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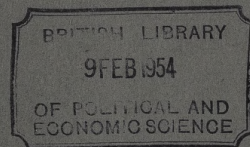
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THE REGISTRAR GENERAL'S

STATISTICAL REVIEW
OF ENGLAND & WALES

FOR THE FIVE YEARS

1946—1950

TEXT, CIVIL



LONDON : HER MAJESTY'S STATIONERY OFFICE

1954

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EXPLANATORY NOTES

1. Table Numbering

Of the tables referred to in this Review, those numbered in Arabic numerals will be found in "Tables, Part I—Medical", and those lettered will be found in "Tables Part II—Civil", for the year in question, whilst those numbered in Roman numerals appear in this volume.

2. Regions

The constitution of the Regional Divisions of England and Wales used in this volume is as follows:—

<p><i>Greater London</i></p> <p>The aggregate of the City of London and of the Boroughs and County districts falling entirely within the area of the Metropolitan Police District as defined in the Police Act, 1946.</p>	<p><i>North II</i></p> <p>Cumberland. Westmorland. Yorkshire, E. Riding. Yorkshire, N. Riding.</p> <p><i>North III</i></p> <p>Yorkshire, W. Riding. York, C.B.</p> <p><i>North IV</i></p> <p>Cheshire. Lancashire.</p> <p><i>Midland I</i></p> <p>Gloucestershire. Herefordshire. Shropshire. Staffordshire. Warwickshire. Worcestershire.</p> <p><i>Midland II</i></p> <p>Derbyshire. Leicestershire. Northamptonshire. Nottinghamshire. Peterborough, Soke of.</p> <p><i>East</i></p> <p>Cambridgeshire. Ely, Isle of Huntingdonshire.</p>	<p><i>East (cont.)</i></p> <p>Lincolnshire— Parts of Holland. Parts of Kesteven. Parts of Lindsey. Norfolk. Rutland. Suffolk, East Suffolk, West.</p> <p><i>South West</i></p> <p>Cornwall. Devon. Dorset. Somerset. Wiltshire.</p> <p><i>Wales I</i></p> <p>Brecknockshire. Carmarthenshire. Glamorganshire. Monmouthshire.</p> <p><i>Wales II</i></p> <p>Anglesey. Caernarvonshire. Cardiganshire. Denbighshire. Flintshire. Merionethshire. Montgomeryshire. Pembrokeshire. Radnorshire.</p>
<p><i>South East</i></p> <p>Bedfordshire. Berkshire. Buckinghamshire. Essex. Hertfordshire. Kent. London. Middlesex. Oxfordshire. Southampton. Surrey. Sussex, East. Sussex, West. Wight, Isle of.</p> <p><i>North I</i></p> <p>Durham. Northumberland.</p>		

3. General

See also explanatory notes to the Parts II, Tables volumes.

CORRIGENDA

Statistical Review, 1940-45, Text, Civil

- Page 13. Table IV, Males, Mid-1940, Married, Age 50—, for 1,005 read 1,003.
All Ages, for 9,984 read 9,982.
- Page 87. Table, col. E, line 6 years 1940-45, for 959 read 954.
- Page 168. Table IV, headnote, *delete* (figures in tens).
- Page 172. Table V
1938, duration 4— years, age 15-19, for .248 read —.
1938, duration 7— years, age 20-24, for — read .248.
1941, duration 8½-11½ months, age 15-44, for .313 read .318.
1944, duration 9— years, age 25-29, for .149 read .148.

INTRODUCTORY

Owing to the delay in the preparation and printing of the Registrar General's Statistical Review for England and Wales resulting from the Second World War, it was necessary to depart for a time from the pre-war practice under which a textual commentary was produced for each calendar year in association with and following the publication of Parts I and II (Medical and Civil Tables, respectively) of the Statistical Review for that year. In consequence, in 1947, a single Text Volume (Medical and Civil) covering the years 1938-39 was published; in 1949, a Text Volume (Medical only) covering the years 1940-45 was produced; and, in 1951, there was published a Civil Text Volume covering the same period of six years. Since then, Medical Text Volumes covering the years 1946-47 (in 1951) and 1948-49 (in 1953) have been published, and one for the year 1950 is in course of preparation. The present volume is the Civil Text Volume covering the years 1946-50, i.e., the period of five years immediately following the war.

For the years 1946-50, the General Register Office has continued to make the two types of basic population estimates for England and Wales which were described in the Civil Text Volume for the years 1940-45 (pages 5 and 6), viz., the estimates of the *Total* population and the *Civilian* population. It has also been found possible, for the years 1948-50, to make a third type of estimate, that of the *Home* population, which consists of the Civilian population (including the whole of the Mercantile Marine) and the Armed Forces—British, Commonwealth and Allied—stationed in England and Wales. These matters are dealt with in detail in pages 5 to 8 of the present volume.

After the Census of April, 1951, it was possible to estimate the Home population on the same basis as that adopted before the war, but this is a matter which will be dealt with fully in the next Civil Text Volume.

The *total* population of England and Wales has increased by 1,384,000, or 3·2 per cent., from 42,636,000 at mid-1945 to 44,020,000 at mid-1950, but the preliminary results of the 1951 Census indicate that the estimate of the total population at mid-1951 may have been 70 or 80 thousands too high, this excess being mainly in the figures relating to males. This does not mean, of course, that the figure of increase of 1,384,000 between 1945 and 1950, referred to above, is necessarily inflated to that extent, since the inflation may be deemed to have accumulated gradually from years prior to 1945. No full revision of past population estimates has been possible, but in the present volume, account is taken of the preliminary 1951 Census figures, where this is necessary for an understanding of the changes in the numbers and characteristics of the population reflected in the estimates.

Other points which are dealt with in the early pages of the present volume are: the large and uneven impact of demobilisation on the size of the *civilian* population in the course of the year 1946, together with a comparison with the position in the period immediately after the end of the First World War; the net migration figures during the period of five years now under review; and the estimates of the sex-age distribution of the national population (total, civilian and, from 1948, home) during this period.

The average age of the population in 1950, 34·4 years for males and 36·8 years for females, is practically unchanged from 1945, but it is explained in this

volume that this statement conceals an increase in the proportion of the population at both the youngest and oldest ages at the expense of those (especially the females) aged 15-44.

The proportion of females to males in the population, which rose slightly during the last war owing to war casualties, has resumed its pre-war downward trend, falling from 1,075 to 1,061 females per 1,000 males during the period under review.

Table IV on page 13 gives the usual estimates of the total population by sex, age and marital condition, the figures having been roughly adjusted in the light of the preliminary figures from the Census, 1951, so as to eliminate all major discrepancies without changing the all-conditions totals by sex and age.

Local population estimates for the years under review are based on *civilian* populations up to 1949 and on the *home* population in 1950. Means of correcting local birth, death and marriage rates are described on page 15.

Tables VI and VII (pages 18 and 19) illustrate the decline in the extent of the movement of local populations from one administrative area to another during the years 1946-50 as compared with the war years 1940-45.

The number of marriages registered in England and Wales during the years 1946-50 was 1,917,238, as compared with 1,755,437 in the years 1941-45 and 1,985,815 in the years 1936-40. The last-mentioned figure was the highest ever recorded for any quinquennial period since 1837 when the General Register Office was first established. The annual average rates of marriage in the three quinquennia were 17.7 (persons married per 1,000 population), 16.6 and 19.2 respectively. The corresponding figures for each of the five years now under review were 18.0 in 1946, 18.6 in 1947, 18.2 in 1948, 17.1 in 1949 and 16.3 in 1950. The rates for the years 1947 and 1948 were exceeded only in the years 1915, 1919, 1920, 1939, 1940 and 1945. A comparison of the marriage rates during the two world wars and in the years preceding and following them and an explanation of the variation of these rates is given in pages 26 to 28.

Marriage intensity among women during the years under review is higher than it has been at any time in the last 100 years, particularly at the younger ages, and there is as yet no clear sign of any decline in these marriage rates.

Whilst, throughout the nineteenth century, the highest marriage rates occurred in the winter quarters, the position during the last 30 years has been that the highest rates have occurred in the summer quarters and the lowest in the winter quarters. This position has continued during the period 1946-50, the months of June to September having shown a clear concentration of marriages.

Widowhood and widowerhood rates are dealt with in pages 51 to 52. It is there pointed out that, at the present low level of mortality at ages under 45, the younger married population, and in particular the population of married women at the reproductive ages, is not being significantly reduced by the termination of marriages by the death of one or other of the partners.

In the Text Volume for the years 1940-45, reference was made to the sharp increase in the number of petitions for divorce in those years. This increase continued during the years 1946-50 and the questions of divorce and the remarriage of divorced persons are dealt with at length in pages 54 to 72, of the present volume.

The total number of live births occurring in the five post-war years 1946-50 was 3,904,666, giving an annual average of 781,000. For the six war years 1940-50, the average annual figure was 656,000 and for the five pre-war years 1935-39, 610,000. The average annual rates for the three periods were respectively 18.0, 15.6 and 14.9 live births per 1,000 population.

In the Text Volume for the years 1940-45, it was pointed out that the birth rates, which had for some years been about 15.0 per thousand, fell after the outbreak of war to the unprecedentedly low figure of 13.9 in 1941; then rose within three years to 17.7 per thousand in 1944 (the highest figure since the early 1920s); and fell again to 15.9 per thousand in 1945. It was suggested in the Text Volume under reference that a number of the births which might normally have been expected had been deferred during the war period and were in course of being made up in the years immediately following the war. The movement of the rates during the immediate post-war years now under review shows the full effect of this making-up process. When hostilities ceased, the birth rate at once rose to 19.2 per 1,000 in 1946 and 20.5 in 1947. In the early part of 1947, the figure of 21 per 1,000 was for a time exceeded.

After 1947 the rate fell, sharply at first to 17.8 in 1948, and then more slowly to 16.7 in 1949 and 15.8 in 1950. There was a further slight fall to 15.4 in 1951, after which the rate appears to have levelled itself out for the time being—at a rate approximating to that prevailing in the pre-war years.

It seems justifiable to assume that the post-war adjustment of the birth rate after its war-time fluctuations was virtually completed in 1950.

The number of illegitimate maternities, which had risen from 26,569 in 1939 to 64,743 in 1945, fell during each of the years under review to 35,816 in 1950. On the other hand, the number of legitimate maternities pre-maritally conceived, which was 60,346 in 1939 and only 38,176 in 1945, rose to 62,304 in 1948, falling again to 54,188 in 1950.

The report also discusses (pages 79 to 87 and Appendix III), the births of the period in terms of their more fundamental quality, viz., their sufficiency as replenishers of the national stock of creative power upon which the future development of the population depends.

The Effective Reproduction Rate—the Department's sufficiency index, which shows the ratio of the latent reproductive capacity possessed by the newly born children of each year to the corresponding capacity expended in the course of their production—rose to a maximum of 1.244 in 1947 and thereafter, with the gradual shedding of the abnormal war element, fell to 1.017 in 1950 with the apparent prospect of settling at about a position of unity over the immediate years ahead, and with the prospect therefore of maintaining the total reproductive capacity of the population at its present level, which is much the same as it was at the outbreak of war fourteen years ago.

A special feature of the present report is one which traces the reproductive performances of successive generations of women born over the past century. It shows that the earliest generation represented—born 110 years ago—produced female progeny more than 40 per cent. in excess of its own numbers; that the subsequent performances thereafter steadily declined down to the generation of 1906 whose total progeny achievement was only two-thirds of its originating element. Since then, however, the fall has been succeeded by an equally steady improvement and there seems every prospect that the generations now coming into childbearing will ultimately reproduce themselves in entirety.

The figure of the number of stillbirths and the number of deaths of infants in the first four weeks of life, taken together, has fallen throughout the years 1946-50, from 51.8 per 1,000 total births in 1945 to 40.7 in 1950, a considerable achievement. Detailed comments are made in pages 139 to 145.

The Civil Text Volume for the years 1940-45 gave an account of the operation of the National Register during the war years and of the uses to which it was

put. This story is continued in the present volume (pages 167 to 169). It will be seen that during the years 1946-50, some of the war-time features of the Register ceased, but that it was put to some new uses arising out of changing circumstances.

[The National Registration Act came to an end on 22nd May, 1952.]

The subject of Parliamentary and Local Government electors was last dealt with in the Text Volume for the years 1938-39. Since then, there has been much legislation on the subject. The most important change resulting from this legislation was a re-distribution of Parliamentary seats, with the abolition of University constituencies and the splitting of 2-member constituencies. By the end of 1950 there were 542 constituencies with one member each. The average electorate per member in England and Wales was 55,732, the highest figure being 78,865 and the lowest 27,870. Permanent Boundary Commissions were set up to keep parliamentary representation under constant review and to make recommendations from time to time as to any desirable re-distribution of seats. Provision was also made for the preparation and publication annually of local registers of electors. These matters are dealt with in detail in the present volume, on pages 170 to 175.

POPULATION

For the years 1946 to 1950 the Registrar General has continued to make the two types of basic population estimates for England and Wales which were described in the Civil Text Volume for 1940-45. These are: the *Total Population*, including the Armed Forces and Mercantile Marine at home and overseas, but excluding any Commonwealth or Allied Forces stationed here; and the *Civilian Population*, which excludes not only all Armed Forces, but also, from 1943 to 1947 inclusive, the Mercantile Marine*. (In the years from 1940 to 1942 and from 1948 to 1950 the Mercantile Marine was included.) In addition it became possible from 1948 onwards to make a third type of estimate, that of the *Home Population*, which is more nearly comparable with pre-war figures. It consists of the Civilian Population (including the Mercantile Marine) and all Armed Forces—British, Commonwealth or Allied—stationed in England and Wales (or, in the case of local population estimates, in the area concerned).

The estimates of total population have in the first place, as before, been built up each year from the previous year's records by adding births and immigrants and deducting deaths and emigrants, while those of the civilian population were obtained by deducting from the total population the estimated contribution of England and Wales to the Armed Forces (and, up to 1947, the Mercantile Marine) of the United Kingdom at the date of the estimate; adding the Armed Forces stationed in England and Wales to the civilian population then gave the estimated home population. But with the end of the war, migration, which had been reduced to a mere trickle, again assumed a greater numerical importance, and this increased the margin of error introduced by any deficiencies in the available records of migration. For this reason greater weight has been attached to other sources of information, mainly the records of food ration books exchanged each year; and by a comprehensive review of all available data mid-year estimates of population have been constructed for each year which are more independent of previous estimates than in the past.

In the meantime the 1951 Census has been held, after a lapse of twenty years, and its first results published†. No full revision of past population estimates has been possible, but account will be taken in the present volume of the preliminary figures where this is necessary for an understanding of the changes in the numbers and characteristics of the population reflected in the estimates.

The estimates of the total, civilian, and (from 1948) home population by sex as at the middle of the years 1945 to 1950 are set out in Table I. Over the five years they show an increase in the total population of 1,384,000 persons, or 3·2 per cent., to 44,020,000 at mid-1950. Judging by the preliminary Census results, this latter figure (but not the increase since 1945) may be about 70 or 80 thousand too high, i.e., by less than 0·2 per cent. The excess is concentrated among the males.

* About 122,000 males at mid-1943 and 111,000 at mid-1947.

† *Census 1951, England and Wales, Preliminary Report* (London, H.M.S.O., 1951, 5s.); *Census 1951, Great Britain, One Per Cent. Sample Tables* (London, H.M.S.O., 1952—Part I, 17s. 6d., Part II, £2).

Table I.—Estimated Population of England and Wales, Mid-1945 to Mid-1950.

(Thousands)

	Total			Civilian			Home		
	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
Mid-1945 ..	42,636	20,549	22,087	37,916*	16,200*	21,716	} Not available		
Mid-1946 ..	42,700	20,611	22,089	40,759*	18,780*	21,979			
Mean 1946	42,737	20,629	22,108	40,395*	18,616*	21,979			
Mid-1947 ..	43,050	20,822	22,228	41,786*	19,612*	22,174			
Mid-1948 ..	43,502	21,091	22,411	42,750	20,370	22,380	43,296	20,888	22,408
Mid-1949 ..	43,785	21,239	22,546	43,100	20,580	22,520	43,595	21,050	22,545
Mid-1950 ..	44,020	21,357	22,663	43,400	20,757	22,643	43,830	21,169	22,661

* Excluding the Mercantile Marine at home and overseas.

In addition to the main estimates as at 30th June, subsidiary estimates as at 31st December have been made and are shown in Appendix I, page 176. In view of the large and uneven impact of demobilisation on the size of the civilian population in the course of the year 1946, a special estimate of the mean population was made, the civilian part taking into account the varying rate of demobilisation during the year. These figures are shown in Tables I and III in addition to those for the middle of the year†.

The progress of demobilisation is illustrated by the following summary, which shows the estimated contribution of England and Wales to the British Armed Forces at half-yearly intervals from 1945 to 1948.

Estimated Strength of the Armed Forces, England and Wales, 1945-48.

Estimate Date	Thousands			30th June, 1945 = 100		
	Persons	Males	Females	Persons	Males	Females
1945 30th June ..	4,588	4,217	371‡	100	100	100‡
31st December ..	3,444	3,192	252	75	76	68
1946 30th June ..	1,829	1,719	110	40	41	30
31st December ..	1,278	1,212	66	28	29	18
1947 30th June ..	1,153	1,099	54	25	26	15
31st December ..	995	957	38	22	23	10
1948 30th June ..	752	721	31	16	17	8

Roughly speaking, demobilisation of the war-time Forces was finished by the middle of 1948. But it will be seen that the bulk of it was completed by the end of 1946, when the number of non-civilians had fallen from a mid-1945 peak of 4,588,000 to 1,278,000, or 28 per cent. of the former figure and six-sevenths of the way towards the mid-1948 total of 752,000. This may be compared with the following figures relating to the First World War, which relate to men only. It should be remembered that in 1918 the War ended in November, whereas in 1945 Germany capitulated in May and Japan in August.

† The corresponding mean population for 1945 is shown in Table I of Part I of the Statistical Review for that year.

‡ The strength of the Women's Forces reached 388 thousand (105 per cent. of the number at 30th June, 1945) at 31st December, 1944, when the number of men was still rising.

Estimated Number of Men in the Armed Forces, 1918-20*.

Mid-Year	Thousands	30th June, 1918 = 100
1918	3,612	100
1919	2,093	58
1920	509	14

The increase in the total population is analysed into its constituent parts in Table II, which also gives comparisons with the war and immediate pre-war years.

Table II.—Analysis of Population Movement, 1945 to 1950, and Comparison with Preceding Periods. England and Wales.

Mid-Year to Mid-Year	Increase or Decrease (-) in Total Population						
	Total			Births	Deaths	Natural Increase	Net Migration
	Persons	Males	Females				
(a) Amount in thousands							
1933-39 ..	1,110	563	547	3,627	-2,931	696	414
1939-45 ..	994	447	547	3,901	-3,285	616	378
1945-50 ..	1,384	808	576	3,904	-2,510	1,394	-10
1945-46 ..	64	62	2	717	-514	203	-139
1946-47 ..	350	211	139	911	-525	386	-36
1947-48 ..	452	269	183	811	-461	350	102
1948-49 ..	283	148	135	751	-508	243	40
1949-50 ..	235	118	117	714	-502	212	23
(b) Increase per cent. per annum							
1933-39 ..	0.45	0.48	0.43	1.47	-1.19	0.28	0.17
1939-45 ..	0.39	0.37	0.42	1.53	-1.29	0.24	0.15
1945-50 ..	0.64	0.77	0.52	1.80	-1.16	0.64	-0.00
1945-46 ..	0.15	0.30	0.01	1.68	-1.20	0.48	-0.33
1946-47 ..	0.82	1.02	0.63	2.13	-1.23	0.90	-0.08
1947-48 ..	1.05	1.29	0.82	1.88	-1.07	0.81	0.24
1948-49 ..	0.65	0.70	0.60	1.73	-1.17	0.56	0.09
1949-50 ..	0.54	0.56	0.52	1.63	-1.14	0.49	0.05

Some of the figures of total increase and net migration in this table have to be treated with caution, since they would reflect the slight inflation of the later estimates revealed by the 1951 Census and mentioned above. An attempt was made on pp. xii ff. of the Census Preliminary Report to produce estimates of net migration free from this error. On the assumptions there made it would seem that the population estimates up to 1939, and the 1933-39 movement figures shown in Table II above, are about right; that the estimate for 1945, and the 1939-45 figures of total increase and net gain from migration in Table II, are overstated by something like 100,000; that the estimates for 1946 and 1947 are about right, so that Table II understates the total increase and net migration gain in 1945-46 by about 100,000; and that the renewed overstatement of 70,000-80,000 reached by 1950 accumulated mostly in 1947-48 and 1948-49. The relevant columns of Section (b) of Table II may thus be roughly adjusted as follows:

* Data from Census of England and Wales, 1921, General Report, p. 16.

Analysis of Population Movement with Net Migration adjusted approximately in the light of the 1951 Census.

Increase per cent. per annum

Mid-Year to Mid-Year	Total	Natural Increase	Net Migration
1933-39 ..	0.45	0.28	0.17
1939-45 ..	0.35	0.24	0.11
1945-50 ..	0.65	0.64	0.01
1945-46 ..	0.38	0.48	-0.10
1946-47 ..	0.83	0.90	-0.07
1947-48 ..	0.97	0.81	0.16
1948-49 ..	0.55	0.56	-0.01
1949-50 ..	0.54	0.49	0.05

Over the five years 1945-50 the average annual increase in the population, at 0.65 per cent., was appreciably higher than either during the war (0.35 per cent.) or just before it (0.45 per cent.). This is the more notable since practically the whole of it was due to natural increase, the net gain from migration having dwindled to insignificant proportions. One reason is that the number of deaths, no longer swollen by war casualties, has fallen below the pre-war level, but more important is the boom in births, many of them postponed from the war years, which was at its height in 1946-48 but has even now left the number of births above the pre-war level. That boom is discussed in more detail on pp. 75 to 79 below.

Migration had shown an inward balance during most of the war years, but with the end of the war the balance swung sharply outward, at least for the first two years, 1945-47. A very large (though by no means the only) element in this movement consisted of the wives and children of Commonwealth and United States servicemen who left to join their husbands and fathers in the latter's home countries. For England and Wales alone their number was of the order of 100,000, most of whom left during 1946. In subsequent years there has been a continuing stream of emigration, much of it for settlement in Commonwealth countries, but this has been more than offset by inward movements. Among the latter should be mentioned particularly a continuing inward balance of movement from the other parts of the United Kingdom, which was at its height immediately after the war; the demobilisation in England and Wales of some 80,000 members of the Polish and other Allied Armed Forces, mostly in 1947-48 and 1948-49; and the arrival for work in this country of considerable numbers of Displaced Persons and others from the Continent, many of the "others" being young women*. The net gain from migration in 1947-48, for instance, is entirely accounted for by the demobilisation of Poles and the movement from Scotland and Northern Ireland, leaving a negligible balance of overseas migration more properly so called.

National Sex-Age Estimates

Estimates of the sex-age distribution of the national population, total, civilian and (from 1948) home, have again been made as at the middle of each of the years 1946 to 1950. The survivorship method used has been described in previous reports, and consists briefly of treating the previous year's population at each age as one year older, adding the births occurring during the

* There were also some tens of thousands of dependents of Poles and other refugees, and of former prisoners of war who stayed here as civilian workers after their release.

movement year at age 0 and the year's immigrants as at the ages they would have at the mid-year date for which the estimate is made, and deducting the year's deaths and emigrants at the corresponding ages. The evidence on the distribution of migrants by sex and age (and marital condition), usually somewhat fragmentary, was improved considerably during the period now under review, by an actual count, first of females emigrating overseas, and from 1948 of both male and female immigrants and emigrants of all types, notified each quarter to the National Register*. In addition the estimates from 1946 onwards take account of the evidence on the sex-age distribution of the civilian population produced by the count of the National Register as at 31st December, 1947, referred to on pp. 20-21 below†. As with those for all ages combined, subsidiary estimates as at 31st December (shown in Appendix I, p. 176) and a mean estimate for 1946 have also been made. The mid-year and mean estimates, most of which have been published in Tables 1 and A. 2 of the Statistical Review for the years concerned, are reproduced in Table III.

