5	0.6
2	1,386	4.2	2,772	1.3	384	138.5	2,388	861.5	1.4
3	1,884	5.7	5,652	2.8	704	124.6	4,948	875.4	2.9
4	2,567	7.7	10,268	5.0	1,368	133.2	8,900	866.8	5.2
5	3,361	10.2	16,805	8.2	2,311	137.5	14,494	862.5	8.5
6	4,326	13.1	25,956	12.7	3,685	142.0	22,271	858.0	13.1
7	4,990	15.1	34,930	17.1	5,040	144.3	29,890	855.7	17.5
8	4,686	14.2	37,488	18.3	5,911	157.7	31,577	842.3	18.5
9	3,307	10.0	29,763	14.5	5,525	185.6	24,238	814.4	14.2
10	2,012	6.1	20,120	9.8	4,093	203.4	16,027	796.6	9.4
11	889	2.7	9,779	4.8	2,253	230.4	7,526	769.6	4.4
12	806	2.4	10,146	5.0	2,740	270.1	7,406	729.9	4.3
and over									
Total	33,082	100.	204,711	100.	34,112	166.6	170,599	833.4	100.

[TABLE J (ii.)

TABLE J. (ii).—*Showing, for England and Wales, in relation to Wives 15 and under 25 years of age at Marriage, the duration of which was from 15 to 20 years at the date of the Census of 1911, the number of Wives, and the number of Children Born Alive according to size of family, with particulars regarding the Deaths and the Survivors.*

## ENGLAND AND WALES.

Size of Family	Wives Aged at Marriage, 15-25 years.		Children (Mothers, 15-25 Years of Age at Marriage. Duration of Marriage, 15-20 years).							
			Children Born Alive.		Children Dead.		Survivors in 1911.			
	No.	Per-centage of Total.	No.	Per-centage of Total.	No.	Per 1,000 Born Alive in each class of Family	No.	Per 1,000 Born in each class of Family	Per-centage of Total.	
0	24,400	5.2								
1	33,160	7.0	33,160	1.4	3,435	103.6	29,725	896.4	1.6	
2	52,150	11.0	104,300	4.6	12,470	119.6	91,830	880.4	5.0	
3	59,394	12.6	178,182	7.8	25,827	144.9	152,355	855.1	8.3	
4	58,426	12.4	233,704	10.2	38,014	162.7	195,690	837.3	10.7	
5	54,269	11.5	271,345	11.9	46,925	172.9	224,420	827.1	12.3	
6	52,707	11.2	316,242	13.9	58,316	184.4	257,926	815.6	14.1	
7	48,270	10.2	337,890	14.8	65,432	193.6	272,458	806.4	14.9	
8	39,029	8.3	312,232	13.7	67,171	215.1	245,061	784.9	13.4	
9	25,244	5.3	227,196	10.0	54,931	241.8	172,265	758.2	9.4	
10	14,034	3.0	140,340	6.1	38,873	277.0	101,467	723.0	5.6	
11	6,323	1.3	69,553	3.0	21,289	306.1	48,264	693.9	2.7	
12 and over	4,741	1.0	59,734	2.6	22,410	375.2	37,324	624.8	2.0	
Total	472,147	100.	2283878	100.	455,093	199.3	1828785	800.7	100.	

[TABLE J (iii.)

TABLE J. (iii.).—Showing, for Scotland, in relation to Wives 15 and under 25 years of age at Marriage, the duration of which was from 15 to 20 years at the date of the Census of 1911, the number of Wives and the number of Children Born Alive according to size of family.

SCOTLAND.				
Size of Family.	Wives Aged at Marriage, 15-25 years.		Children (Mothers, 15-25 years of Age at Marriage. Duration of Marriage, 15-20 years.	
			Children Born Alive.	
	Number.	Percentage of Total.	Number.	Percentage of Total.
0	2,197	4.4		
1	2,030	4.0	2,030	0.7
2	3,170	6.3	6,340	2.3
3	4,389	8.8	13,167	4.7
4	5,413	10.8	21,652	7.7
5	6,236	12.4	31,180	11.1
6	6,570	13.1	39,420	14.0
7	6,813	13.6	47,691	16.9
8	5,995	11.9	47,960	17.0
9	3,974	7.9	35,766	12.7
10	2,015	4.0	20,150	7.2
11	842	1.7	9,262	3.3
12	547	1.1	6,864	2.4
and over				
Total	50,191	100.	281,482	100.