The first results of the 1951 Census suggest that the male age-group 20-24 in 1950 may be overstated in the estimates by about 3 per cent., and that the remaining errors are smaller, mostly much smaller, except at ages 85 and over, where, however, the numbers in the Census 1 per cent. sample are too small to allow any accurate assessment of the estimate excess found. Corresponding discrepancies may be assumed to apply to the earlier years in the table. The figures may thus be regarded as adequate for most purposes until the final Census results are available.

The average age of the population, 34.4 years for men and 36.8 years for women at mid-1950, is practically unchanged from 1945. But this conceals an increase in the proportion of the population at both the youngest and oldest ages at the expense of those aged 15-44, especially females, as can be seen from the following statement :

Sex-Age Group	Total Population (thousands)			Proportion per 1,000 total		
	1939	1945	1950	1939	1945	1950
Under 15, Males and Females ..	8,729	8,755	9,630	210	205	219
15-44 { Males	9,741	9,701	9,587	234	228	218
{ Females	10,022	9,882	9,552	241	232	217
45-64 { Males	4,350	4,545	4,862	104	107	110
{ Females	5,078	5,393	5,601	122	126	127
65 and over, Males and Females ..	3,722	4,360	4,788	89	102	109
Total	41,642	42,636	44,020	1,000	1,000	1,000

* The new data were less complete for marital condition than for sex and age, especially in the case of males. For further details see N. H. Carrier and J. R. Jeffery, *External Migration: A Study of the Available Statistics, 1815-1950* (General Register Office, Studies on Medical and Population Subjects No. 6, London, H.M.S.O., 1953, 8s. 6d.), pp. 110-112 and 145-148.

† One small part of the revision made in the light of this evidence came too late for the publication of the 1946 figures. To be strictly comparable with the estimate for mid-1947 (and with that for December, 1946, in Appendix I), age-group 10— in both the mid-year and mean estimates for 1946 should be increased by about 26 thousand males and 20 thousand females, and age group 15— diminished by the same amounts.

Table III.—Estimates of Total, Civilian and Home Populations by Sex and Age. England and Wales, 1946 to 1950.
(Thousands)

Age Group	Mid-1946		Mean 1946		Mid-1947		Mid-1948			Mid-1949			Mid-1950		
	Total	Civilian*	Total	Civilian*	Total	Civilian*	Total	Civilian	Home	Total	Civilian	Home	Total	Civilian	Home
MALES															
0- ..	1,664		1,671		1,806		1,872			1,898			1,907		
5- ..	1,435		1,435		1,444		1,473			1,519			1,569		
10- ..	1,369		1,371		1,399		1,415			1,433			1,442		
15- ..	1,513	1,174	1,514	1,184	1,471	1,098	1,458	1,143	1,402	1,436	1,137	1,349	1,419	1,162	1,346
20- ..	1,604	785	1,607	762	1,567	1,075	1,574	1,374	1,489	1,558	1,389	1,509	1,545	1,383	1,486
25- ..	1,601	1,300	1,599	1,215	1,633	1,488	1,721	1,636	1,696	1,781	1,702	1,758	1,697	1,626	1,673
30- ..	1,676	1,513	1,677	1,457	1,631	1,557	1,559	1,512	1,541	1,477	1,433	1,465	1,530	1,486	1,515
35- ..	1,720	1,608	1,719	1,592	1,715	1,661	1,715	1,676	1,704	1,712	1,675	1,702	1,704	1,668	1,693
40- ..	1,607	1,559	1,608	1,550	1,629	1,598	1,658	1,637	1,653	1,680	1,661	1,675	1,692	1,674	1,688
45- ..	1,362	1,334	1,362	1,334	1,425	1,401	1,464	1,452	1,462	1,498	1,488	1,495	1,531	1,523	1,529
50- ..	1,178	1,167	1,179	1,168	1,187	1,179	1,214	1,213	1,213	1,252	1,251	1,252	1,293	1,290	1,293
55- ..	1,070	1,064	1,070	1,064	1,076	1,071	1,082	1,081	1,082	1,083	1,082	1,083	1,088	1,087	1,088
60- ..	931	928	931	928	933	930	939	939	939	944	944	944	950	950	950
65- ..	775	774	775	774	780	779	783			783			784		
70- ..		574		575		580	589			593			596		
75- ..		329		331		340	355			364			373		
80- ..		146		147		149	158			163			169		
85 and over		57		58		57	62			65			68		
All Ages	20,611	18,780	20,629	18,616	20,822	19,612	21,091	20,370	20,888	21,239	20,580	21,050	21,357	20,757	21,169

FEMALES															
0- ..	1,585		1,592		1,716		1,780			1,803			1,818		
5- ..	1,387		1,387		1,392		1,416			1,457			1,501		
10- ..	1,334		1,336		1,354		1,368			1,387			1,393		
15- ..	1,479	1,461	1,480	1,462	1,439	1,424	1,421	1,410	1,421	1,406	1,397	1,406	1,391	1,385	1,390
20- ..	1,633	1,566	1,637	1,560	1,559	1,531	1,535	1,522	1,533	1,518	1,507	1,517	1,510	1,501	1,509
25- ..	1,619	1,603	1,617	1,593	1,659	1,653	1,721	1,717	1,720	1,773	1,770	1,773	1,681	1,679	1,681
30- ..	1,717	1,712	1,718	1,712	1,660	1,658	1,574	1,572	1,574	1,485	1,483	1,485	1,539	1,538	1,539
35- ..	1,752	1,750	1,752	1,750	1,742	1,741	1,734	1,733	1,734	1,728	1,727	1,728	1,721	1,720	1,721
40- ..	1,655	1,654	1,654	1,653	1,670	1,669	1,686	1,686	1,686	1,700	1,700	1,700	1,710	1,709	1,710
45- ..	1,545	1,544	1,545	1,544	1,562	1,561	1,581			1,596			1,607		
50- ..		1,403		1,403		1,413	1,429			1,455			1,481		
55- ..		1,276		1,276		1,286	1,302			1,311			1,324		
60- ..		1,151		1,151		1,158	1,168			1,179			1,189		
65- ..		976		977		996	1,009			1,020			1,029		
70- ..		741		742		759	781			796			812		
75- ..		470		472		486	506			520			534		
80- ..		245		246		252	265			272			278		
85 and over		121		123		125	135			140			145		
All Ages	22,089	21,979	22,108	21,979	22,228	22,174	22,411	22,380	22,408	22,546	22,520	22,545	22,663	22,643	22,661

PERSONS															
All Ages	42,700	40,759	42,737	40,595	43,050	41,786	43,502	42,750	43,296	43,785	43,100	43,595	44,020	43,400	43,830

Average Age (Total Population)															
Males ..	34.4		34.4		34.3		34.3			34.3			34.4		
Females	36.6		36.6		36.6		36.7			36.7			36.8		

* Excluding merchant seamen at home and overseas.

This effect is due to the combination of the continued ageing of the adult population with the wave of births in the immediate post-war years*.

The proportion of females to males in the population rose slightly from 1939 to 1945, as a result of war casualties, though much less than during the First World War†. Since then it has resumed its pre-war downward trend, falling from 1,075 females per 1,000 males to 1,061‡. The following analysis by age-groups shows that the excess of females is becoming more and more confined to the higher ages. The small excess in 1945 at ages 15-34, for instance, has become a deficiency.

Females per 1,000 Males

Mid-Year	All Ages	Under 15	15-24	25-34	35-44	45-64	65 and over
1939 ..	1,072	976	977	1,021	1,099	1,167	1,335
1945 ..	1,075	965	1,017	1,017	1,022	1,187	1,361
1950 ..	1,061	958	979	998	1,010	1,152	1,406

National Sex-Age-Condition Estimates

The usual estimates of the total population by sex, age and marital condition (single, married, and widowed and divorced) have been made for the years under review, and those from 1948 onwards published in Table A.3§ of the relevant Parts II of the Statistical Review||. The apparent errors in them, which have accumulated over the years and have been revealed by comparison with the 1951 Census 1 per cent. sample, are proportionately rather greater in some cells of these tables than was the case with the estimates discussed in earlier paragraphs. This applies particularly to the widowed and divorced at ages under 50, where their numbers are relatively small and, at least in the younger age groups, the majority of them are divorced people. Data on current divorces by age of the parties have only become available since 1950, while even the new data on the sex-age-condition distribution of migrants do not distinguish the widowed and divorced from other classes; and this lack of adequate information, combined with the large number of divorces since the war, is no doubt responsible for the discrepancies now found.

Without making a full revision of the estimates, those for 1946 to 1950 have been roughly adjusted in the light of the preliminary Census figures now available so as to eliminate all major discrepancies, while leaving the all-conditions totals by sex and age unchanged. The adjusted figures are given in Table IV.

The proportion married in the population has continued to rise, though more slowly than in the early war years. For men it amounted to 480 per thousand in 1939, 515 in 1945 and 516 in 1950¶; for women, to 449, 476 and 486 respectively. This fact, combined with the continued fall in the ratio of females

* A subsidiary element is the exodus of wives of Commonwealth and Allied servicemen mentioned on p. 8 above.

† It seems possible, in the light of the Census, that the true rise was somewhat greater than the 3 points from 1,072 to 1,075 shown below, but the above statement remains correct.

‡ The Census results suggest that the latter figure should be more like 1,068, but the amount of the drop in 1945-50 is probably about right.

§ A.4 for 1948, A.3 for later years.

|| Part of the figures also appears in Table EE, which goes back to earlier years.

¶ The true rise from 1945 to 1950 may be slightly greater than this, as the adjustments mentioned have not been carried back before 1946.

Table IV.—Estimates of Total Population by Sex, Age and Marital Condition. England and Wales, 1946 to 1950.
Provisionally adjusted in the light of the 1951 Census one per cent. sample. (Thousands).

Age Group	Mean 1946				Mid-1947				Mid-1948				Mid-1949				Mid-1950			
	All Con- ditions	Single	Married	Widowed and Divorced	All Con- ditions	Single	Married	Widowed and Divorced	All Con- ditions	Single	Married	Widowed and Divorced	All Con- ditions	Single	Married	Widowed and Divorced	All Con- ditions	Single	Married	Widowed and Divorced
MALES																				
0- ..	4,477	4,477	—	—	4,649	4,649	—	—	4,760	4,760	—	—	4,850	4,850	—	—	4,918	4,918	—	—
15- ..	1,514	1,501	13	—	1,471	1,462	9	—	1,458	1,450	8	—	1,436	1,427	9	—	1,419	1,411	8	—
20- ..	1,607	1,287	318	2	1,567	1,260	306	1	1,574	1,254	319	1	1,558	1,229	328	1	1,545	1,211	333	1
25- ..	1,599	621	972	6	1,633	618	1,009	6	1,721	638	1,075	8	1,781	648	1,124	9	1,697	620	1,068	9
30- ..	1,677	338	1,324	15	1,631	303	1,310	18	1,559	287	1,251	21	1,477	272	1,185	20	1,530	289	1,222	19
35- ..	1,719	233	1,464	22	1,715	230	1,460	25	1,715	231	1,455	29	1,712	229	1,455	28	1,704	227	1,452	25
40- ..	1,608	192	1,383	33	1,629	189	1,405	35	1,658	192	1,430	36	1,680	193	1,451	36	1,692	192	1,464	36
45- ..	1,362	149	1,177	36	1,425	154	1,231	40	1,464	156	1,268	40	1,498	157	1,301	40	1,531	157	1,334	40
50- ..	1,179	105	1,027	47	1,187	104	1,036	47	1,214	106	1,060	48	1,252	109	1,095	48	1,293	113	1,132	48
55- ..	1,070	96	907	67	1,076	95	916	65	1,082	95	922	65	1,083	95	923	65	1,088	95	930	63
60- ..	931	84	756	91	933	83	759	91	939	83	767	89	944	82	774	88	950	81	780	89
65- ..	775	72	576	127	780	71	583	126	783	71	587	125	783	71	589	123	784	71	591	122
70- ..	575	56	374	145	580	56	384	140	589	56	397	136	593	55	398	140	596	54	402	140
75 and over	536	38	263	235	546	40	268	238	575	44	282	249	592	47	293	252	610	50	303	257
All Ages	20,629	9,249	10,554	826	20,822	9,314	10,676	832	21,091	9,423	10,821	847	21,239	9,464	10,925	850	21,357	9,489	11,019	849
FEMALES																				
0- ..	4,315	4,315	—	—	4,462	4,462	—	—	4,564	4,564	—	—	4,647	4,647	—	—	4,712	4,712	—	—
15- ..	1,480	1,428	52	—	1,439	1,391	48	—	1,421	1,367	54	—	1,406	1,349	57	—	1,391	1,335	56	—
20- ..	1,637	914	713	10	1,559	859	693	7	1,535	828	701	6	1,518	803	709	6	1,510	791	714	5
25- ..	1,617	464	1,126	27	1,659	450	1,185	24	1,721	439	1,256	26	1,773	441	1,305	27	1,681	378	1,280	23
30- ..	1,718	293	1,375	50	1,660	275	1,332	53	1,574	252	1,270	52	1,485	215	1,222	48	1,539	240	1,252	47
35- ..	1,752	294	1,397	61	1,742	273	1,405	64	1,734	255	1,415	64	1,728	243	1,421	64	1,721	236	1,421	64
40- ..	1,654	272	1,297	85	1,670	270	1,311	89	1,686	265	1,333	88	1,700	259	1,351	90	1,710	252	1,370	88
45- ..	1,545	247	1,177	121	1,562	250	1,191	121	1,581	253	1,207	121	1,596	253	1,225	118	1,607	253	1,237	117
50- ..	1,403	212	1,025	166	1,413	210	1,039	164	1,429	211	1,058	160	1,455	215	1,080	160	1,481	218	1,105	158
55- ..	1,276	199	849	228	1,286	199	860	227	1,302	200	873	229	1,311	200	883	228	1,324	201	894	229
60- ..	1,151	181	643	327	1,158	181	650	327	1,168	182	661	325	1,179	183	670	326	1,189	184	680	325
65- ..	977	155	482	340	996	158	489	349	1,009	161	493	355	1,020	162	496	362	1,029	163	498	368
70- ..	742	122	268	352	759	123	278	358	781	125	289	367	796	128	296	372	812	130	305	377
75 and over	841	136	195	510	863	140	197	526	906	147	205	554	932	151	206	575	957	156	203	598
All Ages	22,108	9,232	10,599	2,277	22,228	9,241	10,678	2,309	22,411	9,249	10,815	2,347	22,546	9,249	10,921	2,376	22,663	9,249	11,015	2,399

to males in the younger age groups of the population as a whole, has led to a further decline in the corresponding ratio among the non-married, i.e., the single, widowed and divorced combined. These are the figures :

Comparison of Males and Females in the Non-Married Population (i.e., Single, Widowed and Divorced).

	Total aged 15 and over	15-	20-	25-	30-	35-	40-	45 and over	
Excess or Deficiency (-) of Females (thousands)	1939	1,515	-75	-302	-201	59	112	175	1,747
	1946	1,596	-73	-365	-136	-10	100	132	1,948
	1950	1,516	-76	-416	-228	-21	48	112	2,097
Females per 100 Males	1939	125	96	76	75	115	142	198	236
	1946	129	95	72	78	97	139	159	245
	1950	128	95	66	64	93	119	149	252

These figures show once again that the "surplus of women" is now largely confined, in this country, to the higher ages, and that, considering that husbands tend to be a little older than their wives, the total numbers of men and women in the main marrying age range have approached a state of balance. This is discussed in more detail in the marriage chapter, on pp. 40-41 below.

Estimates of Married Women by Duration of Marriage

Estimates of the mean number of married women exposed to risk of child-bearing by separate years of duration of marriage as well as by age have become increasingly important for the analysis of fertility. A series of such estimates for each of the years 1938 to 1945 was given in Appendix I of the Civil Text volume for 1940-45, and the method of construction explained in detail in Appendix II of that volume.

Similar estimates for 1946 to 1950 are shown in Appendix II, Table 3, on pp. 184-185. Their relative complexity, as well as the small size of many of the cells in the 1951 Census Sample tables concerned, make it impracticable at this stage either to judge the need for any real revision or to carry one out; in the meantime a simple rateable adjustment has been applied to all cells for married women in the age ranges 15-19 and 25-29 last birthday, so as to make the "all durations" totals agree with the numbers of married women given in Table IV above.

The implications of the figures are discussed more fully in the marriage and fertility chapters of this Review. Here it will be sufficient to point out some of the changes which have occurred. The following table shows the proportionate distribution of married women at the reproductive ages between various marriage durations in 1939, 1945 and 1950.

Table V.—Married Women Aged 15-44 Last Birthday (Estimated Years of Life Spent in the Calendar Year): Distribution per 1,000 by Duration of Marriage. England and Wales, 1939, 1945 and 1950.

	Duration of Marriage (Years)*											All Durations		
	Under 1	1-	2-	3-	4-	5-	6-	7-	8-	9-	Under 5		5-9	10 and over
1939	63	61	62	59	58	55	50	50	49	49	303	253	444	1,000
1945	53	46	50	60	64	75	56	52	52	50	273	285	442	1,000
1950	54	58	61	58	56	48	40	43	52	56	287	239	474	1,000

* These durations should be read as more strictly meaning 0-11½ months, 11½ months to 1 year 11½ months, etc.

The effect of fluctuations in the number of marriages, e.g., the sharp rise at the outbreak of war, the low level in the later war years and the relatively large numbers in 1945-49, are clearly visible. Thus the fall in the proportions at durations under 5 years and the rise at durations 5-9 between 1939 and 1945 are associated with the inclusion, in 1945, of most of the many women married in 1939-41 in duration group 5-9, and of the relatively few married in 1943 and 1944 in duration group Under 5. By 1950 these small cohorts (further depleted by the emigration of war brides mentioned on p. 8 above) had passed into the 5-9 group and the previous, more numerous ones into the 10 and over group, while the proportion at duration Under 5 was swollen by the postwar marriages.

Local Populations

Estimates of the civilian populations of all boroughs, urban districts and rural districts in England and Wales for the several years 1946 to 1949, and of the home population for 1950, are shown in Table 17* of Part I and Table E of Part II of the respective Statistical Reviews for those years†. As explained on p. 5 above, these estimates included the Mercantile Marine at home and abroad from 1948 onwards. Appendix Z of Part II gives details of changes in boundary taking place during each year; the small changes which occurred in 1946 and 1947 did not involve any changes in population, and there were no changes in 1948 to 1950.

As the estimates up to 1949 inclusive continued to relate to civilians only, they increased with the progress of demobilisation, over and above the changes due to natural increase and migration; further, those from 1948 onwards are increased compared with 1946 and 1947 by the inclusion of merchant seamen, and the 1950 home population estimates also take in any members of the Armed Forces stationed in each area at or about the middle of the year.

The local birth and death rates in Tables 17* and E and the marriage rates in Table F are therefore based on varying civilian populations up to 1949 and on home populations in 1950. For death rates this is appropriate, since the classification of births and deaths by locality was up to 1949 confined to civilians. In the case of births and marriages, however, it is less adequate, even though inevitable, for potential parents and marriage partners both include non-civilians, so that rates based on civilian populations only might be regarded as overstated; moreover the national rates in Tables C and D are based on total populations (including the Armed Forces at home and overseas). In addition the national population estimates for 1946 were revised downwards by 150,000 after the local estimates had been completed, and it was found impracticable to revise the latter in time for publication.

It is therefore suggested that to make the local civilian death rates for 1946 comparable with that for England and Wales and with those for other years up to 1949 they should be multiplied by a correcting factor of 1.0037, the ratio of the unrevised to the revised national mean civilian population. Local birth and marriage rates for 1946 can be made comparable with the England and Wales rates in Tables 17, E and F (based on civilian populations) by applying the same factor 1.0037. Approximate comparability of local birth and marriage rates with the national rates in other tables (based on total populations) and with rates for other years up to 1949 (after the latter have been corrected by the factors appropriate to those years and given in the

* Table 12 in 1950.

† Home population estimates for 1949 were published in a separate pamphlet. (The Registrar General's Estimates of the Population of England and Wales—Populations of Each Administrative Area at 30th June, 1949. London, H.M.S.O., 1950, 4d.)

respective Statistical Reviews) can be achieved by applying the following multiplying factors :

Ratio of National Civilian to Total Population			
1946*	1947	1948	1949
0.9534	0.9706	0.9827	0.9844

From 1950 onwards the rates in Tables 12, E and F are based on home populations, and their national values do not differ appreciably from rates based on total populations. The local values, however, are influenced by the varying proportion of Armed Forces stationed there in the home population of each area. Therefore, while the 1950 local rates are comparable with the national rate and with local rates for later years, they cannot be made comparable with those for 1940-1949 by applying a national factor.

For the years before 1950 such correction achieves comparability between national and local rates and between different years in the limited sense of removing most of the distortions due to the varying numbers of non-civilians excluded from the local estimates. It does not, however, remove the effect of the differences in sex-age composition between the populations of various areas. That may be done approximately by the use of areal comparability factors, such as were given for use with death rates in the Statistical Reviews from 1934 to 1939. The count of the National Register at the end of 1947, referred to below, provided the data for calculating a new set of such factors, and they have been published in Tables 17† and E from 1948 onwards. Their use and method of construction are explained in the Text volumes for 1934 (pp. 4 ff.), 1938-39 (pp. 5 ff.) and 1948-49 (Medical, pp. 15-16). A similar set for use with birth rates was introduced in 1949, and is discussed on pp. 131-132, below.

The estimates of local civilian populations for 1946 were constructed in the same way as those for 1940-45, described in the Civil Text volume for those years (pp. 16-17). That is to say, estimates as at the end of each quarter were made for each area by modifying the previous quarter's estimate in respect of the births, deaths, enlistments into and discharges from the Armed Forces and Mercantile Marine, and changes of permanent residence, as recorded in the National Register. These were then adjusted so as to aggregate to a more reliable estimate calculated independently by using additional data such as birth and death registrations and the Service Departments' records of enlistments and discharges. The estimates in Tables 17 and E for 1946 are means derived from the quarterly figures by adding together one-eighth of the two terminal December estimates and one-quarter of the intermediate March, June and September estimates, and modifying the result so as to aggregate to an independently calculated national mean estimate. As in earlier years, the number of food ration books issued in the middle of 1946 was used as a subsidiary check.

From 1947 a different procedure was employed, since it had become evident that defects in the records of permanent migration were having a more appreciable effect than during most of the war years, while the large and erratic temporary movements which had compelled the construction of mean in place of mid-year population estimates had come to an end. Accordingly the estimates in Tables 17 and E for 1947, and corresponding ones for later years,

* Ratio of unrevised mean civilian to revised mean total population estimate.

† Table 12 in 1950.

relate to the middle of the year, and are based mainly on the numbers of food ration books issued, with allowances for other data such as the number of inmates of certain institutions who do not receive ration books. The count of the National Register, described below, was used as a subsidiary check in 1947, and any marked discrepancies were further investigated before the final estimates were adopted. The net balance of movement recorded by the National Register was similarly used as a check in later years. The numbers of merchant seamen, estimated approximately from records compiled at the time of their exclusion from the National Register in 1943, were added from 1948 onwards, and the numbers of non-civilians stationed in each area, based on returns supplied by the Service Departments, from 1950. As before, the final estimates were adjusted so as to aggregate to the independently calculated national estimate of the civilian (or home) population as at the middle of the year.

As might be expected after a lapse of twenty years since the last Census, covering a period of large and abnormal movements, comparison of the estimates with the first results of the 1951 Census revealed differences varying considerably in size and importance among the 1472 administrative areas of England and Wales. Many of the larger discrepancies, however, were found to be cases where several areas had been grouped for Food Office purposes, so that ration book data were available only for the group as a whole; the sum of the estimates for the areas composing the group was usually much better than the figures for individual component areas.

Local Movement

Changes in the civilian populations of local areas are due on the one hand to factors influencing the national as well as the local civilian population, that is, births, deaths, enlistments into and discharges from the Armed Forces, and migration into and out of the country as a whole; on the other hand they are very much affected by migration between different areas *within* England and Wales.

From the setting up of the National Register on 29th September, 1939, all changes of residence other than those of a temporary nature (such as holidays) were notifiable to the local National Registration Offices. An account of the working of the system and of the varied population movements during the war years was given in the Civil Text volume for 1940-45. A more detailed study, especially of some features of post-war migration within the country, has been published as a separate booklet*; one of the outstanding features demonstrated there is that net changes in the population of an area are normally differences of very much larger movements in *both* directions, both immigrants and emigrants showing very similar characteristics. Further work on a sample of removals recorded in the National Register is proceeding.

The overall volume of movement in the years 1946 to 1950 is shown and compared with previous years in Table VI, which gives the number of non-local removals within England and Wales registered quarter by quarter. "Non-local removals" are those from one Administrative Area (Borough or County District) to another. Local or internal removals do not alter the population content of an area and statistics of them were not available until 1949, when they amounted to about 90 per cent. of non-local removals, or a little under half of both combined. Small dispersed tests made during and just after the war indicated that at that time the proportion of local to non-local removals was rather smaller, perhaps of the order of 60 per cent. There is, of course, a great deal of local variation, especially according to whether the area is large or small.

* Mary P. Newton and James R. Jeffery, *Internal Migration: Some Aspects of Population Movements within England and Wales.* (General Register Office, Studies on Medical and Population Subjects No. 5. London, H.M.S.O., 1951, 1s. 6d.)

Table VI.—Non-Local Removals within England and Wales Registered in 1946 to 1950, and Comparison with 1940–45.

	1940–45 (Mean)	1945	1946		1947		1948		1949		1950	
	Percentage of Civilian Population	Percentage of Civilian Population	Number in Thous.	Percentage of Civilian Population	Number in Thous.	Percentage of Civilian Population	Number in Thous.	Percentage of Civilian Population	Number in Thous.	Percentage of Civilian Population	Number in Thous.	Percentage of Civilian Population
1st Qr.	2.9	2.5	992	2.5	794	1.9	830	2.0	801	1.9	725	1.7
2nd "	3.3	3.2	1,136	2.8	1,007	2.4	1,017	2.4	944	2.2	944	2.2
3rd "	3.9	2.8	1,016	2.5	1,057	2.5	1,023	2.4	849	2.0	737	1.7
4th "	3.7	2.7	1,079	2.6	1,015	2.4	926	2.2	852	2.0	797	1.8
Year	13.8	11.2	4,223	10.4	3,873	9.3	3,796	8.9	3,446	8.0	3,203	7.4

The table clearly shows the gradual decline in movement to more normal, peacetime proportions—from a mean of 13.8 per cent. of the civilian population in 1940–45 and 11.2 per cent. in 1945 itself to 7.4 per cent. in 1950, little more than half the war-time average. The proportion was then still falling, but at a diminishing rate; it reached 7.0 per cent. in 1951. Another feature of the table is the seasonal pattern of movement, which shows a rather lower proportion during the winter quarter and after some fluctuation seems to have established a peak in the June quarter. It is possible, however, that this last represents less than a real peak in movement than arrears of notifications cleared on the occasion of the annual exchange of food ration books.

An even clearer picture of a gradual attainment of normality and stability after the disturbances of the war period is presented by the distribution of the civilian population between various parts of the country. This distribution is shown in Table VII at quarterly intervals up to 1947, and at annual intervals thereafter, for each of the geographical regions of England and Wales* and also for the density aggregates. The latter are classes of areas grouped according to their status as County Boroughs, Urban† or Rural Districts, with Greater London as a separate class, indicating approximately their degree of urbanisation.

It is clear that 1946 continued the trend, begun in 1945, to a new peacetime pattern, as people returned from areas of temporary wartime residence and the economy of the country was switched back to serve peacetime needs. The position was more or less stabilised by the second half of 1946—it has already been seen that the bulk of demobilisation was completed by the end of that year—and changes in subsequent years were relatively small and few.

Comparing the shares of the various density aggregates and regions in the population of England and Wales in 1950 and 1939, we find that there has been a marked reduction in Greater London, entirely accounted for by a fall of one-fifth in the County of London, and a small decline in the aggregate of County Boroughs, while both Urban and Rural Districts outside Greater London have increased their shares. Among the regions, increases have been recorded by the Remainder of the South East, the Midlands (especially the Western half, Midland I) and also the South West, while moderate reductions have occurred in most of the North. Many of these changes are in line with pre-war trends; the main exceptions are South Wales, where the tendency to decline has been arrested, the aggregate of Rural Districts, where it has been

* For the constitution of the geographical regions see p. vii.

† Municipal Boroughs are included with Urban Districts.

Table VII.—Regional and Density Distribution of the Civilian Population per 1,000 of England and Wales*.

Date	Eng-land and Wales	GEOGRAPHICAL REGIONS												DENSITY AGGREGATES			
		Greater Lond.		Re-main-der of S.E.	N. I	N. II	N. III	N. IV	M. I	M. II	E.	S.W.	Wales I	Wales II	C.B.'s outside Greater London	U.D.'s outside Greater London	R.D.'s outside Greater London
		Lond. A.C.	Outer Ring														
30th June, 1939	1,000	97	114	139	54	31	84	150	117	60	45	50	43	17	310	305	174
30th June, 1945	1,000	69	110	146	54	31	85	150	127	64	46	55	45	18	305	325	191
31st Dec., 1945	1,000	74	114	147	53	31	84	148	125	63	45	54	45	17	305	320	187
31st Mar., 1946	1,000	75	115	147	54	31	84	148	124	63	45	53	44	17	306	319	185
30th June, 1946	1,000	77	116	147	53	31	84	148	123	63	45	53	43	17	305	318	184
30th Sept., 1946	1,000	77	116	148	53	31	84	147	123	62	46	53	43	17	305	318	184
31st Dec., 1946	1,000	78	116	148	53	31	83	147	123	62	46	53	43	17	305	318	183
31st Mar., 1947	1,000	78	116	148	53	31	83	147	123	62	46	53	43	17	305	318	183
30th June, 1947	1,000	78	116	149	52	31	83	147	123	62	46	53	43	17	304	318	184
30th Sept., 1947	1,000	78	116	149	52	31	83	147	123	62	46	53	43	17	303	318	185
31st Dec., 1947	1,000	78	116	149	52	31	83	147	123	62	46	53	43	17	304	317	185
30th June, 1948	1,000	78	116	150	52	31	83	147	122	62	46	53	43	17	303	318	185
30th June, 1949	1,000	78	116	150	52	31	83	147	122	62	46	53	43	17	303	318	185
30th June, 1950	1,000	78	116	150	52	31	83	147	122	62	46	53	43	17	303	318	185

* The effect of the grouping of some administrative areas for Food Office purposes, mentioned in the Text Volume for 1940-45, has been eliminated from the figures in this table.

reversed*, and Greater London. In spite of wartime bomb-damage and evacuation the fall in the County of London taken as a whole, as distinct from some of the central boroughs, is little greater proportionately than in the nineteen-thirties, but the long-continued, vigorous rising trend in the Outer Ring seems to have come to an end.

Local Age Distributions

Estimates of the sex and age distribution of the population in the various geographical regions and density aggregates were shown in Table 2 of Part I of the Statistical Review until 1941. After that they had to be suspended, since there were insufficient data about the sex-age incidence of the large and erratic population movements of the war years to allow the construction of at all reliable estimates year by year.

The Count of the National Register.—By 1947, however, conditions had become more stable, and a long time having elapsed since the last census in 1931, the need for more up-to-date information about the sex and age composition of local populations for many administrative purposes was getting increasingly urgent. It was therefore decided to use the material available in the individual population records maintained in the local National Registration Offices to construct estimates of the sex and age components of the population of each Administrative Area (Borough or County District). It was felt that these would be of sufficient validity to serve the main needs that were likely to be experienced before the results of the 1951 Census were forthcoming.

The local records used were the "live" maintenance registers. These were card indexes of the population registered as residing in the Administrative Area in question. Each card bore, among other particulars, the name and date of birth of the person to whom it related, and also the sex where this could not be inferred from the Christian name. All these registers were temporarily frozen as at 31st December, 1947, and then each local office counted their cards by sex in a series of "year of birth" groups corresponding to prescribed groups of attained age. The local tabulations were sent to the General Register Office, where they were scrutinised, assembled and aggregated. The local totals were compared with the independent estimates of local civilian populations as at 31st December, 1947, and the aggregated sex-age groups with the similarly independent national civilian sex-age estimates as at the same date, both of which have been described in earlier pages of the present volume. Where differences were observed for which there was no obvious explanation, the figures were subjected to careful scrutiny both centrally and locally, and, where possible, revised in the light of any further information thus obtained. Apart, however, from differences arising from error or misunderstanding, the comparison showed that most of the local registers were subject to some degree of inflation. This necessitated a general scaling-down to secure that the local estimates as finally adopted should conform in the aggregate to the independently constructed and more reliable estimates for the country as a whole†. It should be remembered that the local maintenance registers, and therefore the estimates based upon them, like those of Tables 17 and E up to 1947, were

* A large part of this reversal is due to the fact that there were many boundary changes in 1931-39, often at the expense of rural areas, but none of any consequence in 1939-50, so that the adjustment of boundaries has lagged behind the growth of towns more than in normal times.

† Advantage was, however, taken of the data provided by the count to review, and, where necessary, revise the sex-age distribution of the national estimates and, in some instances, the local civilian estimates for all sex-age groups combined; cf. pp. 9 and 17 above.

confined to civilians excluding both the Armed Forces and Mercantile Marine at home and abroad. They have been published in a separate volume*.

The Regional Estimates. Comparison with 1939.—The new data made possible, among other things, the resumption from 1948 of the annual series of sex-age estimates for geographical regions and density aggregates, and these have been published in Part I, Table 2 and Part II, Table A. 4† of the relevant Statistical Reviews. These include the estimated numbers of merchant seamen and, from 1950, the Armed Forces stationed in each area. They have been made each year by modifying the previous year's estimate at ages 15 and over (beginning with that at December, 1947) by a series of rateable adjustments until, by successive approximations, they aggregated to both the independent controls provided by the national sex-age estimate and the local estimates of the aggregate population aged 15 and over for that year‡. At ages under 15 independent estimates, based mostly on the number of children's food ration books issued each year, were used§. Inmates of certain types of institutions and, from 1950, members of the Armed Forces were treated separately. Comparison of the results with those of the 1951 Census 1 per cent. Sample, as far as the size of the sample cells allowed conclusions to be drawn, has indicated the existence of discrepancies which were, on the whole, very moderate in size.

To compare the post-war situation as shown by these published estimates with, say, 1939 data is not altogether easy, since those up to 1949 differ from the pre-war tables in excluding non-civilians, while those for 1950 relate to different groups of areas. But the estimates of the home population for 1939|| and 1949 now given in Appendix I, pp. 178-179, are broadly comparable, both in the population included and the areas identified. A brief summary of the changes brought about in ten years of war and post-war adjustment is provided by Table VIII, in which the average age and the ratio of males to females in each region and density aggregate is expressed in terms of the corresponding figure for England and Wales taken as 1,000.

In the decade separating the two sets of figures the average age of the total population of England and Wales rose by a little over one year, or about $3\frac{1}{2}$ per cent. All regions and density aggregates shared in this rise, but to a varying extent. The third column of figures in the table shows in which areas the average age rose faster than in the country as a whole (increase in the ratio) or more slowly (decrease in the ratio). The greatest increases took place in North I (Northumberland and Durham), by 20 points from 944 to 964 per 1,000 of England and Wales, Greater London (17 points) and Wales I (South Wales, 16 points). The greatest decreases in the ratio, and hence the smallest rises in average age, took place in the Remainder of the South East (27 points), the South West (26 points), the aggregate of Rural Districts (21 points) and the East (18 points).

The averages, however, fail to bring out one feature which is associated with the numerous post-war births. In some areas where an increase in the ratio

* Estimates of the Sex and Age Distribution of the Civilian Population in Regions and Administrative Areas of England and Wales at 31st December, 1947. (London, H.M.S.O., 1949, 2s. 6d.)

† A.3 in 1948, A.4 in later years.

‡ The 1950 estimates actually relate to the standard regions, conurbations and new types of density aggregates defined in the Tables volumes for that year, but they also have been derived from the 1947 estimates in the way described.

§ The estimates of children under 15 for 1949 and 1950 were published in the local population estimate pamphlets for those years; see p. 15, footnote †.

|| This is not the estimate of the composite population shown in Table 2 of the 1939 Statistical Review (Part I), which is not comparable with other years, but is one of the elements used in computing that table.

Table VIII.—Average Ages and Sex Ratios in Geographical Regions and Density Aggregates, Expressed in Relation to England and Wales Taken as 1,000. 30th June, 1939 and 1949.

Area	Average Age (Years)			Sex Ratio (Males per 1,000 Females)		
	1939	1949	Increase or Decrease (—)	1939	1949	Increase or Decrease (—)
ACTUAL (based on Total Population)						
England and Wales ..	34.4	35.6	1.2	933	942	9
RATIOS TO ENGLAND AND WALES TAKEN AS 1,000 (based on Home Population)						
England and Wales ..	1,000	1,000	—	1,000	1,000	—
Geographical Regions :—						
South East	1,014	1,013	— 1	970	971	1
Greater London	994	1,011	17	955	959	4
Remainder of South East ..	1,043	1,016	—27	992	987	— 5
North	987	994	7	991	996	5
North I	944	964	20	998	1,042	44
North II	981	972	— 9	1,025	1,046	21
North III	994	1,001	7	1,013	1,002	—11
North IV	999	1,006	7	969	966	— 3
Midland	981	977	— 4	1,044	1,031	—13
Midland I	976	971	— 5	1,049	1,032	—17
Midland II	989	989	—	1,033	1,029	— 4
East	1,019	1,001	—18	1,055	1,067	12
South West	1,057	1,031	—26	992	1,013	21
Wales	984	995	11	1,075	1,038	—37
Wales I	967	983	16	1,098	1,049	—49
Wales II	1,029	1,026	— 3	1,017	1,009	— 8
Density Aggregates outside Greater London :—						
County Boroughs	984	991	7	979	975	— 4
Urban Districts	1,012	1,005	— 7	998	992	— 6
Rural Districts	1,016	995	—21	1,101	1,101	—

shows a relatively large rise in the proportion of people in the older age groups there has nevertheless been a faster increase in the proportion of children under five than in the country as a whole ; this is true particularly of Greater London and also of the East Midlands (Midland II), where the constant average age ratio conceals a considerable rise in the relative proportion of these children. Similarly falls in the ratio occasionally conceal relatively small increases in the number of young children, as in North II (Cumberland, Westmorland and the North Riding), Wales II (North and Central Wales) and the aggregate of Rural Districts. This part of the table does, however, show the marked reduction in the differences between the age structures of the population in the various areas which has taken place, and which is confirmed by a more detailed analysis of the age proportions than there is space for in this chapter.

The right hand half of Table VIII shows a similar comparison for the ratio of males to females, which for England and Wales rose by about 1 per cent. over the decade. All the density aggregates and most of the regions shared in varying degrees in this rise ; the exceptions were Wales I, in 1939 the only region where the males outnumbered the females,* but now with a majority of females like the rest following a fall in the sex ratio of $3\frac{1}{2}$ per cent. ; and to a much smaller extent Midland I (the West Midlands) and North III (the West Riding of Yorkshire). The overall ratios for Wales and the Midlands entire also fell. Areas where the ratios rose appreciably more than in the country as a whole were North I, North II, the South West and the East. Unlike what happened in the case of the age structure there does not seem to have been any marked change in the degree of variation of the different areas about the mean sex ratio for England and Wales.

Population Projections

By virtue of its long established responsibility both for the regular provision of population statistics and also for the continuous study of the phenomena and trends associated with them, the views of the Department have not unnaturally been sought in the past when information was required concerning the implications of the experienced movements and such inferences as it seemed permissible to draw regarding their likely continuance and development in the course of the future.

Prior to the war, such enquiries were not infrequent but they could mostly be satisfied by *ad hoc* treatment of specific eventualities and it was only on the rarer occasions when they were furnished in connection with public enquiries, that such population projections appeared in published documents ; an example of the latter being that given in evidence to the Royal Commission on the Geographical Distribution of the Industrial Population in 1939 by the Registrars General of England and Wales and of Scotland, which was later reprinted and presented to Parliament as a separate Command Paper (6538) in 1942.

Since the war, the increasing degree of forward planning in policies and issues dependant on population development not only widened the need for population projections but was manifested by demands for their more frequent revision so as to maintain them in as up to date a condition as possible.

With a view to meeting the extended demand, the construction of the projection was put on a more systematic basis and projections of the population of England and Wales have been prepared annually and, from 1949 onwards, published in the Registrar General's Quarterly Return for the Quarter ended 31st December of each year ; the latest December estimate of the current population is published in this issue of the Quarterly Return and it is from these successive estimates as a base that the revised forecasts have been projected.

Experience has shown that users tend to plan their objectives in terms of calendar periods of 5 or 10 years, the shorter intervals being confined to the immediate future, and the projections have accordingly been designed to exhibit the contemplated population in quinary sex age groups at the end of 5, 10, 15, 20, 30 and 40 years from the base date in each case, the 40 year limit being regarded as sufficient to cover the likely range of practical needs.

It should be noted that the projections issued by the Department differ from some that are occasionally brought to public notice in that they are intended primarily to be "objective" rather than "illustrative". The purpose of the latter type is merely to display the resultant effect on the population of theoretical assumptions concerning the trend of births, deaths and migration—the

* The only density aggregate with a majority of males, both in 1939 and 1949, is that of Rural Districts.

Royal Commission on Population published 16 varieties—and though they have their uses, they are not of significance here. The Departmental projections incidentally display the effect of the assumptions on which they are based but that is not their purpose; their main object is to supply material for users who need the information in connection with the planning of current actions and policies and who look to the Department for a view of “most likely” conditions on the ground that its close familiarity with the behaviour of the several population factors gives it a peculiarly favourable position for the exercise of such judgment.

At the same time, it is fully recognised that the future is far too uncertain for any views so expressed to be other than highly conjectural. The projections are inevitably subject to a margin of approximation which rapidly widens as the period lengthens, and though the more immediate—say those within 10 years—may perhaps be regarded as possessing a useful degree of realism, the 40 year projection can never be other than a dim vista of a distant horizon which only future periodical reviews and revisions will gradually bring into focus as the time approaches.

It is reasonable that the basic assumptions regarding the future course of the birth, death and migration factors employed for the Departmental projection should be reconsidered at five yearly intervals following the completion of the quinquennia in which the statistics are customarily aggregated and presented in the Annual Review. The position was reviewed when the analysis of the events of 1950—completing the 1946–50 quinquennium—became available, and the first of the projections to be constructed on the revised assumptions then decided upon, which was published in the December Quarterly Return of 1952, is shown in Appendix I on page 180.

The nature of the mortality, natality and migration assumptions themselves are briefly indicated at the head of the projections, and in regard to them it may be said that they represent a broad judgment regarding the likely course of the several events rather than the automatic results of mechanical extrapolations or of complex hypothetical constructions. The latter are sometimes inevitable in projections of the illustrative kind but for an objective forecast, the wider and more general type of consideration and treatment is considered preferable in that it is more easily capable of accommodating explicit or implicit allowance for the more imponderable forces which influence the several factors.

But the chosen assumptions are not of course put forward as being in any way unique in this respect, and knowledgeable individuals who are in a position to formulate their own views about the future may well prefer population projections based on them. The most that can be claimed, or indeed is intended to be claimed, for the present projections is that they provide a service, which, from the point of view of both validity and up-to-date-ness, will be found adequate for practical purposes until the next review of the basic assumptions falls due.

MARRIAGES

During the five years 1946 to 1950 there were 1,917,238 marriages registered in England and Wales. This was 161,801 more than during 1941 to 1945 but 68,577 fewer than in 1936 to 1940, when 1,985,815 marriages were registered, the highest number yet recorded in any quinquennial period since 1837 when the General Register Office was first established.

The experience of 1946 to 1950 expressed in terms of the total population of all ages and marital conditions represents an annual average rate of 17·7 persons married per 1,000 population, compared with 16·6 in 1941–1945 and 19·2 in 1936–1940. The numbers of marriages and rates per 1,000 population for calendar years are given in serial form in Tables B and C of Parts II and in Table D for calendar quarters. The figures for each year from 1936 to 1950 have been extracted from these tables and are shown in Table IX from which it will be seen that the rates in the recent post-war period rose from 18·0 to

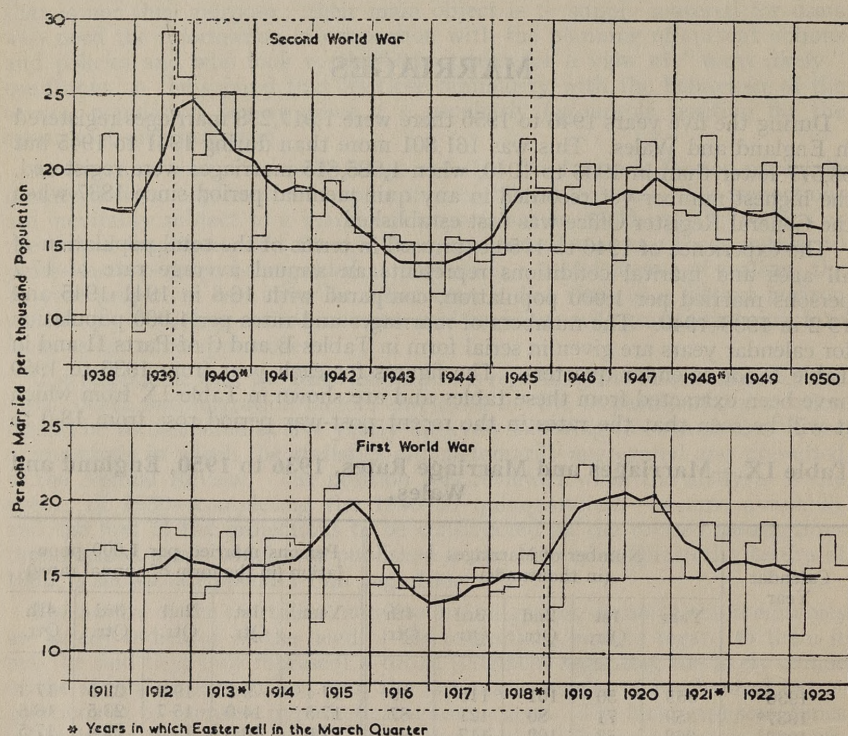
Table IX.—Marriages and Marriage Rates, 1936 to 1950, England and Wales.

Calendar Year	Number of Marriages (in thousands)					Persons married per 1,000 population (in the form of annual rates)				
	Year	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
1936	355	50	101	115	89	17·4	9·8	19·8	22·5	17·3
1937*	359	71	80	121	87	17·5	14·0	15·7	23·5	16·8
1938	362	52	102	117	91	17·6	10·3	19·9	22·4	17·5
1939	440	47	103	153	137	21·2	9·2	19·9	29·3	26·2
1940*	471	109	117	132	113	22·5	21·0	22·4	25·1	21·4
1941	389	81	106	105	98	18·6	15·7	20·3	19·9	18·6
1942	370	88	101	96	84	17·7	17·1	19·3	18·3	15·9
1943	296	63	83	82	70	14·0	12·0	15·7	15·3	13·1
1944	303	63	83	82	75	14·3	11·9	15·6	15·4	14·0
1945	398	77	100	119	101	18·7	14·6	18·8	22·2	18·9
1946	386	78	101	110	96	18·0	14·8	19·0	20·4	17·9
1947	401	75	109	119	97	18·6	14·2	20·3	22·0	18·0
1948*	397	95	93	123	85	18·2	17·6	17·2	22·5	15·6
1949	375	82	96	114	83	17·1	15·1	17·5	20·7	15·1
1950	358	87	81	115	76	16·3	16·0	14·7	20·7	13·7

18·6 in 1947 and thereafter declined to 18·2, 17·1 and 16·3 in 1948 to 1950. The degree of fluctuation in the series can be ascribed to the effect of war conditions for, from a rate of about 17·5 per 1,000 in the three years preceding the outbreak of war, there was a steep rise to 21·2 in 1939 and to 22·5 in 1940. By 1943 and 1944 the rates had fallen to 14·0 and 14·3, only to rise suddenly and steeply to 18·7 in 1945, a rate which was not reached in any of the five post-war years. Notwithstanding the slight recession in 1946, however, it is noteworthy that the rates for 1947 and 1948 were only exceeded in 1939, 1940 and 1945 during the second world war, in 1915 (19·4) and in the two years immediately following the first world war, 1919 (19·8) and 1920 (20·2).