It would appear from the preceding tables that of the wives selected, 5.5 per cent. were childless, as against 5.2 per cent. for England and Wales, and 4.4 per cent. for Scotland. Thirteen per cent. of the wives in Ireland aged 15 to 25 years at marriage were mothers of families of 3 children or under, as compared with 30.6 per cent. for England and Wales, and 19.1 per cent. for Scotland. As regards families of from 4 to 6 children, 31.0 per cent. of the Irish married women were mothers, 35.1 per cent. of the English, and 36.3 per cent. of the Scottish, while for families of 7 children and upwards, the percentage of married women aged at marriage 15 to 25 years and married from 15 to 20 years was 50.5, the corresponding percentage for England and Wales being 29.1, and for Scotland 40.2.

With reference to the children born, only 4.6 per cent. in Ireland, as against 13.8 per cent. in England and Wales, and



7.7 per cent. in Scotland related to families of 3 and under; 25.9 per cent. of the children born in Ireland occurred in families 4 to 6 in size, as compared with 36.0 per cent. in England and Wales, and 32.8 per cent. in Scotland. The children belonging to families of 7 and upwards in Ireland were 69.5 per cent. of the total births; those belonging to such families in England and Wales represented 50.2 per cent., and those relating to Scotland were 59.5 per cent. of the total number of children born alive to wives whose marriage ages were from 15 to 25 years and who were married from 15 to 20 years.

In connection with mortality it may be noted that the rate per 1,000 born alive for Ireland varied from 95.0 for families of one to 270.1 for families of 12 and upwards, as against a range from 103.6 in families of one to 375.2 in families of 12 and upwards for England and Wales.

Of the survivors at the date of the Census of 1911, only 4.9 per cent. related to families of 3 or under as against 14.9 per cent. for England and Wales; 26.8 per cent. related to families 4 to 6 children in size in comparison with 37.1 per cent. for England and Wales; for Ireland families of 7 children and upwards accounted for 68.3 per cent. of the total survivors, the corresponding percentage for England and Wales being 48.0.

#### *Deaths.*

A full and comprehensive review could not be made in a short paper like this, and so it has been necessary to confine my remarks as regards mortality to (1) all causes, and (2) some of the leading diseases, and this mortality is shown by quinquennial periods in comparison with England and Wales and Scotland. In connection with the Irish figures for the earlier years it may be desirable to repeat that caution should be exercised in their use, as doubtless a number of deaths were left unregistered.

The mortality from all causes in Ireland during the half century under review is based on no less than 4,272,814 entries in the Registers of Deaths—a period and a number which, I am sure, you will regard as sufficiently comprehensive.

In Table I. the facts with reference to all deaths are set forth; in Table II., the mortality from the “principal epidemic diseases” (the causes of deaths, on the comparative absence or presence of which the value of public health work is commonly based); in Tables III. to XI., the principal epidemic diseases, taken separately, are shown;

in Tables XII. to XIV., respectively, the mortality from influenza, tuberculosis and cancer; while Tables XV. and XVI. show the maternity and infantile mortality.

### MORTALITY FROM ALL CAUSES.

TABLE I.—*Showing by Quinquennial Periods the Mortality from All Causes per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland, during the Fifty Years 1866–1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM ALL CAUSES.		
	Ireland.	England and Wales.	Scotland.
1866–1870	1,644	2,242	2,197
1871–1875	1,774	2,196	2,265
1876–1880	1,875	2,079	2,062
1881–1885	1,798	1,940	1,958
1886–1890	1,790	1,889	1,884
1891–1895	1,850	1,872	1,901
1896–1900	1,814	1,769	1,795
1901–1905	1,759	1,604	1,705
1906–1910	1,725	1,470	1,614
1911–1915	1,678	1,427	1,567

From this table it would appear that the drain on the population of Ireland, represented by a mortality of 1,644 per 100,000 in the first period, rose, with a few slight variations, to 1,850 in the quinquennium, 1891-5, but fell continuously from this point to 1,678 in the last five-yearly period, the latter mortality showing an increase of 2.1 per cent. as compared with the average for the first five years.