* In years so marked, Easter fell in the first quarter.

DIAGRAM A.—A Comparison of Marriage Rates in periods covering the First and Second World Wars, England and Wales. (See Text)



To facilitate comparison of the incidence of marriage before, during and after the two world wars Diagram A has been prepared in which the marriage rates of successive calendar quarters are shown by thin lines superimposed by more continuous thick lines on which each point represents the average of the four quarters of which it is the centre, thereby suppressing the effect of the cyclical variations produced by the high seasonal incidence associated with marriages. The diagram shows that the course of the marriage rates in both periods had the same general characteristics of a peak in the early part of the war followed by a sharp fall below the peace-time level and a subsequent rise at the end of hostilities which was again followed by a decline to about the pre-war level. The high rates at the beginning of the wars reflect the tendency to advance the date of marriage and the subsequent lower rates reflect the loss of these earlier marriages, which would normally have taken place later, as well as some which had to be postponed until after the war. Many of these postponed marriages took place in the last years of hostilities and the immediate post-war periods and so caused the secondary peaks shown in 1919 and 1920 and in 1945–1947. In order to remove from the comparison of the two periods the fluctuations mentioned above, the figures for the years covering the two peaks and the intervening trough have been aggregated and are shown in Table X.

From a comparison of the ratios in columns (4) and (7) of Table X it appears that, relative to the pre-war position, the increase in marriage incidence was greater during the period around the First World War than in the Second

Table X.—Comparison of Marriage Rates per 1,000 Population in periods covering the First and Second World Wars, England and Wales.

Description of Period	First World War		Second World War		Ratio of Second World War rate to that of First World War		
	Period	Marriage Rates* Per 1,000 population	Ratio to pre-war rate taken as 100	Period		Marriage Rates* Per 1,000 population	Ratio to pre-war rate taken as 100
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pre-war	1913	15.7	100	1938	17.6	100	112
War and Immediate Post-war	1914–22	16.9	108	1939–49	18.1	103	107
Later Post-war ..	1923	15.2	97	1950	16.3	93	107

World War. The average marriage rate in the period 1914–1922 was 8 per cent. above that of 1913 but in 1939–1949 it was only 3 per cent. above that of 1938, and, while the later post-war decline in 1923 was 3 per cent. compared with 1913, it was 7 per cent. in 1950 compared with 1938. This impression, however, is modified by reference to Column (8) of the table which shows that marriage-rates were higher in the period covering the Second World War than in that covering the First War. Compared with 1913 the rate in 1938 was higher by 12 per cent. Marriage rates had in fact been higher with an average of 16.5 in the years 1931–1937 than in the corresponding period before the First World War, 1906–12, with an average of 15.3. The greater intensity of marriage during the past twenty years has tended to reduce the proportion of the non-married element of the population. Since only the non-married are “at risk” of marrying, a somewhat better measure of the marriage incidence is provided by relating the number of marriages to the population available for marriage instead of to the whole population. Marriage rates based on the non-married males and females aged 15† and over are given in serial form in Table C of Part II and Table XI derived from Table C has been prepared to provide a comparison between the periods of the two World Wars of rates calculated on the non-married population.

Columns (4) and (7) of Table XI show that marriage rates for both males and females were by 1950 8 per cent. above those of 1938, showing a superiority over the corresponding comparison for the period covering the First World War, since in 1923 the male rate was only 3 per cent. above that of 1913 whilst the female rate had actually fallen by 6 per cent. This superiority was notwithstanding that male and female rates started in 1938 already 17 per cent. and 9 per cent. respectively above those of 1913. In fact Column (8) of Table XI, which compares the rates for years in the period covering the Second World War with those for the corresponding years of the First, shows that the excess of 17 per cent. in the male rate in 1938 rose to 23 per cent. by 1950 and the similar rise for the female rate was from an excess of 9 per cent. to one of 26

* Based on annual average number of persons married.

† It should be noted that though, by the Age of Marriage Act, 1929, any marriage between persons either of whom is under 16 is void, marriages of persons under 16 were never other than insignificant, and the continued use of 15 as the commencing age has been retained, as a matter of statistical convenience and continuity without prejudicing the interpretation of the record.

Table XI.—Comparison of Marriage Rates per 1,000 non-married population by sex, in periods covering the First and Second World Wars, England and Wales.

Description of Period	First World War		Second World War		Ratio of Second World War rate to that of First World War		
	Period	Marriage Rates*		Period		Marriage Rates*	
		Per 1,000 non-married population	Ratio to pre-war rate taken as 100			Per 1,000 non-married population	Ratio to pre-war rate taken as 100
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MALES							
Pre-war	1913	52.2	100	1938	61.2	100	117
War and Immediate Post-war	1914-22	58.6	112	1939-49	68.8	112	117
Later Post-war ..	1923	53.9	103	1950	66.1	108	123
FEMALES							
Pre-war	1913	43.7	100	1938	47.8	100	109
War and Immediate Post-war	1914-22	46.2	106	1939-49	53.0	111	115
Later Post-war ..	1923	41.1	94	1950	51.5	108	126

per cent. (These compare with the apparent relative decline in marriage intensity from an excess of 12 per cent. to one of only 7 per cent. shown in Column (8) of Table X where rates were based on the total population and not on the non-married only). Marriage rates for both men and women are thus seen to have been very high during the twelve years 1939-1950; their maintenance over so long a period constitutes a record in the history of marriage rates in this country during the past hundred years.

Marriage Analyses by Sex, Age, etc.

The marriage rates considered in the preceding paragraphs have taken no account of the age-groups at which the marriages take place nor of the marital condition of the persons married. The crude marriage rates based on a total population serve many administrative and social needs and have attained a degree of prominence from the fact that they are readily ascertained and are sometimes the only rates available. Rates based on the number of non-married males and females over 15 years of age have more direct bearing on marriage habits but, in order properly to measure the changing intensity of marriage, they require further analyses distinguishing the various sex, age and marital condition sections of the population involved. Estimates of the population by sex, age and marital condition have been made annually and the marriages by single years of age for each sex and condition are given in Table G of successive Parts II. Prior to 1947 marriages of divorced persons were included with bachelors and spinsters in Table G and were separately tabulated in Table H. In Table XII the marriages of the divorced are included with those of the widowed and have been excluded from those of bachelors and spinsters and the resulting numbers of marriages have been related to the appropriate estimates of the population. The population estimates from which these rates have been calculated differ from those previously published by the inclusion of some

* Based on annual average number of persons married.

Table XII.—Annual Marriage Rates per 1,000 Bachelors, Widowers and Divorced Men, Spinsters, and Widows and Divorced Women respectively, at each of several age periods, 1931, 1938 and 1939 to 1950, England and Wales.

Year	Annual marriage rate per 1,000 in each age group						Marriage rate per 1,000 population over 15 in each class	Ratio to corresponding rate for 1938 taken as 1,000	Marriage rate which would have resulted had the 1938 age ratio been in operation	Ratio of actual marriage rate (col. 8) to rate in previous column (10)
	15-	20-	25-	35-	45-	55 and over				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
BACHELORS										
1931	3.2	72.6	141.3	49.8	16.3	5.5	56.0	864	65.0	862
38	3.2	87.0	160.6	57.0	18.5	4.8	64.8	1,000	64.8	1,000
39	4.5	115.7	187.0	63.3	19.6	5.1	77.8	1,201	63.9	1,218
40	5.8	128.9	211.6	68.7	22.7	5.3	86.8	1,340	63.2	1,373
41	7.2	113.5	166.3	67.3	22.6	5.5	73.3	1,131	62.6	1,171
42	8.2	119.9	147.7	65.7	21.8	5.3	71.2	1,099	62.3	1,143
43	7.8	97.0	109.6	57.2	19.1	4.6	56.6	873	62.3	909
44	7.2	97.6	106.8	53.9	20.2	4.0	56.9	878	63.6	895
45	7.9	124.9	155.8	68.6	22.8	5.2	76.5	1,181	64.5	1,186
46	5.9	101.7	172.6	64.2	21.1	5.5	71.2	1,099	63.2	1,127
47	5.7	108.0	178.5	62.8	20.9	5.3	73.4	1,133	62.7	1,171
48	5.5	113.5	168.5	58.9	20.6	5.4	72.5	1,119	62.8	1,154
49	5.8	114.7	155.6	53.6	19.5	4.9	69.7	1,076	62.8	1,110
50	5.6	113.8	148.2	51.6	19.5	4.9	67.6	1,043	62.7	1,078
WIDOWERS AND DIVORCED MEN										
1931	—	131.7	185.9	133.5	67.3	15.0	35.9	942	40.6	884
38	—	153.6	219.8	152.6	79.1	15.9	38.1	1,000	38.1	1,000
39	—	156.0	229.4	165.9	84.1	16.2	40.1	1,052	38.2	1,050
40	—	145.0	232.3	173.3	89.7	16.5	40.9	1,073	37.5	1,091
41	—	74.5	212.8	163.7	90.2	16.8	39.6	1,039	37.3	1,062
42	—	86.5	232.0	172.0	95.0	16.6	40.2	1,055	36.6	1,098
43	—	85.5	205.8	161.8	92.7	16.6	38.7	1,016	36.7	1,054
44	—	150.5	235.2	166.0	93.4	17.0	40.5	1,063	36.8	1,101
45	—	208.0	300.8	201.4	106.2	18.1	46.8	1,228	36.9	1,268
46	—	166.0	428.6	246.6	119.9	19.2	55.6	1,459	36.9	1,507
47	—	462.0	676.8	308.5	129.1	18.6	70.6	1,853	38.4	1,839
48	—	—	547.7	272.8	130.6	19.3	69.2	1,816	40.1	1,726
49	—	533.0	455.6	252.0	124.3	18.3	62.4	1,638	39.9	1,564
50	—	431.0	415.7	242.5	118.6	18.1	58.2	1,528	39.2	1,485
SPINSTERS										
1931	17.0	106.4	96.6	21.3	7.8	2.2	51.6	840	67.2	768
38	22.6	147.9	117.9	22.0	8.6	2.0	61.4	1,000	61.4	1,000
39	32.0	197.6	142.5	28.8	9.3	2.0	75.7	1,233	58.6	1,292
40	38.4	222.7	150.2	31.0	9.7	2.0	83.4	1,358	58.4	1,428
41	36.3	188.7	117.6	28.6	9.5	1.9	70.1	1,142	57.5	1,219
42	38.8	187.4	101.8	27.6	9.6	2.0	67.5	1,099	57.1	1,182
43	34.2	141.2	80.3	23.3	9.2	1.8	53.5	871	57.0	939
44	33.1	143.1	83.8	22.9	9.2	1.8	54.6	889	57.3	953
45	40.0	200.6	119.0	28.1	10.6	2.1	72.6	1,182	56.4	1,287
46	33.9	189.0	125.0	33.0	11.8	2.3	69.5	1,132	55.9	1,243
47	36.7	205.5	130.2	32.7	11.2	2.2	72.5	1,181	54.7	1,325
48	39.4	212.5	130.1	32.5	11.3	2.2	73.4	1,195	53.8	1,364
49	40.5	212.0	124.7	30.5	10.7	2.1	71.4	1,163	52.9	1,350
50	39.3	208.9	123.7	29.2	10.3	2.1	69.4	1,130	52.1	1,332
WIDOWS AND DIVORCED WOMEN										
1931	—	121.9	107.0	36.5	14.1	2.2	9.8	961	11.9	824
38	—	197.1	131.2	50.1	14.7	2.5	10.2	1,000	10.2	1,000
39	—	191.8	144.3	56.1	16.0	2.4	10.8	1,059	10.0	1,080
40	—	190.0	158.8	62.1	17.4	2.6	11.3	1,108	9.6	1,177
41	—	151.0	155.0	61.0	18.6	2.7	11.4	1,118	9.7	1,175
42	—	261.8	162.5	60.5	18.5	2.6	11.4	1,118	9.5	1,200
43	—	175.0	151.2	60.5	18.9	2.5	11.3	1,108	9.8	1,153
44	—	206.7	147.0	60.4	19.0	2.5	11.9	1,167	10.4	1,144
45	—	241.4	187.0	71.0	21.9	2.6	15.1	1,480	11.1	1,360
46	—	326.4	225.9	76.0	23.9	3.0	19.2	1,882	12.3	1,561
47	—	475.3	324.5	91.0	25.5	3.8	23.6	2,314	12.0	1,967
48	—	491.3	295.3	93.0	27.6	3.0	22.7	2,225	11.8	1,924
49	—	343.3	243.4	85.2	27.0	2.9	19.5	1,912	11.6	1,681
50	—	336.8	229.3	83.6	27.2	2.9	18.1	1,775	11.1	1,631

provisional adjustments, as described on page 12. They are shown in Table IV on page 13.

To a greater or lesser extent the fluctuations noted in the crude rate shown in Diagram A are reflected in the age and condition rates shown in Table XII, namely the initial rise to a peak in 1940, followed by a fall and a rise to a second peak at the end of the war and the immediate post-war years, with a tendency to fall slightly thereafter. Marriages postponed and later made good, however, may appear in an older age group than would have been the case had there been no such postponement and too detailed an examination of individual ages may lead to wrong conclusions. To avoid this difficulty, the all ages comparisons of columns (9) and (11) of Table XII will first be considered and, in order to minimise the abnormal fluctuations of the annual rates, the average for the period 1939-1949 will be taken as a whole as follows:—

Period	Bachelors	Widowers and Divorced Men	Spinsters	Widows and Divorced Women
Crude Comparison of column (9)—Annual Averages				
1931	864	942	840	961
1938	1,000	1,000	1,000	1,000
1939-49 ..	1,103	1,299	1,131	1,499
1950	1,043	1,528	1,130	1,775
Age Standardised Comparison of column (11)—Annual Averages				
1931	862	884	768	824
1938	1,000	1,000	1,000	1,000
1939-49 ..	1,132	1,305	1,235	1,402
1950	1,078	1,485	1,332	1,631

The crude comparisons in the upper section of the above statement show that for bachelors the 1939-1949 average rate was 10.3 per cent. and for spinsters it was 13.1 per cent. above the 1938 rate, while in 1950 the bachelor rate declined to 4.3 per cent. above 1938 and that of spinsters was practically constant at 13.0. In the widowed and divorced section the excesses over 1938 were much greater for both men and women, the former being 29.9 and 52.8 per cent. above 1938 in 1939-1949 and 1950 respectively and the latter 49.9 and 77.5 per cent. above 1938 in the same periods. These crude comparisons, however, take no account of the changes in the age structure of the non-married population which have been taking place during the period under review and a comparison freed from this defect is provided in the lower section of the statement by the method of standardisation described in the headings to columns (10) and (11) of Table XII.

The high marriage rates of the recent years have depleted the numbers of young bachelors and spinsters in the population and the application of the 1938 age rates to this relatively smaller population will reduce the expected marriage rates at all ages of column (10) with the consequent increase in the ratio of the crude to the expected rates. The effect of standardisation is to increase the crude excess over 1938 from 10.3 to 13.2 per cent. in 1939-1949 and from 4.3 to 7.8 per cent. in 1950 in the case of bachelors. For spinsters the effect is much more substantial, crude excesses over 1938 of 13.1 and 13.0 per cent. in 1939-1949 and 1950 respectively being increased to 23.5 and 33.2 per cent. respectively. Some of this difference between the bachelor and spinster increases after standardisation is attributable to a change in sex ratios which has been taking place during the past thirty years, from an excess of females over males in the younger age groups of the non-married population to a deficiency. Attention was drawn to this important fact in the Civil Text Volume for 1940-1945, pages 38-40, and it is further discussed in the present volume on pages 40-42.

The comparable remarriage rates of the widowed and divorced have, in recent years, been influenced substantially by the quadrupling of the annual incidence of divorce. Although the number of persons widowed each year exceeds those divorced by a handsome margin, the age structures of these two groups are so different that the divorced are tending to become numerically superior at the younger ages and thus, at these ages, to have a greater influence on the remarriage rates of the widowed and divorced, considered as a combined group. Further, since remarriage rates of the divorced are much higher than those of the widowed, this change of weighting leads to an artificial inflation of remarriage rates during the period under review, that is to say current remarriage rates are not strictly comparable with the past but are setting up a new datum against which future experience may properly be measured. In any event remarriage can at least only replace a marriage which has been broken by death or divorce and more remarriages have been necessary since the war to perform such replacement, or in practice partial replacement, in the face of the much higher divorce rates which have been holding. It is against this background that remarriage rates must be examined in the period under review.

It may be seen from the summary statement on page 30 that, for widowers and divorced men, the crude remarriage rate for 1939-1949 was, on average, 29.9 per cent. above that of 1938 and by 1950 this excess had risen to 52.8 per cent. The similar standardised excesses were 30.5 per cent. and 48.5 per cent. respectively. For widows and divorced women the crude remarriage rates for 1939-1949 and 1950 were 49.9 per cent. and 77.5 per cent. above that for 1938, showing substantially greater excesses than the male rates. Owing to the release into the unmarried population of relatively young divorced women, standardisation somewhat reduces these excesses, namely to 40.2 per cent. and 63.1 per cent. respectively, but these still show a substantial superiority over their male counterparts.

The marriage rates at the various age groups for each marital condition shown in Table XIII are expressed in the form of percentages of the corresponding

Table XIII.—Ratio of Marriage Rates for Bachelors, Widowers and Divorced Men, Spinsters and Widows and Divorced Women, to those of 1938 taken as 100, by age, 1931, 1939-1945 and 1946 to 1950, England and Wales.

15-	20-	25-	35-	45-	55 and over	All Ages*	Period	15-	20-†	25-	35-	45-	55 and over	All Ages*	
BACHELORS								WIDOWERS AND DIVORCED MEN							
100	83	88	87	88	115	86	1931	—	—	85	87	85	94	88	
100	100	100	100	100	100	100	1938	—	—	100	100	100	100	100	
216	131	97	111	115	104	113	1939-45	—	—	107	113	118	106	110	
178	127	102	102	110	108	113	1946-50	—	—	230	173	157	118	163	
184	117	107	113	114	115	113	1946	—	—	195	162	152	121	151	
178	124	111	110	113	110	117	1947	—	—	308	202	163	117	184	
172	130	105	103	111	112	115	1948	—	—	249	179	165	121	173	
181	132	97	94	105	102	110	1949	—	—	207	165	157	115	156	
175	131	92	91	105	102	108	1950	—	—	189	159	150	114	149	
SPINSTERS								WIDOWS AND DIVORCED WOMEN							
75	72	82	97	91	110	77	1931	—	62	82	73	96	88	82	
100	100	100	100	100	100	100	1938	—	100	100	100	100	100	100	
160	124	96	124	112	95	119	1939-45	—	103	120	123	127	104	118	
168	139	107	144	128	109	132	1946-50	—	200	201	171	179	117	175	
150	128	106	150	137	115	124	1946	—	166	172	152	163	120	156	
162	139	110	149	130	110	133	1947	—	241	247	182	173	112	197	
174	144	110	148	131	110	136	1948	—	249	225	186	188	120	192	
179	143	106	139	124	105	135	1949	—	174	186	170	184	116	168	
174	141	105	133	120	105	133	1950	—	171	175	167	185	116	163	

* Age Standardised.

† Based on small numbers (see Text).

1938 rates for 1931, for the averages of 1939-1945, and 1946-1950, and for each individual year from 1946 to 1950.

The greatest increases for bachelors and spinsters relative to 1938 are in the age-group 15-19. The rates in this group are small for bachelors being on average 6.4 per 1,000 during 1939-1950 compared with 3.2 in 1938 but for spinsters they are several times as high, averaging 36.9 per 1,000 in 1939-1950 against 22.6 in 1938. The marriage rate for bachelors under 20 years of age has thus doubled itself and that for spinsters of the same age has increased by 63 per cent. over the 1938 level. Some of this increase may be due to advancing the date of marriage owing to war conditions but the fact that high rates have persisted during 1946-1950 suggests a greater tendency for minors of both sexes to marry than was the case fifteen to twenty years ago. The marriages of minors are considered in detail on pages 33-34.

Table XIV.—Bachelor and Spinster Marriage Rates for each age-group, related to the age-standardised all ages rate for the same period, taken as 100, 1938 to 1950, England and Wales.

Period	Age at Marriage						All Ages*
	15-19	20-24	25-34	35-44	45-54	55 and over	
	Bachelors						
1938	5	134	248	88	29	7	100
1939-45	9	156	212	87	29	7	100
1946-50	8	151	225	79	28	7	100
	Spinsters						
1938	37	241	192	36	14	3	100
1939-45	49	250	156	37	13	3	100
1946-50	47	254	156	39	14	3	100

Some light is thrown on the change which has occurred in the age at marriage by a comparison between the periods 1938, 1939-1945 and 1946-1950 of bachelor and spinster marriage rates for each age group, related to the age-standardised all-ages rate for the period, taken as 100. From such a comparison in Table XIV, it may be seen that in 1939-1945 compared with 1938, for both bachelors and spinsters, there was a shift from marrying at age 25-34 to the two younger groups. But comparing the period 1946-1950 with 1939-1945 some recession is seen from age groups under 25 to the group 25-34 for bachelors, and from 15-19 to 20-24 for spinsters—age groups over 35 may be disregarded since the numbers involved at these higher ages are too few to be significant. This recession is not entirely unexpected since the period 1939-1945 presumably contained a proportion of advanced marriages, celebrated therefore at a younger age than intended, whilst conversely 1946-1950 contained some postponed marriages celebrated at older ages. But it is significant that the greater recession has been suffered by the male section, another demonstration of the effect of the changing sex ratio to which attention has already been drawn.

It may be seen from Table XIII that, taking all ages together and standardising the rates for changes in the age constitution of the population, the bachelor's rate was, on average in 1939-1945 and also in 1946-1950, 13 per cent. above that of 1938, whilst the spinster's rate was 19 per cent. and 32 per cent. respectively above that of 1938 in the same two periods.

Attention has already been drawn to the greater influence on remarriage rates which the divorced have had since the war, leading to a substantial rise,

* Age standardised.

particularly at the younger ages. It will be seen from Table XIII that the increase since 1938 reached its peak at each age-group except the oldest, where the rates will still be predominantly those of the widowed, in 1947 or 1948 following the large number of divorces granted in 1947.

For widowed and divorced men aged 25-34 the rate of remarriage in 1947 was three times as high as in 1938 and for the period 1946-1950 was more than twice the 1938 level. For widowed and divorced women of the same age the rate in 1947 was 2½ times that of 1938 and in 1946-1950 it was twice as high as in 1938. At the next two age-groups, 35-44 and 45-54, the increases over 1938 for both men and women, though not so great as at the younger ages, were still very substantial. At 55 years and over the increases over 1938 are very much smaller than at the younger ages but were greater in the post-war period than in 1939-1945. The remarriage of divorced persons would not greatly influence this age-group and it is probable that the increase is largely that of the widowed. The remarriage of divorced persons is discussed in detail on pages 67-72.