A very different state of affairs would appear to prevail as regards the mortality in England and Wales, and in Scotland. In the former country, the figures show a constant decline from 2,242 per 100,000 in the first period to 1,427, in the last, a fall in the mortality equivalent to 36.4 per cent., and in the latter the rate declined almost continuously from 2,197 in 1866-1870, to 1,567 in 1911-1915, or 28.7 per cent.

It will also be observed that during the first six periods covered by the table, the mortality from all causes for Ireland was less, and in the earlier periods considerably less than that for each of the sister countries.

During the years 1866-70, the rate for Ireland represented by the deaths then registered was 26.7 per cent. less than

that for England and Wales, and 25.2 per cent. under the rate for Scotland.

Assuming that there was no material difference in the age and sex constitution of the population of the three countries at this period, it is suggested that the emigration from Ireland did not then materially affect the rates of mortality, as it is certain that in the earlier years of emigration whole families left the country together.

The probability is that the age and sex constitution of the residue of the population in those earlier years was not changed materially, hence the mortality among those who left the country might not be supposed to differ widely from the mortality among those who remained at home.

Soon, however, the American Immigration Laws, while making no objection to quantity, took the quality of the emigrants into consideration. Only the sound and healthy were allowed to land, with the result that Ireland lost its strongest and best, and contained, and still contains, more than its due proportion of the sick and infirm. Of the emigrants from Ireland during the fifty years—viz., 2,629,748—a high proportion consisted of persons between 15 and 35 years of age, whom we might describe as the flower of the population of rural Ireland, forming in recent years more than 85 per cent. of the total emigrants.

Furthermore, a feature of the Irish emigration was the very large proportion of the emigrants who were females—47 per cent. in the fifty years. As far as I can gather, the emigrants from other countries included only a small proportion of females.

The extent of the emigration of females from Ireland is another factor tending to increase the recorded death-rate, as the mortality among females is appreciably less than that among the male population.

It may be here observed that from the 1st May, 1851 (the date at which the collection of the returns commenced) to 31st December, 1915, no less than 4,309,300 (2,241,316 males and 2,067,984 females) natives of Ireland emigrated.

Some of the results of the extensive emigration from Ireland may be seen in Table I., which shows that while the Irish death-rate has mounted up to 1,850 per 100,000 in the sixth quinquennium (the latter being the highest average rate, with the exception of 1,875, in the third period), those for England and Wales and Scotland have literally "tumbled down."

Ireland would appear to be following the lines of the other countries from the sixth quinquennium; the rate falling steadily from 1,850 in that period to 1,678 for the last five years.

## PRINCIPAL EPIDEMIC DISEASES.

TABLE II.—*Showing by Quinquennial Periods the Mortality from the "Principal Epidemic Diseases" per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland, during the Fifty Years 1866-1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM PRINCIPAL EPIDEMIC DISEASES.		
	Ireland	England and Wales.	Scotland.
1866-1870	272	446	478
1871-1875	274	394	473
1876-1880	239	334	335
1881-1885	189	278	285
1886-1890	164	251	261
1891-1895	144	242	262
1896-1900	149	269	240
1901-1905	120	203	193
1906-1910	106	155	167
1911-1915	112	151	163

This group of causes includes enteric fever, typhus, small-pox, measles, scarlet fever, whooping-cough, diphtheria and "croup," and "diarrhœal diseases." It differs, however, in a few cases from the list of causes forming the group of principal epidemic diseases, as dealt with in my Reports. Therein, for instance, deaths from "croup" are not included with diphtheria, nor are deaths from enteritis of persons aged two years and upwards with diarrhœal diseases. These have been added for the purposes of this paper in order to afford a more accurate comparison with the figures for the earlier years.

An examination of the table shows the effects on a community largely rural and communities largely urbanised. The rate for Ireland per 100,000 of the population in the last five-yearly period was 112, being 39 less than that for England and Wales (151), and 51 under that for Scotland (163). It will also be observed that the rates for the three countries are only about one-third of those which prevailed in the first quinquennium.

“ FEVER.”

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Owing to the fact that deaths from enteric fever and typhus were not differentiated until the year 1869, and that for a long period many deaths registered as from simple continued fever (pyrexia, origin uncertain) were in reality cases of enteric fever, it has been deemed advisable to group these causes for comparative purposes.

It may be noted that of the 3,399 deaths from “ fever ” in 1869, 1,718, or 51 per cent., were returned under the heading “ simple, continued fever,” and that in 1915 only 11 (or 4 per cent.) out of a total of 283 deaths from “ fever,” were registered as from pyrexia (origin uncertain).

TABLE III.—*Showing by Quinquennial Periods the Mortality from “ Fever ” (Enteric Fever, Typhus, and Simple Continued Fever or Pyrexia—origin uncertain) per 100,000 of the Population in Ireland as compared with England and Wales and Scotland, during the Fifty Years 1866–1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM FEVER		
	Ireland.	England and Wales.	Scotland.
1866–1870	66	85	109
1871–1875	59	60	72
1876–1880	55	38	50
1881–1885	42	27	33
1886–1890	32	20	23
1891–1895	26	19	21
1896–1900	26	18	18
1901–1905	16	12	11
1906–1910	10	7	7
1911–1915	8	5	5

This table shows a very rapid decline in the mortality from “ fever ” from the first to the last quinquennial period for each of the three countries:—In Ireland, from 66 per 100,000 in the first to 8 in the last; in England and Wales, from 85 to 5; and in Scotland, which shows the greatest decrease, from 109 to 5 per 100,000 of the population.

## ENTERIC FEVER.

TABLE IV.—*Showing by Quinquennial Periods the Mortality from Enteric Fever per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland, during the Forty-five Years 1871-1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM ENTERIC FEVER.		
	Ireland.	England and Wales.	Scotland.
1871-1875	18	37	42
1876-1880	19	28	38
1881-1885	16	22	27
1886-1890	17	18	20
1891-1895	18	17	19
1896-1900	21	18	17
1901-1905	13	11	11
1906-1910	8	7	7
1911-1915	6	5	5

It will be observed that the mortality from enteric fever remained practically the same for the first five periods, the lowest of these rates being 16 per 100,000 in the period 1876-1880.

The highest rate for any of the quinquennia was reached in 1896-90—namely, 21 per 100,000—from which point it declined rapidly to 6 in 1911-15. A steady decline characterises the mortality for England and Wales and Scotland—from 37 to 5 per 100,000 in the former country, and from 42 to 5 in the latter.

## TYPHUS.

TABLE V.—*Showing by Quinquennial Periods the Mortality from Typhus per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland, during the Forty-five Years 1871-1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM TYPHUS.		
	Ireland.	England and Wales.	Scotland.
1871-1875	14	8	23
1876-1880	14	3	8
1881-1885	14	2	4
1886-1890	8	1	2
1891-1895	5	—	1
1896-1900	3	—	1
1901-1905	2	—	—
1906-1910	1	—	—
1911-1915	1	—	—

This table shows that for Ireland there has been a constant decrease in the mortality from typhus, which was 14 per 100,000 in each of the first three periods, falling steadily to 1 per 100,000 in the last period. The deaths from typhus in England and Wales and Scotland, which represent rates of 8 and 23 per 100,000, respectively, in the first quinquennial period, are not now of sufficient magnitude to yield a rate of one in every 100,000. It may be stated that in the year 1871, there were 873 deaths from typhus, and in 1915 only 34, being the lowest number ever recorded for Ireland.

## SMALL-POX.

TABLE VI.—*Showing by Quinquennial Periods the Mortality from Small-pox per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland, during the Fifty Years 1866-1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM SMALL-POX.		
	Ireland.	England and Wales.	Scotland.
1866-1870	1	11	3
1871-1875	21	41	38
1876-1880	7	8	—
1881-1885	1	8	—
1886-1890	—	1	—
1891-1895	1	2	1
1896-1900	—	1	—
1901-1905	—	3	3
1906-1910	—	—	—
1911-1915	—	—	—

During the fifty years England and Wales would appear to have been the greatest sufferer from small-pox; the mortality for which, in the years 1871-75, reached 41 to every 100,000 of the population, as compared with 21 for Ireland, and 38 for Scotland. The death-rate for Ireland from this disease during the twenty years, 1896-1915, and those for England and Wales and Scotland for the last two quinquennia have reached vanishing point. There was no death from small-pox recorded for Ireland since 1907, during which year only one such death was registered.