The rates for widowed and divorced males at 20-24 years of age have been omitted from Table XIII as the numbers on which they are based are too small to yield reliable comparisons. For females the ratios to 1938 have been included in the table, to give a general indication of the changes in the incidence of remarriage of young widowed or divorced women, but with some reserve as the populations on which they are based, whilst larger than the corresponding male populations, are nevertheless small, and are therefore subject to a relatively wide margin of error. With this reservation in mind it is seen that they are of the same character as those of the next higher age-group with their peak in 1947 and 1948 and an average excess in 1946-1950 of 100 per cent. over the 1938 rate.

Marriages of Minors

Of the total marriages registered during the five years 1946-1950 those of 102,000 males and 438,239 females related to minors, equal to an annual average of 20,400 males and 87,648 females; the corresponding annual averages for the six years 1940-1945 was 30,075 males and 96,390 females. The usual excess of females marrying under 21 is repeated in 1946-1950 when females outnumbered males by 4.3 to 1 compared with 4.9 and 4.4 to 1 in 1938 and 1939 respectively. During the war the increase in the marriage of male minors reduced the ratio of females to males to 3.2 to 1. The bridegroom was a minor in 5.3 per cent. of all marriages in 1946-1950, a considerable decline from the high proportion of 8.1 per cent. reached during 1940-1945 but still well above the 1938 figure of 3.4 per cent. The corresponding proportions for brides were 22.9 per cent. in 1946-1950 compared with 26.0 and 16.0 per cent. in 1940-1945 and 1938 respectively. The remarkable rise in the proportions during 1940-1945 has not been maintained, more especially in the case of males. It is not surprising that there has been some recession from the high proportions reached during the war but it is worthy of note that in 1949 and 1950 both sexes showed increased proportions compared with 1947 and 1948. The high proportion of marriages of minors recorded during the war may be associated with the abnormal conditions of the time and their subsequent decrease with the passing of those conditions, but the general increase since 1938 is probably associated with the changing sex ratios in the marriageable population referred to on pages 40-42, and the depletion of marriageable partners in the age groups over 21. Both the proportions and rates for each sex are shown for selected periods and calendar years in Table XV.

Columns (6) and (7) of Table XV show that compared with 1938 the rates for males and females in 1946-1950 increased by 97 and 84 per cent. respectively. These are much greater increases than those associated with adult ages during the same period.

Table XV.—Marriages of Minors. Proportions to all Marriages, Marriage Rates, and the Ratio of these Rates to that for 1938. 1921, 1931, 1938, 1939, 1940–1945 and 1946 to 1950, England and Wales.

Year	Marriages of Minors per 1,000 marriages at all ages		Marriage rates per 1,000 non-married population aged 15–20		Ratios of marriage rates in Cols. (4) and (5) to corresponding rate in 1938 taken as 100	
	Males	Females	Males	Females	Males	Females
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1921	48.2	149.2	7.7	23.4	128	77
1931	43.5	158.5	6.7	24.8	112	81
1938	33.6	163.8	6.0	30.5	100	100
1939	44.5	197.0	9.3	43.8	155	144
1940–1945	81.1	259.8	16.1	55.1	268	181
1946	55.1	213.3	11.9	50.2	198	165
1947	50.3	215.3	11.6	54.4	193	178
1948	50.4	227.6	11.6	58.0	193	190
1949	53.8	241.7	11.9	59.2	198	194
1950	56.9	247.2	12.2	58.5	203	192
1946–1950	53.2	228.6	11.8	56.1	197	184

Table J of Part II shows the ages at marriage of husbands and wives in combination. From this table it appears that, of 20,391 males under 21 who married in 1950, about 74 per cent. married girls under 21, 23 per cent. married women aged 21–24 and only 3 per cent. married women 25 years of age or older. Female minors, on the other hand, for the most part married men of adult age. The percentage marrying husbands also under 21 was only 17, while 57 per cent. married men in the 21–24 age-group, 22 per cent. married men aged 25–29 and in only 4 per cent. of the marriages of female minors was the husband 30 years of age or older. Very similar proportions were also recorded in 1938.

Marriage Incidence at Reproductive Ages

With the widespread interest now shown in population development and trend, a special interest will attach to the behaviour and effect of the marriage rate in relation to its influence on fertility. The Population (Statistics) Act of 1938 made provision whereby the births of all children after 30th June, 1938, could be related to the ages and dates of marriage of their mothers. In the Text of the first Review dealing with the new records, that for the years 1938 and 1939, the occasion was taken briefly to review the nature of the marriage influence and the changes that had taken place prior to 1939, both in the female marriage rates and in the proportion of married females in the community, at the several parts of their reproductive age field. In that Text, the basic data, comprising the numbers of married and non-married women between the ages of 15 and 49, the proportions married, the numbers of women marrying and their relation to the non-married class, were assembled in the form of individual years' records back to 1911, together with earlier records at decennial census periods back to 1851, the first census year at which the marital conditions of the population were distinguished. In Part II of the Text for 1940–1945 these records for females were continued up to the end of 1945 and at the same time

similar records were added for males, in decennial form between 1851 and 1931 and thereafter in individual years until 1945. In the present Text, records for the years 1946 to 1950 are added for both sexes at Appendix II on page 181.

A warning was advanced in the previous commentary that the populations at risk, from which the proportions and rates necessary to a study of the course of marriage intensity had been calculated, had been based on estimates having no factual count of the population in recent years to check and rectify them, and therefore that the possibility of error in them could scarcely be disregarded. The full results of the 1951 Census are not yet available, so that a complete check of the estimates has still to be made. A preliminary investigation has been made by comparing estimates advanced year by year to 1951 with the tabulations of the 1 per cent. Sample taken from the Census, and notwithstanding the element of doubt attached to the Sample figures due to sampling errors, it has been found possible to make provisional adjustments to the estimates for 1946 to 1950 based on this comparison, as described on page 12. Populations containing these adjustments, shown in Table IV on page 13 have been employed in the calculation of rates in the present text and it is hoped that by this means gross errors, such as would destroy the balance of the main perspective, have been avoided.

Marriage Rates.—It has been customary in the past to base the main discussion of the marriage trend at the reproductive ages on all marriages, whether first or re-marriages, and an extension of these rates to current years is given in Table XVI.

Table XVI.—Women marrying per 1,000 Non-Married Women at each Age, 1911, 1932, 1938, 1939–1945, 1946 to 1950, England and Wales.

Year	Age							Aggregates	
	15–19	20–24	25–29	30–34	35–39	40–44	45–49	20–39	15–49
1911	11.2	95.9	109.8	62.6	35.5	22.0	14.8	86.9	54.0
1932	17.8	105.3	117.0	58.6	30.4	17.4	11.9	91.4	57.7
1938	22.6	148.1	154.4	69.9	37.9	21.5	13.8	119.0	71.2
1939–1945	36.2	183.2	150.7	73.0	39.4	25.9	17.0	132.7	81.8
1946	33.9	190.7	160.4	97.1	52.9	30.7	20.5	145.3	87.7
1947	36.8	207.7	177.7	107.2	59.6	32.3	20.6	159.3	94.5
1948	39.5	214.5	175.8	102.7	60.6	33.1	21.4	161.9	95.8
1949	40.5	213.0	157.6	100.0	57.0	31.5	21.0	157.0	92.8
1950	39.3	209.7	166.8	89.5	54.9	30.8	20.1	154.7	90.5
1946–1950	38.0	207.1	167.7	99.3	57.0	31.7	20.7	155.6	92.3

The aspect of marriage at the reproductive ages which is of particular interest is the establishment of additional marriages, that is to say first marriages, since remarriages do no more than cancel the effect of earlier disruptive forces, whether mortality or divorce. The justification of past practice in which remarriages were included, is that not only the changes from year to year, but even the absolute levels of marriage rates for the whole non-married female population were, at the reproductive ages, only negligibly different from those for spinsters alone, so that no disadvantage of any moment arose on this account. Furthermore there were considerable advantages on other counts, notably the less stringent requirements imposed on the data and thus the ability to obtain comparable rates for more foreign countries, and for past periods in this country.

For the present at least the position has changed; temporarily on account of the remarriages of war widows and women divorced under the abnormal conditions now obtaining; but possibly to some extent permanently if divorces eventually stabilize at a sufficiently high level, as well they may. (A discussion of the divorce aspects is given on pages 56-57.)

Table XVII.—Remarriages of Widows and Divorced Women by Age as Percentages of All Marriages at the same age, 1938, 1946-1950, England and Wales.

Year	Age-groups						Aggregates		
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	20-39	15-49
	Re-marriages of Widows								
1938	0.0	0.2	1.2	5.9	17.6	32.6	45.5	2.0	3.1
1946	0.1	1.5	7.5	15.0	18.8	27.9	40.4	5.6	6.2
1947	0.0	0.8	6.2	13.4	18.3	25.1	38.8	4.8	5.4
1948	0.0	0.5	4.8	12.7	18.0	25.1	38.6	3.9	4.7
1949	0.0	0.3	3.5	11.7	18.7	24.9	37.8	3.2	4.2
1950	0.0	0.2	2.8	10.4	18.4	25.7	37.0	2.9	3.9
1946-1950	0.0	0.7	5.0	12.6	18.4	25.7	38.5	4.1	4.9
	Re-marriages of Divorced Women								
1938	0.0	0.1	0.8	3.5	6.2	6.7	7.0	0.9	1.0
1946	0.0	0.4	3.7	10.6	15.0	15.4	13.0	3.2	3.4
1947	0.0	1.0	9.5	19.9	23.9	21.8	16.7	6.8	6.5
1948	0.0	1.2	10.3	21.6	25.7	23.6	19.0	7.1	6.9
1949	0.0	0.9	9.4	21.4	25.1	24.7	19.9	6.4	6.3
1950	0.0	0.8	8.9	21.3	26.2	25.4	20.3	6.2	6.1
1946-1950	0.0	0.9	8.4	19.0	23.2	22.2	17.8	5.9	5.8

The proportion of all marriages attributable to re-marriage are given in Table XVII for 1938 and 1946 to 1950 distinguishing re-marriages of widows from those of divorced women. The extent of re-marriage of widows in any period will depend in the first place on the number of widows in the population, and this, in its turn, depends upon the mortality amongst married men. It is therefore clear that the substantial rise from 1938 to 1946 in the proportion of widows amongst young brides, shown in Table XVII, was caused by the male war casualties in the immediately preceding period. The fall in these proportions subsequently recorded is an indication that the number of young war widows is being depleted by re-marriage, and the continued decay of these proportions may be expected. The normal improvement in male mortality, by reducing the incidence of widowhood at the reproductive ages, will no doubt extend this fall; at ages of 40 and over the incidence of war widowhoods has apparently been insufficient to prevent the proportion of widow brides falling below the 1938 level even in 1946, and in the period 1947 to 1950 a still further decline may be seen. It seems likely therefore, that as far as widow brides are concerned, such abnormality has passed and that, at the reproductive ages, a continuing decline will take proportions below those of 1938.

Divorced women who re-married during the period 1946-1950 formed a much higher proportion of all marriages than they did in 1938 at every age-group from 20 to 49. This increase in the proportion of the divorced was substantial at each age in 1946 and continued to increase each year at ages between 20 and 34 until 1948 after which there was some slight falling away but not to any great

extent. At the older ages, 35-49, the proportion continued to increase up to 1950. This was to be expected since an abnormally large number of divorces were granted in the period. The proportion of divorced women re-marrying has exceeded that of widows at all ages from 20 to 39 each year from 1947 to 1950 and the excess of widows has been considerably reduced at ages over 39. (Re-marriage of divorced persons is discussed in detail on pages 67-72).

The mere fact that the incidence of re-marriage was higher in 1946 to 1950 than previously does not by itself establish the need to break with custom in these years in the study of marriage at the reproductive ages. In Table XVIII are set out the marriage rates in 1946 to 1950, relative to 1938, for all brides and for spinster brides, and the distortion which would be introduced by treating these as synonymous is shown in the bottom section of the table. This distortion is seen, in each year, to be substantial at ages over 30, being mostly 20 per cent. or more, frequently approaching, and in one case exceeding 30 per

Table XVIII.—Ratio of Marriage Rates in 1939-1945 and 1946 to 1950 to those of 1938, taken as 100, for All Brides and for Spinster Brides, by age, England and Wales.

Year	Age						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
	All Brides						
1946	150	129	104	139	140	143	149
1947	163	140	115	153	157	150	149
1948	175	145	114	147	160	154	155
1949	179	144	102	143	150	147	152
1950	174	142	108	128	145	143	146
	Spinster Brides						
1946	150	128	98	126	128	136	136
1947	162	139	102	127	128	136	128
1948	174	144	103	121	129	135	126
1949	179	143	95	122	122	127	124
1950	174	141	101	108	117	121	120
	Excess of Ratio for All Brides over that for Spinster Brides						
1946	0	1	6	13	12	7	13
1947	1	1	13	26	29	14	21
1948	1	1	11	26	31	19	29
1949	0	1	7	21	28	20	28
1950	0	1	7	20	28	22	26
	ANNUAL AVERAGES						
	All Brides						
1939-45	160	124	98	104	104	120	123
1946-50	168	140	109	142	150	147	150
	Spinsters						
1939-45	160	124	97	101	102	115	113
1946-50	168	139	100	121	125	131	126
	Excess of All Brides over Spinsters						
1939-45	0	0	1	3	2	5	10
1946-50	0	1	9	21	25	16	24

cent. Such distortion in assessing a marginal characteristic such as the trend in marriage intensity is most undesirable. Accordingly at Table XIX are set out "First Marriage" rates to parallel the "All Marriage" rates of Table XVI and the left hand side of Diagram B shows "All Marriage" rates for 1911 to 1950 whilst the right hand side shows "First Marriage" rates for 1938 to 1950. Owing to lack of data, "First Marriage" rates could not be extended by single calendar years back to 1911, but an examination of the years common to the left and right hand sides of Diagram B will show that no serious misrepresentation is introduced by grafting these two sections together to obtain a continuous picture on the one hand and a comparison between the two world wars on the other.

Table XIX.—First Marriages per 1,000 Spinsters, by Age, 1938 to 1950, England and Wales.

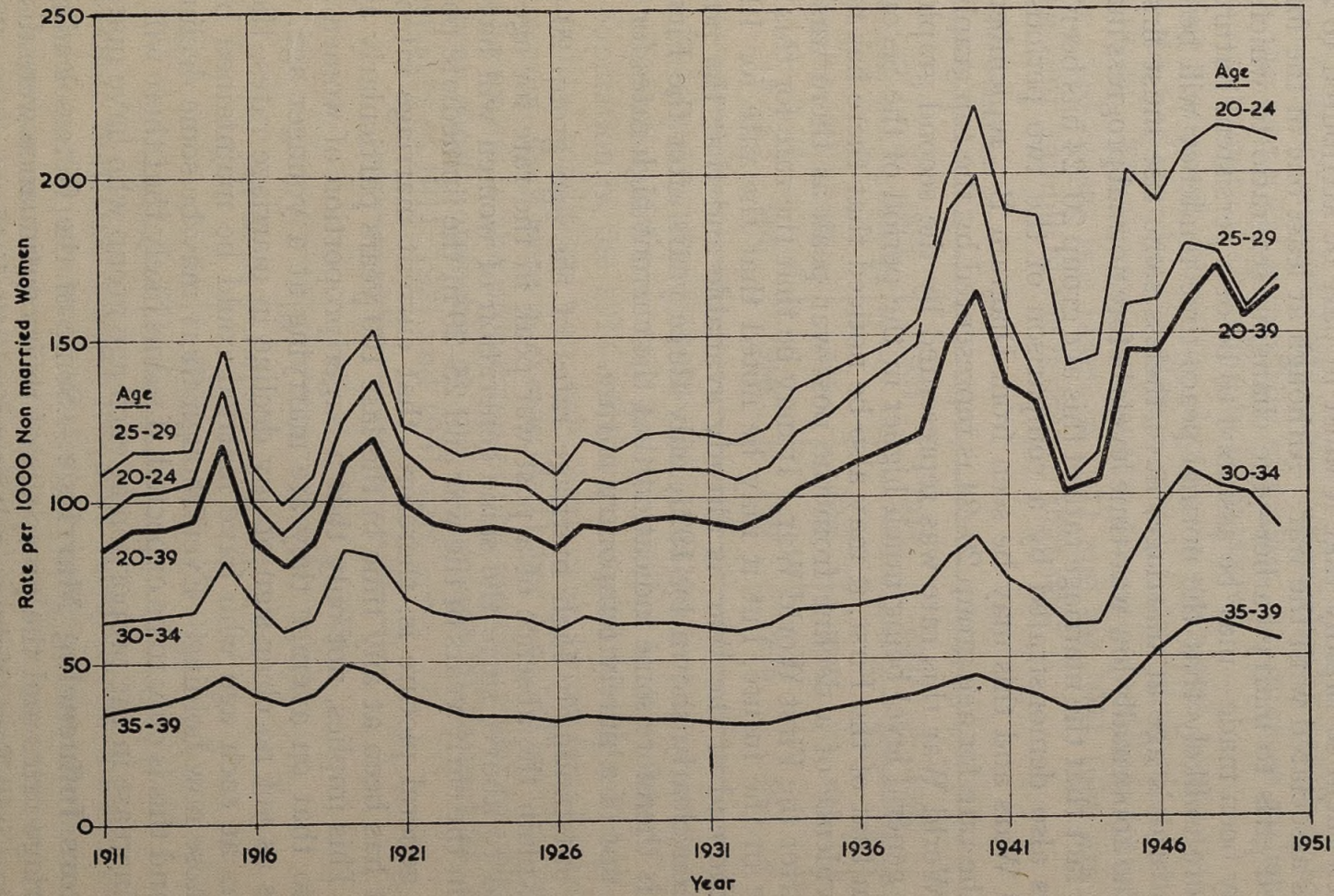
Year	Age							Aggregates	
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	20-39	15-49
1938	22.6	147.9	154.0	67.2	33.1	16.8	10.6	119.7	72.7
1939	32.0	197.6	188.7	78.4	37.2	18.6	11.5	150.8	90.3
1940	38.4	222.8	198.8	84.7	39.1	20.9	12.0	164.8	100.4
1941	36.3	188.9	155.1	70.3	35.1	20.6	12.1	136.5	85.0
1942	38.9	187.4	133.2	63.0	33.7	20.2	12.3	129.8	82.3
1943	34.2	141.2	101.7	54.0	28.1	17.6	11.7	100.6	65.6
1944	33.1	143.1	109.9	53.5	27.9	17.1	11.3	104.3	67.1
1945	40.0	200.6	155.6	71.4	35.4	20.2	13.0	144.4	89.9
1939-45	36.1	183.1	149.0	67.9	33.8	19.3	12.0	133.0	82.9
1946	33.9	189.0	150.7	84.5	42.3	22.9	14.4	142.5	86.4
1947	36.7	205.5	157.7	85.1	42.5	22.8	13.6	152.1	91.1
1948	39.4	212.5	158.1	81.3	42.7	22.6	13.4	156.0	92.9
1949	40.5	212.0	145.6	81.8	40.4	21.3	13.1	153.9	91.3
1950	39.3	208.9	156.0	72.9	38.7	20.3	12.7	152.5	89.4
1946-50	38.0	205.6	153.6	81.1	41.3	22.0	13.4	151.4	90.2

Before considering particularly the period 1946 to 1950, the opportunity may be taken to draw attention again to the salient features of the past, which the graphical representation of Diagram B demonstrates especially clearly. The rates at the younger ages and for the aggregate 20-39 were slightly higher in 1932 than in 1911, but in 1932—seven years before the Second World War—the rate of increase became faster, and had shown no sign of slackening when the Second World War interposed. The rise in marriage rates is thus by no means a temporary phenomenon purely associated with war conditions, though the tempo certainly was raised by the war.

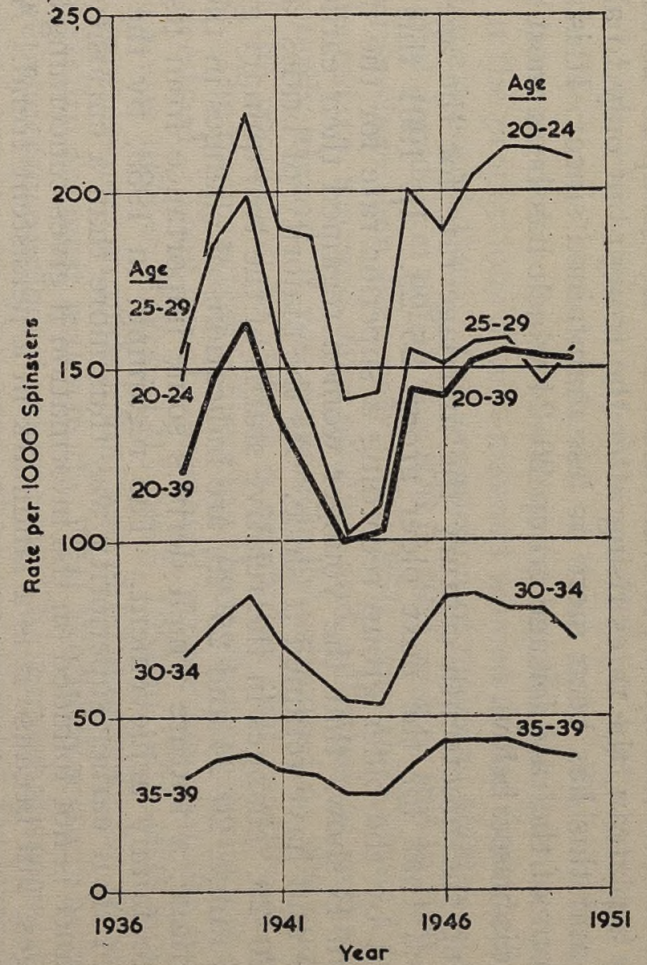
Diagram B also shows the fluctuations in the marriage rates in the periods around the two World Wars. The rates for each age group in the First World War may be seen to follow broadly the same course as that for All Ages, examined on pages 26-28. Essentially the pattern consists of two peaks with a trough between, the rates ultimately stabilising in 1921 or so at values not very different from those holding before the war. The fluctuations in the Second World War may be seen to have some points in common with those of the earlier war, but there are some marked differences. There is some evidence of the two peaks and a trough between as before and, at ages over 30, rates seem to

DIAGRAM B.—Marriage Rates of Women, by Age, 1911 to 1950, England and Wales. (See Text)

ALL MARRIAGES



FIRST MARRIAGES



be stabilising at about the pre-war value. For age group 25-29 the second peak is more a plateau, the rates rising after the trough but only to about the 1938 value, and this has been more or less maintained since. It is, however, the behaviour of the rate for age group 20-24 which has been most startling, and this is discussed below.

During the nineteenth century the marriage rate for the age group 20-24 exceeded that for the next older group 25-29. In 1901 this position was reversed by the older group recording a superior rate for the first time, and Diagram B shows that the younger women regained their earlier superiority in 1939 and have retained it since. As the majority of brides' ages lie in the range 20-29, changes in the relative status of the two quinary groups making up this range, 20-24 and 25-29, are indications of changes in the average age at marriage, a feature which derives some importance from its influence on ultimate family achievement. The regaining, in 1939, by the younger age group of their earlier superiority was thus more than a curiosity; though its importance is not founded on the information it gives concerning a single year's marriages, but because it is a landmark in a persistent trend. After 1939 the younger age group increased its lead over the older, and a wide gap opened up between them so rapidly that it must in part be attributed to abnormal conditions associated with the war. Although at least one of the forces which has enabled girls to marry earlier—the changing sex-ratio to which reference has already been made—may be assumed to be of a persistent nature, and it is not therefore unlikely that the normal peace-time tendency will be for a lowering of the bride's age at marriage, nevertheless some rise must first be expected from the abnormally low war-time levels before normal progress may be resumed.