## MEASLES.

TABLE VII.—*Showing by Quinquennial Periods the Mortality from Measles per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland, during the Fifty Years 1866-1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM MEASLES.		
	Ireland.	England and Wales.	Scotland.
1866-1870	19	43	38
1871-1875	18	37	39
1876-1880	24	38	33
1881-1885	18	41	36
1886-1890	20	47	41
1891-1895	17	41	51
1896-1900	18	42	43
1901-1905	16	33	32
1906-1910	14	29	35
1911-1915	17	34	33

In Ireland the mortality from measles, which was 19 per 100,000 in the period 1866-70, fell slightly, to 17, in the five years, 1911-15; in England and Wales the fall was from 43 to 34, and in Scotland from 38 to 33. The highest rate for Ireland (24) occurred during the period 1876-80), and that for Scotland (51) in the period 1891-5. In all three countries the mortality from measles does not fluctuate to any considerable extent; but it may be noted that Ireland, whose rate in the last period is about half that for the other two countries, occupies much the same position in the first quinquennium.

[TABLE VIII.



## SCARLET FEVER.

TABLE VIII.—*Showing by Quinquennial Periods the Mortality from Scarlet Fever per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland, during the Fifty Years 1866-1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM SCARLET FEVER.		
	Ireland.	England and Wales.	Scotland.
1866-1870	55	96	109
1871-1875	55	76	107
1876-1880	32	68	52
1881-1885	27	44	36
1886-1890	14	24	23
1891-1895	10	18	20
1896-1900	9	14	18
1901-1905	4	13	9
1906-1910	3	9	9
1911-1915	9	6	13

This table shows a very remarkable decrease in the mortality from scarlet fever. In the case of Ireland, it fell from 55 per 100,000 in the first period to 3 in the ninth, rising to 9 in the last; in Scotland, the rate fell from 109 in the first to 9 each in the eighth and ninth periods, rising to 13 in the tenth; while in England and Wales the rate fell from 96 in the first to 6 in the last period. Thus, the mortality from scarlet fever shows a continuous and rapid decrease for each of the three countries. The lowest point for Ireland was reached in the period 1906-10; in Scotland, 1901-5 and 1906-10; while the rate for England and Wales has fallen without a break from the first to the last period.

[TABLE IX.]

## WHOOPING-COUGH.

TABLE IX.—*Showing by Quinquennial Periods the Mortality from Whooping-cough per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland, during the Fifty Years 1866-1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM WHOOPING-COUGH.		
	Ireland.	England and Wales.	Scotland
1866-1870	33	55	66
1871-1875	33	50	60
1876-1880	37	53	66
1881-1885	30	46	61
1886-1890	28	44	62
1891-1895	26	40	53
1896-1900	27	36	51
1901-1905	24	30	50
1906-1910	24	25	40
1911-1915	19	21	41

The mortality from whooping-cough, as evidenced by this table, shows, with a few minor fluctuations, a strong tendency downwards. While Ireland shows a reduction in 1911-15, as compared with 1866-70, of 14 (from 33 to 19), or 42 per cent., the rate for England and Wales declined 34 (from 55 to 21), or 62 per cent.; and that for Scotland decreased 25 in every 100,000 (from 66 to 41), equivalent to 38 per cent

[TABLE X,

## DIPHTHERIA AND CROUP.

TABLE X.—*Showing by Quinquennial Periods the Mortality from Diphtheria and Croup per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland, during the Fifty Years 1866–1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM DIPHTHERIA AND CROUP.		
	Ireland.	England and Wales.	Scotland.
1866–1870	30	34	51
1871–1875	36	31	62
1876–1880	31	28	49
1881–1885	26	32	45
1886–1890	24	30	42
1891–1895	19	32	37
1896–1900	17	31	21
1901–1905	15	22	17
1906–1910	11	16	18
1911–1915	10	14	18

As before observed, it has been considered appropriate to combine croup and diphtheria in order to afford comparison between recent and former years. It may be stated that for some years supplementary inquiries with reference to deaths registered as from "croup" have been made to the certifiers of such deaths, with the result that many so registered were found to be cases of diphtheria.