The fact that the marriage rate of this age group 20-24 has been outstandingly high is also demonstrated by a comparison of the two periods covering the World Wars and this may be seen from Diagram B; remembering that from 1939 the rate for age group 20-24 is represented by the top graph, whilst in the First World War this rate was represented by the second graph. In addition to the general level being much higher in the period of the Second World War than in that of the First, it may also be noticed that there has not as yet been any evidence of a decline from the post-war peak as there was from 1920 to 1924 after the First World War. It may be that the rate for this age group will decline in the future, but it may be noted that the rate for 1950, five years after the end of the War, is already available and that the post-war decline had been clearly shown by 1921, only three years after the First World War. There is therefore some indication that the current high rates for age group 20-24 are not of a purely temporary nature.

The outstandingly high marriage rates of the age group 20-24 since 1939 may explain the absence of a post-war peak in the rate for age group 25-29, referred to above, since the same generation of women will have been of age 20-24 in the early years of the war and 25-29 in the immediate post-war period.

The general picture is, therefore, that current marriage intensity is higher than it has been at any time in the last 100 years particularly at the younger ages. This implies, not only that a larger proportion of women are marrying, but also that on average they are marrying at a younger age. Furthermore there is as yet no clear sign of any decline in marriage rates, though the proportions at each age who have married could be maintained by lower rates than those now holding. Even though there may be some decline in marriage rates, and this is only to be expected, it seems likely that there will be a tendency for an increase in the proportion at each age group who have married.

Factors Influencing Marriage.—Some of the factors leading to the rise in marriage rates and the prospects of their continuance were discussed in the previous Civil Text Volume relating to 1940-1945 on pages 38-40. It was

shown that, while the ratio of males to females at ages 15-44 in the total population had been rising continuously since 1921, it had risen still more in the non-married section of the population at these ages. This increase in the proportion of non-married males to non-married females has been accompanied by decreases in the proportions of non-married women at the reproductive ages in the total female population. The proportion of males to 1000 females aged 15-44 in the total population which was 876 in 1921 rose to 915 in 1931 and has continued to rise since then each year. In 1951, from the Census 1 per cent. Sample, projected to the mid-year position and adjusted to include Armed Forces temporarily abroad, it was provisionally estimated as 989 and from a projection of the population to 1961 it is estimated that by then it will have risen to 1008. The main factors influencing these changes in the sex ratio are generally understood. They are the increased proportion of males to females at birth, which was 1038 to 1000 in 1911-1915, 1051 in 1931-1935 and 1061 in 1946-1950; improvement in male infant and child mortality, no recurrence of the heavy mortality amongst males in the First World War and the reduction of the male preponderance amongst emigrants. The somewhat special migration of the war period appears to have more than compensated for losses of males during the war, there is no sign of the growth of any predominantly male emigration, and further improvements in the nation's health are likely to favour an increase in the numerical superiority of males. An increase rather than a decrease in this unbalance is therefore to be expected.

The following statement shows the changes in sex ratios in the total population and in the non-married population which have taken place since 1871 at age group 15-44. The figures are based on census populations from 1871 to 1931 inclusive; no census was taken in 1941 and for 1951 they are derived from a one per cent. sample of the census of that year.

Males per 1,000 Females :—

	1871	1901	1911	1921	1931	1951
Total population, 15-44	927	923	926	876	915	965
Non-married „ 15-44	967	950	959	875	945	1,106

During the sixty years 1871 to 1931 the sex ratios in both the total and the non-married population did not vary greatly, except in 1921 where the losses to the male population in the 1914-1918 war are plainly evident, but by 1951 males of all marital conditions were only 3 per cent. below females and in the non-married section they were in excess by 11 per cent. This change from a deficiency to an excess in the proportion of non-married males to non-married females has been most noticeable at the age groups 20-24 and 25-34. The ratios at these ages in 1911, 1931 and 1951 were :—

	1911	1931	1951
Age 20-24	1,016	1,097	1,376
„ 25-34	968	960	1,349

At the ages where marriage is most frequent there is now an excess of non-married men of some 36 per cent. With this change in the sex ratios another important change has occurred in the proportion of non-married women in the total female population which is illustrated in the following table :—

Non-married Females per 1,000 total Females aged 15-19 and 20-44

	1871	1901	1911	1921	1931	1951
Age 15-19	968	984	988	983	982	956
„ 20-44	381	417	416	407	397	249

At the important age-group 20-44 the proportion of non-married women in the total remained more or less constant at about 40 per cent. from 1871 to 1931 but fell to 25 per cent. in 1951. The proportions in 1931 and 1951 are analysed by quinary age-groups as follows:—

	20-24	25-29	30-34	35-39	40-44
1931	743	413	267	245	251
1951	519	228	170	167	188

It will be seen that at every age-group the proportion of non-married women has fallen substantially. At age 20-24 only a little over one-half of the women at this age were unmarried in 1951, compared with nearly three-quarters in 1931, and at 25-29 less than a quarter, compared with 41 per cent. in 1931, were not married in 1951. At the youngest age-group, 15-19, the percentage unmarried has also decreased from 98.2 in 1931 to 95.6 per cent. in 1951.

Total Married Women of Reproductive Age.—So far as the marriage factor is concerned the fertility of the community is determined by the total number of married women of reproductive age in the population, that is by the survivors of women who married at any time during the preceding 35 years. New marriages will be continually replenishing, and death of either of the partners, or divorce, will be continually depleting, this number. The annual addition of new marriages in relation to the total married population represents only a small fraction, of the order of 6 per cent., so that changes in the marriage rates will be much diluted in their effect upon the corresponding changes in the total proportions of married women in the population. The proportions of married women are shown by quinary age-groups up to age 50 for selected years in Table XX.

Throughout the period covered by the table the proportions have increased at each age-group and these increases have been greatest at ages under 25. Comparing the average proportions for the period 1946-1950, with 1938, there was an excess of 61 per cent. at age 15-19, of 39 per cent. at age 20-24, after which much smaller excesses were recorded, ranging from 13 per cent. at 25-29 to 3 per cent. at 40-44. The increases recorded during the war years continued throughout the five years 1946-1950 with little sign of slackening; the proportions in 1950 being in excess of 1938 by 74 per cent. at age 15-19, 44 per cent. at 20-24 and from 19 per cent. at 25-29 to 4 per cent. at 40-44. The proportions rise with advancing age, very rapidly at first and then more slowly to a maximum between ages 35 and 40, after which they very slowly decline as new marriages are offset by widowhoods with a consequent decline at the later ages which, however, is not of great significance up to age 50.

The remarkable rise in the proportions at the younger ages and the much more modest increases at the older ages emphasise the facts that not only are more women marrying but that they are doing so at younger ages.

Table XX.—Married Women per 1,000 total Female Population at each Age and Ratio of proportion to that of 1938 taken as 100. England and Wales.

Year	Age						Aggregates		
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	20-39	15-49
Married Women per 1,000 total Female Population									
1911	12	242	558	711	752	755	729	552	502
1932	20	260	584	732	758	750	732	574	534
1938	23	328	643	733	771	768	736	623	566
1939-1945	37	403	705	774	778	779	752	667	605
1946	35	436	696	800	797	784	762	686	626
1947	33	445	714	802	807	785	763	697	635
1948	38	457	730	807	816	791	763	707	643
1949	41	467	736	823	822	795	768	716	651
1950	40	473	762	814	826	801	770	724	657
1946-1950	37	456	728	809	814	791	765	706	642
Ratio of proportion to that of 1938 taken as 100									
1911	52	74	87	97	98	98	99	89	89
1932	87	79	91	100	98	98	99	92	94
1938	100	100	100	100	100	100	100	100	100
1939-1945	161	123	110	106	101	101	102	107	107
1946	152	133	108	109	103	102	104	110	111
1947	143	136	111	109	105	102	104	112	112
1948	165	139	114	110	106	103	104	113	114
1949	178	142	114	112	107	104	104	115	115
1950	174	144	119	111	107	104	105	116	116
1946-1950	161	139	113	110	106	103	104	113	113

The last two columns of Table XX show the proportion of married women in the reproductive field 15-49 as a whole and in the more critical period 20-39, at which 90 per cent. of births occur. From the aspect of fertility the proportions represent the fraction of the reproductive years spent in the married state and subject therefore to legitimate fertility. From 1911 to 1932 this proportion rose slightly from 50.2 to 53.4 and more rapidly between 1932 and 1938 to 56.6 per cent. During the war years the increase was much greater reaching 62.2 per cent. in 1945 and an average for 1939-1945 as a whole of 60.5 per cent. The post-war years, 1946-1950, have recorded still further increases, with 65.7 in 1950 and an average of 64.2 for the whole period. In the more restricted age group 20-39, the proportion has risen from 55.2 per cent. in 1911 to 72.4 in 1950, with an average of 70.6 for the five post-war years compared with an average of 66.7 for 1939-1945.

The contrast between the proportions in the periods compared is somewhat distorted by the ageing of the population in the 15-49 group since 1911 which of itself would impart a tendency to increase the proportions, the weight having shifted from the younger to the older half of the reproductive age-field. To remove the effect of this ageing of the population, so as to isolate the marriage factor, the intensity index for the year can be expressed as the ratio of the actual number of married to the number which would have emerged as married if the populations in the several age-groups had been subject to a series of standard age-proportions of the married in those age-groups.

Marriage intensity indices standardised on 1911 proportions of married women at the successive quinary age-groups in the 15-49 field with the corresponding unstandardised figures are shown below :—

	1911	1932	1938	1939-1945	1946	1947	1948	1949	1950	1946-1950
Standardised ..	1.000	1.022	1.067	1.126	1.146	1.154	1.168	1.180	1.188	1.167.
Unstandardised	1.000	1.064	1.127	1.205	1.247	1.265	1.281	1.297	1.309	1.279

The correction for the ageing factor shows that the true increase in the marriage intensity of women aged 15-49 between 1911 and 1950 was 18.8 per cent. instead of the 30.9 per cent. suggested by the crude proportions, about 39 per cent. of the latter being due to the ageing of the population and quite distinct from the incidence of marriage itself. If comparison is restricted to the narrower age-field of 20-39 the effect of standardisation reduces the excess of 1950 over 1911 from 31 per cent. to 26.4 per cent., the ageing of the population in this more restricted group being less significant, only 15 per cent. of the increase in the proportion of married women being attributable to the ageing of the population. The fact that such a high degree of marriage has been maintained is significant and important. There is no sign of any recession in the proportions as yet, and provisional figures for 1951 indicate a further increase in the standardised index to 1.203. It would not be necessary for the high rates of new marriages to be maintained at the level recently experienced to achieve further increases in the proportion of married women in the population aged 15-49 but the rates experienced before the war would not be sufficient for this purpose and a rate somewhere between the two seems to be indicated.

Seasonal Incidence of Marriage

Table D of Part II, 1950 shows the numbers of marriages registered in England and Wales and the rates per 1,000 population in each quarter in serial form for decennial periods from 1841 and for each year 1940 to 1950. In the same volume the monthly incidence of marriages is shown for each year 1947 to 1950 in Table N.

Throughout the nineteenth century the highest marriage rates occurred consistently in the December quarter and the lowest in the March quarter. During the last 20 or 30 years, however, there has been a steady cyclical variation with the highest rates in the Summer and the lowest in the Winter quarters. The March quarter has generally been that of lowest marriage rates but its relative position to that of the June quarter has been affected in the years when Easter fell in the March quarter, the June quarter in those years being reduced while the March quarter increased.

Taking the average number of marriages in a quarter as 100 the following compares the quarterly incidence in years when Easter fell in the March or the June quarter.

Year	Easter in March Quarter					Year	Easter in June Quarter				
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year		1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year
1932	81	90	124	105	400	1938	58	113	129	100	400
1937	79	89	135	97	400	1946	81	105	114	100	400
1940	93	99	112	96	400	1947	75	109	119	97	400
1948	96	94	124	86	400	1949	87	102	122	89	400
						1950	97	90	128	85	400

In the years of a March Easter the June quarter average is consistently lower than when the festival occurred in April; but it is noteworthy that in 1950 the March quarter average exceeded that of the June quarter in spite of the fact that Easter occurred in April in that year.

Quarterly records, however, fail to reflect fully the concentration of marriages at the Christmas and Easter festivals as well as in the summer holiday months. Monthly figures for England and Wales have been tabulated from 1947 and are shown in Table N of Part II.

Table XXI shows the monthly daily average number of marriages registered in England and Wales and the ratio of the monthly daily average to the yearly daily average in each year 1947 to 1950 :—

Table XXI.—Comparison of Marriage Intensity by Calendar months, 1947 to 1950, England and Wales.

	Monthly Daily Average number of Marriages				Ratio of Monthly Daily Average to yearly daily average taken as 1,000			
	1947	1948	1949	1950	1947	1948	1949	1950
January ..	641	741	696	497	583	684	677	506
February ..	798	711	796	773	726	656	774	787
March ..	1,065	1,673*	1,223	1,608	969	1,543*	1,190	1,637
April ..	1,387	858	1,308	1,047	1,262	792	1,272	1,066
May ..	890	857	527	591	810	791	513	602
June ..	1,332	1,351	1,332	1,033	1,212	1,246	1,296	1,052
July ..	1,174	1,492	1,364	1,204	1,068	1,376	1,327	1,226
August ..	1,396	1,140	1,064	1,134	1,270	1,052	1,035	1,155
September ..	1,325	1,386	1,304	1,412	1,206	1,279	1,268	1,438
October ..	912	911	864	700	830	840	840	713
November ..	913	671	598	563	831	619	582	573
December ..	1,346	1,196	1,244	1,208	1,225	1,103	1,210	1,230
Year ..	1,099	1,084	1,028	982	1,000	1,000	1,000	1,000

The concentration of marriages in the summer months June to September is clearly shown in this table. August was the most popular of these four months in 1947, July in 1948 and 1949 and September in 1950. Over the four years as a whole September was about 30 per cent., July 25 per cent., June 20 per cent. and August 13 per cent. above the yearly average.

The Christmas holiday effect on the marriage incidence is shown by the December ratio which was on the average about 19 per cent. above the yearly figure. The Eastern concentration is apparent in the April ratio of 1947 and 1949 and in the March ratio of 1948 in which year Easter fell in March. This Easter concentration is not apparent, however, in 1950. In spite of the fact that Easter occurred in April in that year, the ratio for March was 63.7 per cent. above the yearly average, the largest excess shown in the table, whereas April was only in excess of the yearly average by 6.6 per cent. The Winter months of January, February and November show low daily averages, about 30 per cent. below the yearly figure, while May has tended to fall below January in 1949 and 1950 with ratios 49 and 40 per cent. respectively below the yearly average. During the four years 1947 to 1950 there has been a tendency for the monthly daily average divergence from the yearly daily average to increase. In 1947 the range of divergence was from - 41.7 per cent. in January to + 27.0 per cent. in August and in 1950 from - 49.4 in January to + 63.7 per cent. in March.

* Easter fell in March in 1948

The mean of the monthly deviations for each of the four years was 208, 268, 268 and 302 respectively.

Marriage Frequencies in different Sections of the Country

The numbers of marriages and the marriage rates in regions, counties and county boroughs for each year are published in Table F of the successive issues of Part II.

It has frequently been indicated in previous reports that the comparison of local marriage rates and their significance are discounted by the fact that the district in which the marriage was registered was often the district of residence of only one of the parties and sometimes of neither. The weakness would be less acute in comparisons between large sections of the country than between small local areas but it must have been aggravated during the war by the large numbers of temporary changes of residence involved in the ebb and flow of evacuation and other transfers of population which occurred even among areas as large as the geographical regions distinguished in the Statistical Reviews.

Table XXII.—Ratio of Marriage Rates in Geographical Regions of England and Wales to that of the whole country; 1936 to 1950.

Region	Ratio of Regional to National rate taken as 1,000										
	1936	1937	1938	1939	Average 1940-45	1946	1947	1948	1949	1950	Average 1946-50
England and Wales	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
South East	1,026	1,027	1,036	1,081	1,059	987	1,015	1,003	992	997	999
County of London	1,241	1,249	1,256	1,280	1,417	1,227	1,280	1,247	1,225	1,236	1,243
North I	954	935	955	876	1,027	1,070	1,022	1,034	1,051	1,053	1,046
North II	928	940	941	908	956	1,019	1,015	972	981	983	994
North III	1,020	1,021	1,003	970	997	1,041	1,028	1,034	1,046	1,030	1,036
North IV	988	982	963	918	974	1,020	1,016	1,007	1,017	1,009	1,014
Midland I	1,054	1,063	1,061	1,043	989	966	964	998	1,011	1,010	990
Midland II	993	1,007	1,005	975	980	989	995	1,017	1,013	1,021	1,007
East	944	936	936	991	968	988	977	962	957	965	970
South West	924	920	943	980	884	921	920	926	901	912	916
Wales I	961	955	950	920	997	1,022	989	1,012	1,018	999	1,008
Wales II	891	894	858	831	829	924	945	906	913	930	924
	Ranking of Ratio										
South East	2	2	2	1	1	8	4	6	7	7	6
North I	7	9	6	10	2	1	2	1	1	1	1
North II	9	7	9	9	9	5	5	8	8	8	7
North III	3	3	4	6	3	2	1	2	2	2	2
North IV	5	5	5	8	7	4	3	5	4	5	3
Midland I	1	1	1	2	5	9	9	7	6	4	8
Midland II	4	4	3	5	6	6	6	3	5	3	5
East	8	8	10	3	8	7	8	9	9	9	9
South West	10	10	8	4	10	11	11	10	11	11	11
Wales I	6	6	7	7	3	3	7	4	3	6	4
Wales II	11	11	11	11	11	10	10	11	10	10	10

Another difficulty arises from the fact that the number of marriages tabulated for local areas includes members of the Armed Forces, whereas the population of these areas relates to civilians only, thus overstating the marriage rates progressively throughout the war years and also to a diminishing extent in the post-war period. To avoid the comparability difficulty, the ratios of the

local rates to the national rate for each year are shown in the following regional summary. In this form the ratios are comparable over the war and post-war years and also with those of pre-war experience.

The attraction of London for marriage has always been reflected in an abnormally high number of marriages in relation to the population and in the years immediately preceding the war about 12.5 per cent. of the total marriages of the country were celebrated in London, giving it a marriage rate of some 25 per cent. in excess of that of the country as a whole. During the war the percentage of London marriages fell to 9.5 but the fall in population was much greater with the result of increasing the excess of its marriage rate, compared with the national rate, from 25 per cent. before the war to 42 per cent. for the years 1940-1945. During the post-war years the percentage of marriages celebrated in London has remained at slightly more than 9½ per cent. but the increase in the London population since the war has reduced the excess of the London rate over the national rate from the war-time average of 42 per cent. to 24 per cent., about the same as the pre-war level.

The disturbance of the population by evacuation during the war probably accounts for the decline in the ratios of the South West and Wales II regions from peace-time averages of about 94 per cent. and 87 per cent. respectively of the national rate to 88 and 83 per cent. during the war. These declines have been reversed in the post-war years and the South West practically recovered its pre-war ratio at 92 per cent. while the ratio for Wales II increased from the pre-war figure of 87 to 92.4 per cent. Each of these regions has always recorded low marriage rates compared with that of England and Wales as a whole and neither the war nor post-war years materially altered their position as the lowest in order compared with the other regions distinguished.

The rise in the ratios of North I region (Northumberland and Durham) and in Wales I (South Wales) which was a feature of the war-time period has still further increased during 1946 to 1950. Compared with the national rate that for North I region rose from a deficit of 7.0 per cent. in 1936-1939 to excesses of 2.7 and 4.6 per cent. in 1940-1945 and 1946-1950, while in Wales I a deficit of 5.3 per cent. in 1936-1939 rose to the small deficit of 0.3 per cent. in 1940-1945 and to an excess of 0.8 per cent. in 1946-1950. These increases probably reflect economic changes and other factors influencing marriage rates and the North I position now ranks higher than any other region (outside London), while Wales I holds fourth place compared with its pre-war level of seventh or eighth. There has been a definite fall in the ranking of the South Eastern Region (including London) from first or second place during the years 1936 to 1945 to sixth in the period 1946 to 1950. Midland I region, which in the years 1936-1939 had an excess of 5.5 per cent. above England and Wales, dropped to a deficit of about 1 per cent. during the war and for the period 1946-1950 as a whole. It showed, however, some slight improvement in 1949 and 1950, when it exceeded the national rate by about one per cent., but it still remains well below its pre-war level compared with other regions. The other Midland region, after a slight decline during the war, has regained its pre-war level of approximate equality with the national rate.

The rise in the national rate from 1936 to a peak in 1940, its fall to the low level of 1943 and 1944 and the secondary rise and fall at the end of the war and subsequent years have been common to all local areas, but, as shown by Table XXII, the changes in the regions have not been uniform. It is perhaps noteworthy that the range of the regional differences from the national rate has narrowed considerably during the period covered by Table XXII, the mean deviations from the national ratio being 54 in 1936-1939, 47 in 1940-1945 and 29 in 1946-1950.

Buildings in which Marriages may be Solemnized

At the end of each of the years 1946 to 1950, the numbers of churches or chapels of the Established Church and of the Church in Wales and of registered buildings of other religious denominations in which marriages could legally be solemnized were as follow :—

	1946	1947	1948	1949	1950
Number at end of Year					
Established Church and Church in Wales	16,744	16,772	16,792	16,800	16,827
All other Religious Denominations	22,843	22,991	23,145	23,289	23,421
Total	39,587	39,763	39,937	40,089	40,248

Number Added in Year

	1946	1947	1948	1949	1950
Established Church and Church in Wales	15	28	20	8	27
All other Religious Denominations	134	148	154	144	132
Total	149	176	174	152	159

Increase per cent. since 1921

	1946	1947	1948	1949	1950
Established Church and Church in Wales	3.6	3.8	3.9	4.0	4.1
All other Religious Denominations	26.2	27.0	27.8	28.6	29.4
Total	15.5	16.1	16.6	17.0	17.5

By the Places of Religious Worship Certifying Act, 1852, provision was made for places of religious worship of Protestants, other than churches or chapels of the Established Church, to be certified as such to the Registrar General instead of to the Diocesan authorities or the local Justices as required by earlier Acts. This Act was replaced in 1855 by the Places of Worship Registration Act, which extended the privilege to other religious bodies. Such certification is a necessary preliminary to the registration of a building for the solemnization of marriages.

The Marriage Act, 1836, enacted that any separate building which had been certified as a place of religious worship could, if registered by the Registrar General, be used for the solemnization of marriages in the presence of a registrar. The provision is now contained in the Marriage Act, 1949.

The numbers of places of meeting for religious worship on the official register on the 31st December of each of the years 1946 to 1950 respectively, and the numbers of buildings registered for the solemnization of marriages are shown in Table XXIII.

Table XXIII.—Buildings* certified as places for Worship and registered for Marriages, 1946 to 1950, England and Wales.