Hence the deaths in my Reports under the designation "croup" are cases which, resulting from investigations, were either stated to be non-diphtheritic or further information could not be ascertained.

Doubtless many of the deaths classed to croup in the Reports of my Department previous to 1900 (when the inquiry into ill-defined, doubtful and unspecified causes was first instituted) were in reality deaths from diphtheria. Consequently the addition of croup will, I venture to say, be considered appropriate.

It may be mentioned that in the year 1866 no less than 1,390 deaths from croup were returned, while in 1915 only 78 such deaths appear in my Annual Report.

This table shows that the mortality per 100,000 of the population in Ireland fell steadily from 30 in the first period to 10 in the last—a decrease of 20, equivalent to 67 per cent.

The rate for England and Wales fell from 34 to 14, or 59 per cent.; and that for Scotland from 51 to 18, equivalent to 65 per cent.

In the five years, 1871-5, the highest rates for Ireland and Scotland occurred—viz., 36 and 62 per 100,000 respectively; while the highest for England and Wales related to the quinquennium 1866-70—namely, 34 per 100,000.

The downward tendency in the Irish mortality commenced in the five-yearly period 1876-80, from which there was a well-defined fall from period to period. The English figures remained practically the same for the first seven periods; afterwards there was a pronounced decline in the death-rates, while the figures for Scotland, generally speaking, follow the Irish course.

### “ DIARRHOEAL DISEASES.”

TABLE XI.—*Showing by Quinquennial Periods the Mortality from “Diarrhoeal Diseases” per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland, during the Fifty Years 1866-1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM “DIARRHOEAL DISEASES”		
	Ireland.	England and Wales.	Scotland.
1866-1870	69	124	102
1871-1875	53	100	95
1876-1880	53	101	85
1881-1885	44	80	74
1886-1890	45	85	70
1891-1895	44	91	79
1896-1900	51	128	89
1901-1905	45	91	71
1906-1910	45	69	58
1911-1915	50	71	53

This group includes dysentery and diarrhoea and enteritis (Nos. 104 and 105 of International List).

The figures in Table XI. include more deaths from enteritis than are ordinarily referred to the diarrhoea group. The changes in classification introduced in 1911 renders this course necessary, as in the case of croup with diphtheria, in order to afford comparison with previous periods. . .

As the mortality from "diarrhœal diseases" is believed to be influenced to a great extent by weather conditions, one would expect fluctuations in the figures, and this is the case, as appears in the table. The three countries exhibit a steady decline in their rates. The rate for Ireland fell from 69 in 1866-70 to 50 in 1911-15, a fall equivalent to 28 per cent.; the rate for England and Wales fell from 124 to 71, or a decrease of 43 per cent.; while that of Scotland declined from 102 to 53, showing 48 per cent of a decrease.

In reviewing the mortality figures for the "principal epidemic diseases" in Ireland it is satisfactory to note that, taking a broad survey of the subject, a substantial decrease has taken place for the period under consideration. We must not overlook the fact, however, that a greater decline has occurred in England and Wales, and in Scotland. It is a well-known fact that much more has been done in the latter countries for public health, and doubtless this fact accounts for the difference in decrease. Considering what little has been done in Ireland, compared to what has been accomplished across the channel, we may I think feel satisfied when any large measure of public health work is instituted here our death-rate from this group of diseases as well as from others will show an even more satisfactory decline than in the past.

### INFLUENZA.

TABLE XII.—*Showing by Quinquennial Periods the Mortality from Influenza per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland, during the Fifty Years 1866-1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM INFLUENZA		
	Ireland.	England and Wales.	Scotland.
1866-1870	3	?	6
1871-1875	2	1	4
1876-1880	2	1	3
1881-1885	1	—	2
1886-1890	8	3	5
1891-1895	43	42	39
1896-1900	49	31	33
1901-1905	30	19	20
1906-1910	33	24	8
1911-1915	25	18	6

The influenza epidemic raged as we know in the three countries pretty evenly during 1891-1895, the respective rates being 43, 42 and 39 per 100,000. In the next period, the mortality for Ireland reached its highest point—namely, 49 per 100,000, showing that the attack lasted longer and raged more acutely here. The rates for England and Wales and Scotland were also heavy—namely, 31 and 33 respectively.