Denomination	1946	1947	1948	1949	1950
Buildings certified to the Registrar General as meeting places for religious worship					
Roman Catholics	2,278	2,296	2,324	2,364	2,388
Methodist Church	13,372	13,347	13,335	13,328	13,295
Congregationalists	3,618	3,615	3,614	3,617	3,615
Baptists	3,566	3,569	3,574	3,587	3,597
Calvinistic Methodists	1,414	1,416	1,414	1,418	1,417
Presbyterians	467	465	466	465	466
Unitarians	192	192	192	194	193
New Church	61	61	60	59	61
Catholic Apostolic Church	53	55	56	54	53
Countess of Huntingdon's Connexion	44	44	43	43	43
Salvation Army	1,566	1,568	1,573	1,571	1,569
Society of Friends	425	424	423	423	422
Jews	403	410	411	415	423
Other Denominations	7,241	7,312	7,373	7,455	7,513
All Denominations	34,700	34,774	34,858	34,993	35,055

Buildings registered for the solemnization of marriages

Roman Catholics	2,096	2,113	2,135	2,166	2,196
Methodist Church	9,088	9,137	9,191	9,227	9,251
Congregationalists	3,361	3,362	3,360	3,362	3,367
Baptists	3,246	3,256	3,258	3,275	3,284
Calvinistic Methodists	1,195	1,203	1,205	1,210	1,213
Presbyterians	456	456	456	456	456
Unitarians	198	198	198	200	200
New Church	63	63	63	62	63
Catholic Apostolic Church	43	43	45	44	44
Countess of Huntingdon's Connexion	40	40	39	39	39
Salvation Army	517	534	551	558	574
Society of Friends	†	†	†	†	†
Jews	†	†	†	†	†
Other Denominations	2,540	2,586	2,644	2,690	2,734
All Denominations	22,843	22,991	23,145	23,289	23,421

Increase or decrease (—) per cent. since 1921 in the number of buildings certified for religious worship

Roman Catholics	46.0	47.2	49.0	51.5	53.1
Methodist Church	— 4.3	— 4.4	— 4.5	— 4.6	— 4.8
Congregationalists	7.6	7.5	7.4	7.5	7.5
Baptists	11.9	12.0	12.1	12.5	12.8
Calvinistic Methodists	8.9	9.0	8.9	9.2	9.1
Presbyterians	4.2	3.8	4.0	3.8	4.0
Unitarians	4.3	4.3	4.3	5.4	4.9
New Church	10.9	10.9	9.1	7.3	10.9
Catholic Apostolic Church	— 24.3	— 21.4	— 20.0	— 22.9	— 24.3
Countess of Huntingdon's Connexion	— 6.4	— 6.4	— 8.5	— 8.5	— 8.5
Salvation Army	37.9	38.0	38.5	38.3	38.1
Society of Friends	— 1.4	— 1.6	— 1.9	— 1.9	— 2.1
Jews	55.6	58.3	58.7	60.2	63.3
Other Denominations	117.1	119.3	121.1	123.5	125.3
All Denominations	18.3	18.5	18.8	19.3	19.5

* Of these buildings nearly 1,000 were certified before 1852, as Places of Meeting for Religious Worship to some other authority than the Registrar General and therefore are not included in the number so certified to the Registrar General shown above.

† It is not necessary for buildings to be registered for the solemnization of Quaker or Jewish marriages. Under section 31 of the Births, Deaths and Marriages Registration Act (1836), Registering Officers of the Society of Friends and Secretaries of Jewish Synagogues who have been certified to the Registrar General record the marriages in each case.

The increases of 84, 71, 61, 82 and 58 in the years 1946 to 1950 respectively in the numbers of buildings certified as meeting places for religious worship under the heading "other denominations" in Table XXIII were made up as follow :—

Denomination	1946	1947	1948	1949	1950
Apostolic Church	1	2	1	1	—
Assemblies of God	6	8	5	11	3
Baha'is	—	1	—	—	—
Brethren	10	—	4	4	—
Calvary Holiness Mission	2	—	1	—	1
Christadelphians	2	2	2	1	2
Christians	1	—	—	4	—
Christians—not otherwise designated	9	10	14	3	14
Christian Scientists	10	—	2	5	2
Christian Spiritualists	6	2	—	8	2
Elim Foursquare Gospel Alliance	6	2	6	2	—
Fellowship of Independent Evangelical Churches	3	4	—	—	3
Full Gospel Testimony	1	—	2	—	—
Jehovah's Witnesses	13	13	3	10	8
Latter Day Saints	—	4	3	—	—
Moslems	—	1	—	—	—
Pentecostal Mission	—	2	—	—	2
Seventh Day Adventists	3	3	—	—	3
Spiritualists	8	7	6	1	8
Theosophists	—	1	—	—	—
Undenominational Christians	—	1	—	2	—
Others—not specified	3	8	12	30	10
Total	84	71	61	82	58

The Marriage Act, 1898, provided that, under certain conditions, marriages might be solemnized in a registered building, without the presence of a registrar but in the presence of a person duly authorised for the purpose by the governing body of the building and certified as such to the Registrar General. The governing bodies of some of the registered buildings have made use of this provision, which was re-enacted in the Marriage Act, 1949. At the end of the years 1946 to 1950 the respective numbers of buildings where a duly authorised person was able to act were as follow :—

Denomination	1946	1947	1948	1949	1950
Methodist Church	5,063	5,101	5,181	5,239	5,315
Congregationalists	1,143	1,153	1,179	1,196	1,220
Baptists	855	876	903	931	942
Calvinistic Methodists	184	187	191	191	190
Other Denominations and Unsectarians	674	687	722	747	768
All Denominations	7,919	8,004	8,176	8,304	8,435

WIDOWHOOD AND WIDOWERHOOD

Detailed commentary on widowhood and widowerhood was included in the 1940–1945 Civil Text, pages 47 to 52, to which reference should be made for an introductory discussion on the peculiarities of these statistics with special reference to the alternative classes of "not stated" cases which may arise, and such sources of information as there are on these cases. In that commentary the concept of widowhood rates (defined as "The number of widows in a given age group, produced by the death of a husband in the current year, expressed as a proportion of all wives of that age") and widowerhood rates was introduced, and it is retained in the present commentary.

In Table XX of Part II the numbers of marriages terminated by the death of a partner are given by joint ages of the deceased and the surviving partner. Only cases in which marital condition was stated are included in the table, but the proportion of "not stated" to "stated" marital condition is given for each age of deceased. It has been a feature of these statistics, since they were first collected in 1938, that this "not stated" proportion has been very low for female deaths, a small fraction of one per cent., but has been substantial for male deaths, particularly for ages under 30. Table XXIV shows the "not stated" proportions for the years 1938 and 1944 to 1950.

Table XXIV.—Percentage "Not Stated" to "Stated" marital condition—Deceased Men, 1938 and 1944 to 1950, England and Wales.

Age of Deceased	1938	1944	1945	1946	1947	1948	1949	1950
All Ages ..	8.2	6.1	5.4	5.5	5.5	5.4	5.0	4.9
15- ..	22.7	13.6	13.8	15.3	13.8	10.8	12.8	19.6
20- ..	40.4	17.6	15.0	20.7	28.8	27.7	28.9	40.4
25- ..	31.5	15.8	14.1	21.2	24.6	22.8	24.8	28.6
30- ..	28.6	18.1	16.0	20.5	20.3	20.0	19.7	19.7
35- ..	22.2	16.7	14.7	16.2	16.3	16.4	16.2	14.8
40- ..	17.4	15.1	12.2	13.7	14.7	13.1	12.6	12.4
45- ..	16.5	11.4	10.1	9.9	11.0	9.7	9.8	9.5
50- ..	12.6	9.7	8.3	8.2	8.2	8.5	7.3	6.8
55- ..	10.3	7.7	7.1	6.6	6.7	6.8	5.9	5.7
60- ..	8.3	7.0	5.8	6.0	5.9	5.6	5.0	4.8
65- ..	6.2	5.6	5.0	4.6	4.9	4.6	4.0	3.9
70- ..	5.2	5.0	4.5	4.4	4.3	3.9	3.5	3.4
75 and over ..	4.3	4.2	4.1	4.0	3.8	3.5	3.4	3.4

From 1938 to 1945 there was a more or less general and steady decrease in the percentage "not stated". It may be seen from Table XXIV that since 1945 there has been a tendency for the percentage to continue decreasing at ages over 45 but to increase at ages under 30, indeed the percentage for age 20–24 in 1950 was back to the 1938 value of 40.4 per cent.

Table XXV expresses the numbers of surviving widowers shown in Table XX of successive Parts II as rates per 1,000 of the estimated population of married men at each age group. Corresponding rates of surviving widows per 1,000 married women are shown in Table XXVI, distinguishing widowhoods created

Table XXV.—Widowerhoods per 1,000 Married Men in each age group, 1939 to 1950, England and Wales.

Age of Married Man	1939	1940-45	1946	1947	1948	1949	1950	1946-50
All Ages ..	8.7	8.2	7.7	7.7	7.1	7.6	7.5	7.5
Under 25..	2.1	2.0	1.7	1.8	1.5	1.2	1.0	1.4
25- ..	2.3	2.2	1.6	1.6	1.4	1.4	1.1	1.4
30- ..	2.3	2.2	1.8	1.7	1.5	1.5	1.3	1.6
35- ..	2.8	2.6	2.1	2.1	1.8	1.8	1.6	1.9
40- ..	3.6	3.4	2.7	2.6	2.3	2.3	2.2	2.4
45- ..	4.9	4.6	4.3	3.9	3.7	3.8	3.6	3.9
50- ..	7.4	6.8	6.0	6.1	5.5	5.6	5.4	5.7
55- ..	10.5	9.9	8.8	8.7	8.3	9.0	8.4	8.6
60- ..	16.5	15.3	13.9	13.6	12.7	15.0	13.2	13.7
65- ..	24.8	23.5	21.3	21.2	19.9	21.6	21.1	21.0
70- ..	37.3	34.8	33.9	33.8	31.2	31.4	34.2	32.9
75 and over	73.3	63.4	57.2	60.7	55.0	58.7	61.0	58.5

Table XXVI.—Widowhoods per 1,000 Married Women in each age group, 1939 to 1950, England and Wales.

Age of Married Woman	1939	1940-45	1946	1947	1948	1949	1950	1946-50
By Death of All Husbands*								
All Ages ..	14.3	15.1	13.1	13.7	12.9	13.8	13.8	13.5
Under 25..	1.8	6.2	1.2	1.3	1.1	1.1	1.0	1.1
25- ..	2.0	6.2	1.7	1.8	1.6	1.5	1.4	1.6
30- ..	2.8	5.3	2.3	2.3	2.2	2.1	1.9	2.2
35- ..	4.4	5.4	3.5	3.5	3.1	3.2	3.0	3.3
40- ..	6.6	7.2	5.5	5.5	5.1	5.1	4.9	5.2
45- ..	10.3	10.5	9.3	9.4	8.7	8.8	8.7	9.0
50- ..	16.0	16.0	14.5	14.6	13.7	14.2	14.2	14.2
55- ..	22.9	22.1	20.8	21.5	20.3	21.6	21.6	21.2
60- ..	35.0	32.8	32.4	33.1	31.9	34.1	33.6	33.0
65- ..	49.6	48.7	45.1	46.6	45.3	49.3	49.1	47.1
70- ..	72.1	64.0	67.9	71.4	66.0	71.8	71.7	69.8
75 and over	126.4	113.6	87.0	95.8	87.5	99.6	106.5	95.3
By Death of Civilian Husbands								
All Ages ..	14.2	13.5	13.0	13.6	12.9	13.8	13.8	13.4
Under 25..	1.7	1.3	1.0	1.2	1.0	1.0	1.0	1.0
25- ..	2.0	1.9	1.5	1.8	1.5	1.5	1.4	1.5
30- ..	2.8	2.6	2.2	2.2	2.1	2.0	1.9	2.1
35- ..	4.4	4.0	3.3	3.4	3.1	3.1	3.0	3.2
40- ..	6.5	6.6	5.4	5.4	5.0	5.1	4.9	5.2
45- ..	10.3	10.2	9.3	9.3	8.7	8.8	8.7	9.0
50- ..	15.9	15.8	14.5	14.6	13.7	14.2	14.2	14.2
55- ..	22.9	22.0	20.8	21.5	20.3	21.6	21.6	21.2
60- ..	35.0	32.7	32.4	33.1	31.9	34.1	33.6	33.0
65- ..	49.6	48.7	45.1	46.6	45.2	49.2	49.1	47.0
70- ..	72.1	64.0	67.9	71.4	66.0	71.8	71.7	69.8
75 and over	126.4	113.6	87.0	95.8	87.4	99.6	106.5	95.3

* Non-civilian casualties were not classified by marital condition before 1950. An approximate allowance for them has been made, for the war years based on war pensions awards, and for the peace years by rateable allocation.

† Separate tabulations of widowhoods by deaths of civilian husbands are not available for 1950. The rates for widowhoods by deaths of all husbands have been repeated for 1950 to complete the series, since the differences between the two sets of rates in 1948 and 1949 indicate that no significant error will be introduced by this procedure.

by the death of a civilian husband. As may be seen from Table XXVI, this distinction was necessary for the years 1940 to 1945, since the differences between the two sets of rates were substantial at the younger ages. It may be observed from the table that in 1946 the differences were quite small and since then have been barely discernible, confirming that the distinction is no longer necessary.

The nature of these rates differs from that of published death rates because they derive solely from the deaths of married persons who are to some extent selected in that they exclude persons whose health denies them the opportunity of marriage. Nevertheless these rates reflect in general the sex and age distribution and annual changes of mortality rates and many aspects of them may be studied from the commentary on mortality rates contained in the medical texts.

Because of the tendency for a husband's age to exceed that of his wife, the ratio of widowhood rates to widowerhood rates at each age exceeds the ratio of male to female mortality rates at the same age. The 1946-1950 average widowhood rate for all ages combined exceeded the corresponding widowerhood rate by 80 per cent. At the separate age groups over 25 years the excess rose from a modest 14 per cent. at 25-29 to 149 per cent. at 50-55, thereafter declining to 112 per cent. at 70-74 and 63 per cent. for 75 and over. In contrast, for the youngest age group, under 25, the widowhood rate was less than the widowerhood rate. In 1931, the latest date for which the information is available, the death rate for married women at each age under 20 exceeded that of men of the same age. In spite of recent improvements in post-natal and ante-natal care, it would appear that this male superiority has remained, at least in the period 1946-1950.

The important point for many demographic purposes, however, is not the nature of small differentials within the main structure of widowhood and widowerhood rates, but the general level of these rates. It is clear that, at the current low level of mortality at ages under 45, the termination of marriages by the death of one or other of the partners is not significantly reducing the younger married population and in particular the population of married women at the reproductive ages.

DIVORCES AND REMARRIAGE OF DIVORCED PERSONS

Divorces

The number of dissolutions of marriage and of decrees *nisi* made absolute each year have been published in Part II, Table O, in serial form covering the period 1876 to date, and the number of Petitions filed in the year at the Principal Divorce Registry in London, analysed by the duration of the marriage and the number of children of the marriage, in Table P of the successive issues of Part II up to and including 1949.

The number of marriages terminated by divorce is of interest to the demographer since such marriages are removed from the possibility of producing legitimate children and thus have some bearing on fertility rates. The large increase in divorce during recent years has enhanced its importance from the demographic point of view so that the simple analyses provided by Table P could no longer be regarded as adequate and the Royal Commission on Population recommended that the Registrar General should publish more detailed analyses of the information available. The necessary arrangements were accordingly made with the Principal Divorce Registry in London and the County Courts Branch of the Lord Chancellor's Department, and for 1950 the former Table O has been extended to include the number of Petitions filed and Table P has been replaced by four new tables, P1, P2, P3 and P4. Table P1 has been extracted from statistics on grounds of divorce from Civil Judicial Statistics compiled by the County Courts Branch of the Lord Chancellor's Department and published annually as Command Papers. Table P2 is an analysis by age of husband and wife of the number of decrees made absolute during the year for dissolution and nullity, P3 shows the age of the wife and duration of the marriage and P4 the age of wife and number of surviving children of the marriage.

General Trend

The trend of the incidence of petitioning for divorce from 1876 to 1950 is shown in Table XXVII. It is better to study the number of petitions filed than the number of decrees absolute granted as the former are less liable to disturbance from changes in procedure designed to clear accumulated arrears of suits awaiting hearing and from other administrative actions such as the reduction of the period between granting a decree *nisi* and its being made absolute. The fact that a small proportion of petitions fail will not lead to misunderstanding of the general trend based on petitions alone.

Table XXVII shows the number of petitions filed in England and Wales from 1876 to 1950 in the form of annual averages for quinquennial periods and for single years from 1936 to 1950.

The table shows that from 1876 to 1910 the rise in divorce, although continuous, was not very disproportionate to the increase of population. From 1911 to 1925 the numbers were influenced largely by the First World War and its aftermath. Subsequently the aid to Poor Persons seeking divorce shows its influence in 1926-30 and that of the Matrimonial Causes Act of 1937 is clearly seen in the figure for 1938 when petitions rose from 5,903 in 1937 to 10,233. The period from the beginning of the Second World War shows the

Table XXVII.—Number of Petitions filed for Dissolution and Nullity, 1876 to 1950, England and Wales.

Remarks	Quinquennial Period	Number of Petitions (Annual Averages)	Year	Number of Petitions
Period of Comparative Stability	1876-80	460	1936	5,749
	1881-85	462	1937	5,903
	1886-90	556	1938	10,233
	1891-95	565	1939	8,703
	1896-1900	675	1940	7,086
	1901-05	812	1941	8,305
	1906-10	809	1942	12,003
	1911-15	1,033	1943	15,385
	1916-20	2,954	1944	18,969
	1921-25	2,848	1945	25,711
First World War	1926-30	4,052	1946	43,163
Poor Persons Rules, 1925	1931-35	4,784	1947	48,501 ✓
	1936-40	7,535	1948	37,919
Matrimonial Causes Act, 1937	1941-45	16,075	1949	35,191
Second World War	1946-50	38,901	1950	29,729

most notable increase of the whole table. After a decrease in 1939 and 1940 the figures rose continuously to a maximum in 1947, with 48,501 petitions, while in 1950 the number was still more than four times as high as in 1940.

A comparison of the incidence of divorce in periods covering the two world wars is of interest at this point. Diagram C shows a comparison of these two periods by single calendar years and Table XXVIII shows a comparison in Summary form.

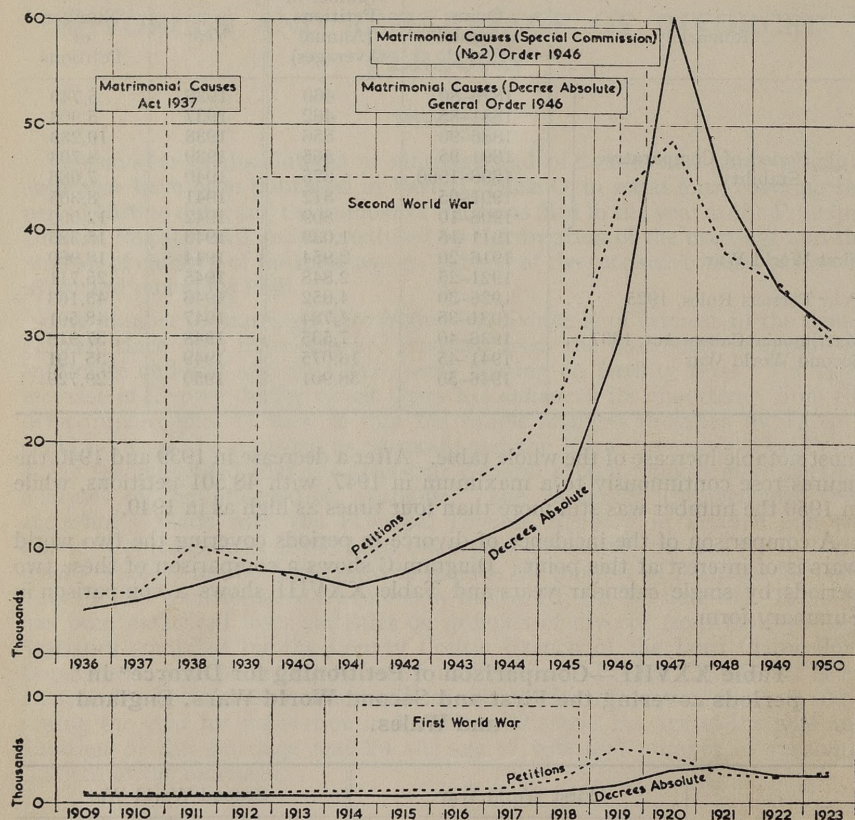
Table XXVIII.—Comparison of Petitioning for Divorce* in periods covering the First and Second World Wars, England and Wales.

Description	First World War			Second World War		
	Period	Average Annual Number of Petitions Filed		Period	Average Annual Number of Petitions Filed	
		Number	Ratio to pre-war number		Number	Ratio to pre-war number
Pre-war	1913	1,037	—	1937	5,903†	—
War and immediate post-war	1914-1921	2,493	2.4	1940-1949	25,223	4.3
Later post-war	1922	2,468	2.4	1950	29,729‡	5.0

In 1913, before the First World War, there were 1,037 petitions filed; in 1922, after the spate of suits arising in the war and immediate post-war years had been cleared, 2,468 petitions were filed or nearly 2½ times as many.

* Dissolution and nullity.
 † This is not quite comparable with the later figures, which include cases on the new grounds introduced by the Matrimonial Causes Act, 1937.
 ‡ This figure may be inflated by about one thousand by the greater facilities granted from 2nd October, 1950 under the Legal Aid and Advice Act, 1949.

DIAGRAM C.—Annual Numbers of Petitions for Divorce and of Decrees Nisi made absolute, 1909 to 1923 and 1936 to 1950, England and Wales.



Note: Suits for both dissolution and nullity are included.

In the intermediate 8 years, 19,947 petitions were filed, an average of 2,493 per year, a figure not greatly different from the 2,468 filed in 1922. Put simply, therefore, the effect of the First World War on divorce was numerically equivalent to the sudden increase on the outbreak of war of the annual incidence of petitioning to $2\frac{1}{2}$ times its former size. The annual number of petitions filed had been increasing steadily but slowly up to 1913, and continued to increase after 1922 but, relative to the sharp rise mentioned above, the general rate of increase is insignificant.

On the 1st January, 1938, the Matrimonial Causes Act of 1937 came into force and, by extending the grounds for divorce, led to inflated numbers of petitions being filed in 1938 and 1939 since they included petitions in respect of causes which had not previously been grounds for divorce. For the present purpose therefore, the years 1938 and 1939 are better omitted, and the intensity of divorce petitioning before the Second World War, may be judged from the figure for 1937 of 5,903. It is too early yet to tell whether the number of petitions filed in 1950 will begin a new long term trend line, similar to that

started in 1922, but in the absence of better information it is not an unreasonable assumption.*

The petitions filed in 1950 numbered 29,729, five times as many as in 1937, and the annual average number during 1940-1949 was 25,223, or about $4\frac{1}{2}$ times the number in 1937. As in the first war period, there was a steady rise throughout the actual years of war followed by a very steep rise in the two years following the end of hostilities; but on the assumption that the post-war petitions were inflated by postponements from the war years, the effect of the war on the incidence of divorce was numerically equivalent to a rise in the numbers to about $4\frac{1}{2}$ times the pre-war figure and the beginning of a post-war trend somewhat above this level.

In terms of numbers, the effect of the First World War was to cause 15 hundred more petitions to be filed each year and of the Second World War to cause 20 thousand more petitions to be filed each year.

Grounds for Divorce

There is difficulty in following the trend of the various grounds for divorce as set down in the original petition, since the permissible grounds were changed as from 1st January, 1938, by the 1937 Act, and before that date tabulations of petitions by grounds were not published. However, in the period 1933-1937, 96 per cent. of suits led to the granting of a decree *nisi* and from the evidence set out in Table XXIX it seems likely that, of petitions filed for dissolution or nullity, 97 per cent. were for dissolution, nearly all on the grounds of adultery, and the remaining 3 per cent. were for nullity, nearly all on the grounds of incapacity.

Table XXIX.—Numbers and Distribution of Petitions and Decrees Nisi by Cause, 1933-1937, England and Wales.

Cause	Decrees Nisi granted		Petitions filed	
	Numbers	Distribution per 1,000	Numbers	Distribution per 1,000
Dissolution				
Adultery	22,624	971	—	—
Others	23†	1	—	—
Total	22,647	972	25,890	971
Nullity				
Incapacity	592	26	—	—
Others	54	2	—	—
Total	646	28	776	29
Grand Total	23,293	1,000	26,666	1,000

The 1937 Act came into force on 1st January, 1938 and extended the grounds for divorce. Thus in 1938, and, it would appear, in 1939 also, petitions were filed on these new grounds in respect of long-standing cases of hardship. This must be borne in mind when interpreting Table XXX, showing the distribution of petitions filed for dissolution and nullity of marriage from 1933 to 1950

* The number of petitions filed in 1951 (38,382) is of no assistance in clarifying this point since it is influenced substantially by the Legal Aid and Advice Act, 1949, which came into force on the 2nd October, 1950.
† Including 17 cases of adultery coupled with cruelty, desertion or bigamy.