In the last five-yearly period, 1911-15, the mortality for Ireland was 25 per 100,000, for England and Wales 18, and for Scotland 6. The drop from 20 for Scotland in 1901-5 to 8 for the following period and to 6 for the last period is somewhat remarkable, and would suggest a change in the method of classification with reference to deaths from influenza in that country.

### TUBERCULOSIS.

TABLE XIII.—*Showing by Quinquennial Periods the Mortality from All Forms of Tuberculous Disease per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland during the Fifty Years 1866-1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM ALL FORMS OF TUBERCULOUS DISEASE.		
	Ireland.	England and Wales.	Scotland.
1866-1870	246	320	382
1871-1875	253	294	365
1876-1880	267	282	343
1881-1885	266	254	296
1886-1890	270	232	261
1891-1895	275	212	243
1896-1900	282	191	235
1901-1905	276	174	218
1906-1910	252	157	204
1911-1915	215	141	169

The mortality from tuberculosis, which accounted for 246 in every 100,000 of the population of Ireland in the quinquennium, 1866-70, rose to 253 in the following period, and to 267 in the next, but fell slightly to 266 during the years 1881-5, then it rose steadily to 282 (the highest point reached) in 1896-1900. The rate fell slightly to 276 in 1901-5, sharply to 252 in 1906-10, and still more so to 215 in the last period covered by this table.

The mortality for the period 1911-15 is very remarkable, showing as it does a decrease of 31 in every 100,000, as compared with the period 1866-70, or 13 per cent., and a decrease of 67 on the five years 1896-1900, equivalent to 24 per cent. Bearing in mind my previous remarks with reference to the excessive emigration from Ireland and its effects on the inhabitants remaining at home—the young and healthy going away in thousands, the population remaining in Ireland containing more than its share of the sick and infirm—caution must necessarily be used, on account of the peculiar circumstances of this country, when making comparisons with Great Britain, and perhaps more so in reference to this disease than any other.

Suffice it to say that in England and Wales, the rate fell steadily from 320 in the first period to 141 in the last, or a decrease of 56 per cent. Similarly for Scotland, there was a steady fall from 382 per 100,000 in the first five years to 169 in the last, equivalent to a decrease of 56 per cent., as in England and Wales.

### CANCER.

TABLE XIV.—*Showing by Quinquennial Periods the Mortality from Cancer per 100,000 of the Population in Ireland, as compared with England and Wales and Scotland, during the Fifty Years 1866-1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM CANCER.		
	Ireland.	England and Wales.	Scotland.
1866-1870	31	40	43
1871-1875	33	45	47
1876-1880	34	49	50
1881-1885	38	55	55
1886-1890	43	63	62
1891-1895	49	71	69
1896-1900	58	80	78
1901-1905	69	87	86
1906-1910	79	94	100
1911-1915	86	105	110

The three countries show a steady increase, period by period, until the highest point is reached in the last quinquennium—viz., 86 per 100,000 for Ireland, 105 for England and Wales, and 110 for Scotland.

As compared with the first period, the increases per cent. were 64, 62 and 61, respectively.

To what extent these apparent increases are due to better diagnosis, it must be admitted it is not possible to determine. Certain it is, however, that in the Irish Statistics many deaths were transferred in recent years from some ill-defined causes to cancer as the result of the special inquiry conducted by my Department, and here I desire to acknowledge with my best thanks the help I have at all times received from my medical professional brethren by their prompt and lucid replies to the queries sent them.

### THE PUERPERAL STATE.

TABLE XV.—*Showing the Mortality from Puerperal Septic Diseases and Accidents of Pregnancy and Childbirth per 1,000 Births during each Quinquennial Period from 1866-1915.*

QUINQUENNIAL PERIODS.	AVERAGE ANNUAL MORTALITY FROM PUERPERAL SEPTIC DISEASES AND ACCIDENTS OF PREGNANCY AND CHILDBIRTH.		
	Ireland.	England and Wales.	Scotland.
1866-1870	6.6	4.6	4.5
1871-1875	6.4	5.5	5.8
1876-1880	6.8	4.0	4.6
1881-1885	7.0	5.0	5.8
1886-1890	7.1	4.5	5.2
1891-1895	7.1	5.5	5.1
1896-1900	6.1	4.7	4.3
1901-1905	5.8	4.3	5.1
1906-1910	5.4	3.7	5.4
1911-1915	5.2	4.0	5.8

In view of the Midwives, Ireland, Act, recently enacted I thought some information on this subject would interest the Members and the public generally.

The figures as shown in the table fluctuate considerably, but generally speaking those for Ireland and England show a decided tendency to fall, while those for Scotland exhibit the opposite tendency.

The deaths resulting from child-bearing in Ireland are equivalent to 6.6 to every 1,000 births in the first quin-



quennial period, falling to 5.2 in the last period, the fall representing 21 per cent.; for England and Wales the mortality was 4.6 in the first and 4.0 in the last period, showing a decrease of 13 per cent.; while the rate for Scotland, which was 4.5 per 1,000 births in 1866-70, was 5.8 in 1911-15, the increase being equal to 29 per cent. It may be also observed that the lowest rate for any of the quinquennia in Ireland was in the last period.

The last period for England and Wales also shows a low rate, being the lowest but one (*viz.*, 3.7 in 1906-10), a position which it shares with the period 1876-80. The rate for Scotland, however, in the period 1911-15, with those for the second and fourth periods, is the highest rate recorded for Scotland, while the lowest was in 1896-1900—*viz.*, 4.3 per 1,000 births.

### INFANT MORTALITY.

TABLE XVI.—*Showing the Number of Deaths of Infants under One Year Old to every 1,000 Births Registered during each Quinquennial Period from 1866-1915.*

QUINQUENNIAL PERIODS.	INFANTILE MORTALITY PER 1,000 BIRTHS.		
	Ireland.	England and Wales.	Scotland.
1866-1870	95	157	122
1871-1875	95	153	127
1876-1880	99	145	118
1881-1885	94	139	118
1886-1890	95	145	121
1891-1895	102	151	126
1896-1900	106	156	129
1901-1905	98	138	120
1906-1910	94	117	112
1911-1915	91	110	113

The infant mortality in Ireland shows only a slight diminution in recent, as compared with the earlier, years covered by this table, the rate for the last quinquennial period being only 4 per cent. less than the first. The rate for England, however, shows a decided improvement from 157 for the first period to 110 for the last, equivalent to a decrease of 30 per cent., the corresponding decrease for Scotland being only 7

per cent. The infant mortality rate for Ireland in the quinquennium 1911-15 is, however, 17 per cent. less than that for England, and 19 per cent. below the rate for Scotland.

It must be borne in mind that during the fifty years' period many changes have taken place in the method of classification of the cause of death, the last, based on the International List, having been adopted in Ireland in 1911. The figures in the previous years have been adjusted, as far as possible, so as to afford comparison with 1911 and subsequent years.

It will be gathered from the foregoing :—

1. That the marriage rate for Ireland is low and has not undergone much change during the period.
2. That the average age at marriage is appreciably higher for Ireland than that for England and Scotland.
3. That the crude birth-rate (*i.e.*, the rate per 1,000 of the total population) is comparatively low in Ireland but has remained practically stationary for a number of years, whereas in other countries it has rapidly decreased.
4. That, the real birth-rate (number of legitimate births per 1,000 married women aged 15-45 years) is much higher for Ireland than for England and Wales and Scotland.
5. That the illegitimate birth-rate is much less in Ireland than in England and Wales and Scotland.
6. That the drain on population by Deaths from All Causes in Ireland has declined appreciably in recent years.
7. That while the mortality in Ireland for the last period is higher than that for the first, the rates for Great Britain are considerably lower.
8. That when the individual causes (with the exception of Tuberculosis) are taken into consideration, it is found that Ireland compares favourably with the sister countries.
9. That owing to the large and long continued flow of emigration and its exceptional character, allowances must be made for the recorded marriage, birth and death rates among a population so much disturbed in its age and sex constitution.