Table XXX.—Numbers of Petitions for Dissolution and Nullity by Cause, and Distribution by Cause and whether filed by Husband or Wife, 1933 to 1950, England and Wales.

Type and Cause	Annual Averages		1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
	1933-1937	1938-1939											
Numbers													
Dissolution													
Adultery	4,860	3,931	4,781	7,116	9,513	12,006	17,091	29,939	31,482	20,037	14,666	11,947	
Desertion	3,361	2,326	2,667	3,630	4,342	5,100	6,227	9,755	12,741	13,752	16,377	13,739	
Cruelty	702	467	437	605	736	963	1,223	1,682	2,380	2,791	3,026	3,101	
Lunacy	267	159	173	223	265	278	283	271	348	384	277	242	
Presumed decease..	54	32	21	39	31	43	33	52	83	100	86	59	
Rape, etc. ..	0	0	0	0	0	0	0	5	7	11	11	8	
Dissolution Total ..	5,178	9,244	6,915	8,079	11,613	14,887	18,390	24,857	41,704	47,041	37,075	34,443	29,096
Nullity													
Incapacity	120	91	121	203	283	145	185	584	551	324	280	278	
Invalidity	5	7	13	13	7	129	212	84	50	74	54	50	
Lunacy	12	3	1	0	3	4	4	8	8	3	11	3	
Pregnancy	9	8	14	20	24	44	53	75	34	27	28	19	
Wilful Refusal ..	74	59	76	150	177	240	389	696	812	413	370	277	
Veneral Disease ..	4	3	1	4	4	17	11	12	5	3	5	6	
Nullity Total ..	155	224	171	226	390	498	579	854	1,459	1,460	844	748	633
Dissolution and Nullity Total	5,333	9,468	7,086	8,305	12,003	15,385	18,969	25,711	43,163	48,501	37,919	35,191	29,729
Percentage Distribution													
Dissolution													
Adultery	51.3	55.5	57.6	59.3	61.9	63.3	66.5	69.4	64.9	52.8	41.7	40.2	
Desertion	35.5	32.8	32.1	30.2	28.2	28.9	24.2	22.6	26.3	36.3	46.5	46.2	
Cruelty	7.4	6.6	5.3	5.0	4.8	5.1	4.8	3.9	4.9	7.4	8.6	10.5	
Lunacy	2.8	2.2	2.1	1.9	1.7	1.4	1.1	0.6	0.7	1.0	0.8	0.8	
Presumed decease..	0.6	0.5	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.2	
Rape, etc. ..	—	—	—	—	—	—	—	—	—	—	—	—	
Dissolution Total ..	97.1	97.6	97.6	97.3	96.7	96.8	96.9	96.7	96.6	97.0	97.8	97.9	97.9
Nullity													
Incapacity	1.3	1.3	1.5	1.7	1.8	0.8	0.7	1.4	1.1	0.8	0.8	0.9	
Invalidity	0.1	0.1	0.1	0.1	—	0.7	0.8	0.2	0.1	0.2	0.2	0.2	
Lunacy	0.1	—	—	—	—	—	—	—	—	—	—	—	
Pregnancy	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	
Wilful Refusal ..	0.8	0.8	0.9	1.3	1.2	1.3	1.5	1.6	1.7	1.1	1.0	0.9	
Veneral Disease ..	—	—	—	—	—	0.1	0.1	—	—	—	—	—	
Nullity Total ..	2.9	2.4	2.4	2.7	3.3	3.2	3.1	3.3	3.4	3.0	2.2	2.1	2.1
Dissolution and Nullity Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Husbands' Petitions													
Dissolution	45.3	44.7	49.2	51.6	52.5	52.7	53.5	55.5	61.2	59.3	48.7	47.7	44.4
Nullity	1.4	1.4	1.4	1.5	2.1	1.8	1.8	2.0	2.1	1.9	1.3	1.1	1.2
Husbands' Total ..	46.7	46.1	50.6	53.1	54.6	54.5	55.3	57.5	63.3	61.2	50.0	48.8	45.6
Wives' Petitions													
Dissolution	51.8	52.9	48.4	45.7	44.2	44.1	43.4	41.2	35.4	37.7	49.1	50.2	53.5
Nullity	1.5	1.0	1.0	1.2	1.2	1.4	1.3	1.3	1.3	1.1	0.9	1.0	0.9
Wives' Total ..	53.3	53.9	49.4	46.9	45.4	45.5	44.7	42.5	36.7	38.8	50.0	51.2	54.4

according to the grounds and whether filed by husband or wife. From this table it may be seen that the proportion of petitions filed on the grounds of adultery rose steadily from 51.3 per cent. for the period 1938-1939 to a maximum of 69.4 per cent. in 1946, and thereafter fell sharply back to 41.7 per cent. in 1949 with a further slight fall to 40.2 per cent. in 1950, the proportion in both 1949 and 1950 having fallen below that for 1938-1939. More or less the opposite occurred to the proportions for desertion and cruelty which fell steadily through the war from 35.5 per cent. and 7.4 per cent. respectively in 1938-39 to minima of 22.6 per cent. and 3.9 per cent. respectively in 1946. Thereafter they also

recovered sharply and, having passed their pre-war positions by 1949, the proportion for desertion became more or less constant whilst that for cruelty experienced a further increase.

It is not perhaps surprising that adultery appears to have been a relatively more frequent ground for petitioning in the war and immediate post-war period than it was before the war, nor that desertion and cruelty were less frequent. In addition it will be noted that adultery was a proportionately less common ground for petitioning in 1950 than it was in 1938-1939, and that desertion and cruelty were proportionately more common (there were 2½ times as many petitions for adultery in 1950 as the average for 1938-1939, but over 4 times as many for desertion and cruelty).

After the initial flood of petitions on the grounds of lunacy in 1938 on the passing of the 1937 Act, the number of petitions filed annually on this ground remained relatively constant and, being swamped by the rising tide of petitions filed on other grounds, proportionately it has fallen from over 2 per cent. in 1938-1939 to under 1 per cent. in 1950.

The proportion of petitions for nullity rose from 2.4 per cent. in 1938-1939 and 1940 to 3.4 per cent. in 1946, and has now fallen back to 2.1 per cent. This ability, not only to hold its own in the face of the rapidly increasing incidence of petitioning for dissolution during the war, but even to increase relatively faster, may be attributed in part to petitioning on the grounds of wilful refusal. Since reaching its peak of 1.7 per cent. in 1947, petitioning on this ground has fallen back and was scarcely higher in 1950 (0.9 per cent.) than in 1938 (0.8 per cent.).

From the bottom half of Table XXX, it may be seen that a higher proportion of petitions was filed by husbands in the war and immediate post-war period than before the war or in 1950. The proportion rose steadily during the war from 50.6 per cent. in 1940 to 57.5 per cent. in 1945, it rose sharply after the war as men were released from the Armed Forces to 63.3 per cent. in 1946, was almost as high at 61.2 per cent. in 1947, fell sharply to 50.0 per cent. in 1948 and thereafter declined slowly to 45.6 per cent. in 1950, a proportion not very different from the 46.7 per cent. of 1933-1937 and 46.1 per cent. of 1938-1939. Taking the war period 1940-1949 as a whole, the proportion of petitions filed by husbands was 56.0 per cent.

In Table XXXI the distribution of petitions by cause is shown separately for petitions filed by husbands and for those filed by wives for 1938, 1949 and 1950, the only years for which the figures have been published. It will be seen that in each of the years a higher proportion of husbands than wives filed their petitions on the grounds of adultery or desertion, and a lower proportion on the grounds of cruelty. It will also be seen that the features to which attention has already been drawn as applying generally, apply to each sex individually, namely the proportion of petitions filed on the grounds of adultery in 1949 and 1950 is less than that in 1938, whilst the proportions for desertion and cruelty are more.

Decrees Nisi and Decrees Absolute

The abnormal increase in the numbers of petitions filed each year from 1941 to 1946 led to an accumulation of arrears in hearing cases. In 1946 two Orders were issued designed to clear up arrears, to keep pace with the increased number of petitions being filed each year and generally to reduce the period between the filing of a petition and granting of a Decree Absolute. The first, which came into force on 6th August, 1946, was the Matrimonial Causes (Decrees Absolute) General Order, 1946. By this Order the minimum time which must elapse before a Decree Nisi could be made Absolute was reduced from 6 months to

Table XXXI.—Percentage Distribution of Petitions for Dissolution and Nullity by Cause distinguishing those petitions filed by Husbands and those by Wives, 1938, 1949 and 1950, England and Wales.

Cause	1938		1949		1950	
	Petitions of Husbands	Wives	Petitions of Husbands	Wives	Petitions of Husbands	Wives
Dissolution						
Adultery	51.9	45.9	43.8	39.6	44.1	36.8
Desertion	38.8	37.6	50.7	42.6	49.0	43.9
Cruelty	0.4	12.6	2.0	14.8	2.8	16.8
Lunacy	5.2	1.4	1.0	0.6	1.2	0.5
Presumed decease ..	0.2	0.7	0.1	0.4	0.2	0.2
Rape, etc.	—	—	—	0.1	—	0.1
Dissolution Total ..	96.5	98.2	97.6	98.1	97.3	98.3
Nullity						
Incapacity	1.8	1.2	0.7	0.9	1.1	0.8
Invalidity	—	—	0.1	0.2	0.2	0.2
Lunacy	0.3	0.1	—	0.1	—	—
Pregnancy	0.2	—	0.2	—	0.2	—
Wilful Refusal ..	1.1	0.5	1.4	0.7	1.2	0.7
Veneral Disease ..	0.1	—	—	—	—	—
Nullity Total	3.5	1.8	2.4	1.9	2.7	1.7
Dissolution and Nullity Total	100.0	100.0	100.0	100.0	100.0	100.0

6 weeks. The second was the Matrimonial Causes (Special Commission) (No. 2) Order, 1946, issued on 11th December, 1946, which extended the power to hear divorce cases to Special Commissioners. The first of these Orders had the effect of bringing forward into the 1946 figures a considerable number of cases which, but for the Order, would not have been made Absolute until 1947. The second accelerated the rate of hearing of cases to work off the accumulated arrears, and it appears to have done this so effectively that all, or at least the bulk, were cleared by the end of 1948.

The statistical consequence of this action is that the decrees granted each year, particularly in 1947 and 1948, are numerically equivalent to the current volume of cases *plus* an unknown amount of arrears worked off. It follows that the decrees granted before 1947 are equivalent to the current cases *less* the complementary amount of arrears accumulating. The resultant series of figures for numbers of decrees granted each year can hardly fail to give a misleading picture of divorce trend and is better abandoned in favour of a study of the trend of petitions, as employed earlier in this section. In particular it may be seen from Diagram C that the much quoted figure of 60 thousand decrees absolute granted in 1947, by itself gives a somewhat false picture of the incidence of decrees absolute in the war and post-war period.

Divorce Rates

The analyses made so far have been purely in terms of the number of petitions filed and of decrees granted each year, and it has been shown that this number has increased as the years have passed. It is common knowledge that the population of the country has been increasing also and it may therefore be con-

jectured to what extent the increase in the number of petitions filed each year reflects merely the increase in population.

The population "at risk" of filing a petition for divorce is of course the married persons. An examination covering the years 1911, and 1921, for which census populations are available, and 1937 and 1950 shows that the numbers of petitions filed in each of these years are broadly representative of the trend of divorce incidence over the period, and therefore that these four years are suitable as datum points for a comparison of the relative rates of increase of the married population and the incidence of petitioning. Such a comparison is shown in Table XXXII.

Table XXXII.—Married Population, Petitions* filed and Rate per 10,000 Married Population 1911, 1921, 1937 and 1950; and the percentage increase of each in the intermediate periods; England and Wales.

Year	Married population (thousands)	Number of petitions filed	Petitions filed per 10,000 married population	Period	Percentage increase in		
					Married population	Number of petitions filed per annum	Rate per 10,000 married population
1911	13,126	902	0.69	1911-21	15	222	180
1921	15,065	2,907	1.93				
1937	18,644	5,903	3.17	1921-37	24	103	64
1950	22,034	29,729	13.49	1937-50	18	404	326

It will be seen from Table XXXII that, without exception, the percentage increase in the number of petitions filed is several times greater than that of the married population. Expressed as a proportion per 10,000 married persons, the petitions increased from 0.69 in 1911 to 13.49 in 1950, a rate nearly 20 times greater than that of 40 years earlier.

Proportion of Marriages Ultimately Broken by Divorce.—The spectacular rise in the incidence of divorce in the last forty years from one thousand petitions per year to 30 thousand may lead to exaggerated ideas as to the proportion of marriages which ultimately are broken by divorce. Tabulations are not made of divorces by the year in which the marriage being dissolved or annulled was contracted, and thus a precise calculation of the proportion of marriages terminated by divorce cannot be made. An approximate estimate to give the right order of magnitude may, however, be made if the number of petitions in years generally representative of the current trend in divorce are related to the average number of marriages per year in the period 5 to 15 years earlier (the majority of divorces occur between 5 and 15 years after marriage). Such a calculation is set out at Table XXXIII. In this table (Col. (4)) the ratio of petitions to the appropriate marriages (Col. (2)) divided by Col. (3)) is not precisely the ratio required, since not all petitions are successful, and a correcting factor is required to allow for this. It is not known how many decrees absolute result from a given number of petitions, but from the available evidence it seems that the ratio was around 75 per cent. in 1911 and has since increased to approaching, or even exceeding, 90 per cent. The choice of correcting factor within this range is not critical, and the ratios .75, .80, .85 and .90 for 1911, 1922, 1937 and 1950 respectively will serve. Correcting column (4) of Table XXXIII by these factors gives column (5). It must be stressed that rough estimates such as these can serve only to indicate the general order of magnitude of the quantities involved.

*For dissolution and nullity of marriage.

The last column of Table XXXIII indicates that, before the First World War, less than $\frac{1}{2}$ of one per cent. of marriages terminated in divorce, the sharp rise in the First World War raised the proportion to about $\frac{3}{4}$ of one per cent., in the inter-war period it climbed steadily to about $1\frac{3}{4}$ per cent. and, as far as can be judged at this early stage, about 7 per cent. of marriages now seem to be terminated by divorce. It will be noted that the First World War doubled the proportion whilst the Second World War quadrupled it.

Table XXXIII.—Approximate Proportion of Marriages terminated by Divorce, 1911 to 1950, England and Wales.

Year	Petitions filed (Dissolution and nullity)	Average number of marriages contracted annually 5-15 years earlier (thousands)	Number of Petitions per 100 marriages	Estimated percentage of marriages terminated by divorce
(1)	(2)	(3)	(4)	(5)
1911	902	257	0.4	0.3
1922	2,468	285	0.9	0.7
1937	5,903	302	2.0	1.7
1950	29,729	369	8.1	7.3

Ages of Husband and Wife in Combination.—Table P.2 of 1950 Part II shows the numbers of decrees absolute granted in England and Wales during 1950 tabulated according to the present ages of husband and wife in combination. The corresponding rate of divorce per 1,000 married couples of the same ages in the population of England and Wales has been calculated and is shown in Table XXXIV. The population of husbands and wives in combination has been derived from the one per cent. sample of the Census of Great Britain, 1951, and is of sufficient accuracy for the purpose of identifying the salient features of divorce rates by age of husband and wife.

Table XXXIV.—Divorce* Rates per 1,000 Married Couples exposed to risk, by present ages of Husband and Wife in combination, 1950, England and Wales.

Wife's Present Age	Husband's Present Age								
	All Ages	Under 25	25-29	30-34	35-39	40-44	45-49	50-59	60 and over
All ages	3.0	2.7	6.2	5.6	4.7	3.4	2.4	1.3	0.3
Under 25	3.6	2.3†	4.5	3.6	4.1	4.2	—	—	—
25-29	6.8	5.1	7.2	6.5	6.7	4.9	6.1	7.7‡	—
30-34	5.2	—	6.7	5.2	5.2	4.7	4.1	3.1	—
35-39	4.0	—	6.1	5.9	4.3	3.6	3.0	3.4	—
40-44	2.9	—	—	4.8	3.8	3.1	2.6	2.4	2.1
45-49	2.1	—	—	—	3.4	2.8	2.2	1.9	1.3
50-54	0.9	—	—	—	—	2.3	1.5	1.0	0.5
60 and over	0.2	—	—	—	—	—	—	0.5	0.2

*Decrees Absolute for dissolution and nullity of marriage.

†About 90 per cent. of the couples in this group will not have been married long enough to obtain a Decree Absolute except under the restricted conditions of the 1937 Act.

‡This rate is not reliable because of the small number of cases involved.

From the top line and from the left hand column of this table it may be seen that the highest rates apply to couples one of whom is aged 25-29, irrespective of the age of the other, being 6.8 for women and 6.2 for men. From the body of the table it may be seen that, when both husband and wife are in this age-group the rate is 7.2 per 1,000 married couples of this age in the population. Excluding the rate for couples in which both parties were under 25 and also those in which both husband and wife were over 40 years of age, it is remarkable that the remaining rates cover so small a range. The highest rate is barely two and a half times the lowest and, if the two highest and two lowest rates are excluded, the ratio of the lowest to the highest is less than 1 to 2, notwithstanding that such extreme cases as wives aged 30-34 with husbands under 30 and with husbands over 50 are considered. The average duration of marriage of couples aged 25-29 is probably that at which divorce is most intense and it will be shown later that, after the first few years, divorce rates tend to fall with duration of marriage. The general tendency of the rates in Table XXXIV to be lower for older couples is probably attributable to this. The rates do not suggest that wide disparity in age between husband and wife has any great influence on the divorce rate.

Duration and Surviving Children of the Marriage.—Up to and including 1949, Table P of Part II showed the duration and surviving children of the marriages concerned in petitions filed at the Principal Divorce Registry in London. (This registry dealt with over half the cases each year until 1947.) Table XXXV, derived from Table P of successive Parts II, shows the percentage distributions of divorces by duration and surviving children of the marriage.

Table XXXV.—Total Number of Petitions filed, and Distribution of Petitions filed at the Principal Divorce Registry in London by Duration and Surviving Children of the Marriage concerned, 1926 to 1949, England and Wales.

Period	Total* Number of Petitions filed for Dissolution or Annulment	Percentage Distributions (Based on suits for Dissolution or Annulment commenced in the period and filed at the Principal Divorce Registry in London) by:—										
		Duration of Marriage					Surviving Children of the Marriage					
		Under 1 year	1-2 years	2-5 years	5-10 years	10-20 years	Over 20 years	No children	1 child	2 children	3-6 children	Over 6 children
1926-30	4,052†	0.7	2.0	11.9	34.0	38.2	13.2	40.8	30.9	16.7	11.2	0.4
1931-35	4,645†	0.8	2.1	12.8	30.8	41.2	12.3	42.2	30.8	16.5	10.1	0.4
1936-40	7,535†	0.5	0.8	9.7	29.1	42.3	17.6	42.4	32.1	16.0	9.2	0.3
1941-45	16,075†	0.5	0.6	14.1	31.8	37.7	15.3	41.0	31.3	16.7	10.7	0.3
1936	5,749	0.6	1.6	11.3	31.2	42.1	13.2	43.5	31.2	16.2	8.8	0.3
1937	5,903	0.7	1.8	12.7	31.8	40.3	12.7	43.9	30.8	15.9	9.1	0.3
1938‡	10,233	0.4	0.4	5.8	25.2	45.3	22.9	42.6	32.6	15.7	8.9	0.2
1939	8,703	0.6	0.4	9.9	29.2	41.8	18.1	40.3	33.4	16.6	9.3	0.4
1940	7,086	0.6	0.3	11.2	30.6	40.5	16.8	42.5	32.0	15.6	9.7	0.2
1941	8,305	0.5	0.7	8.1	30.6	40.7	19.4	42.9	31.0	16.4	9.5	0.2
1942	12,003	0.5	0.7	12.6	30.1	39.1	17.0	41.9	31.2	16.3	10.3	0.3
1943	15,385	0.5	0.5	14.3	29.0	39.3	16.4	40.8	30.8	16.7	11.3	0.4
1944	18,969	0.6	0.5	17.2	30.2	36.7	14.8	39.5	32.0	17.2	10.9	0.4
1945	25,711	0.6	0.6	15.0	37.1	34.8	11.9	40.8	31.4	16.5	11.0	0.3
1946	43,163	0.6	0.6	13.6	41.0	34.4	9.8	40.0	32.5	16.4	10.8	0.3
1947	48,501	0.5	0.6	13.4	39.9	33.0	12.6	39.7	32.2	17.1	10.6	0.4
1948	37,919	0.4	0.6	13.7	36.2	34.4	14.7	40.3	32.2	16.9	10.2	0.4
1949	35,191	0.4	0.6	15.1	34.5	33.9	15.5	40.9	31.7	17.0	10.1	0.3

*Including petitions filed at District Registries.

†Annual Averages.

‡The Matrimonial Causes Act 1937, which came into force on 1st January 1938, extended the grounds for divorce; and restricted petitioning for dissolution within 3 years of the marriage to exceptional cases.

It is of interest to consider whether the spectacular rise in the incidence of petitioning during the war was confined to the younger couples who would, in general, have been married for the shorter periods, and particularly to the marriages of very short duration, namely those contracted in haste under the excitement of war. In fact it may be seen that this is not so. There were some changes in the distribution of petitions by duration, but these were trivial compared with the sharp rise in divorce incidence, and it must be concluded that all generations and longstanding as well as recent marriages have been involved.

The abnormally high proportions at durations of 10-20 and over 20 years may be seen in 1938 after the new grounds had been introduced by the 1937 Act. In general the proportions for durations over 10 were also relatively high in the early war years, whilst later in the war and in the immediate post-war years they fell and, passing through a trough, returned to a more or less intermediate position. The increase in petitions filed by younger married men later in the war and in the immediate post-war years may be presumed to have been associated with protracted separations due to war service.

The distribution by family size in Table XXXV shows small change from 1936 to 1949, such tendency as there is being for the proportion of childless families to decrease with complementary rises in the proportions with 1 child, and 2, and 3-6 children. There is no direct information on the change in distribution of size of all families during this period but, the birth rate having been depressed in the 1930's and having risen so sharply in the later years of the war and the immediate post-war years, it is presumed that childlessness will have decreased and family sizes increased. It may be, therefore, that the change seen in Table XXXV reflects no more than changes in families at large.

Taking the decrees absolute granted in 1950 according to the duration of the marriage concerned which are published in Table P.3 of Part II, and relating them to the number of marriages contracted in the years appropriate to these durations, the proportions of those marriages terminated by divorce in 1950 are found. Divorce rates calculated in this way are shown in Table XXXVI.

Table XXXVI.—Divorce* Rates by Duration of Marriage per 1,000 Related Marriages 1950, England and Wales.

Duration of Marriage	Years of Marriage (Mid year to mid year)	Number of Marriages	Number of Decrees Absolute	Rate per 1,000 Marriages
Under 3 years	1947-50	1,156,381	262	0.23
3-5	1945-47	790,935	3,403	4.30
5-7	1943-45	630,569	4,235	6.72
7-10	1940-43	1,148,453	6,555	5.71
10-15	1935-40	1,940,995	6,844	3.53
15-20	1930-35	1,607,504	4,060	2.53

These proportions ignore the fact that, by 1950, some of these marriages are not at risk of termination by divorce, having already been terminated by the death of the husband or wife, but the effect of this is unlikely to invalidate the drawing of general conclusions from Table XXXVI. It may be seen that the highest rates shown are for the 6th and 7th years of marriage but, although the rates thereafter decrease steadily with duration of marriage, they do so relatively slowly and, even at long durations of marriage, year after year divorce continues to take a steady toll.

*Decrees Absolute for dissolution or nullity of marriage.

Duration of Marriage and Age of Wife.—Providing the analysis is restricted to wives under age 50, population estimates are available to permit the calculation of divorce rates by duration of marriage and wife's age jointly, and allowance has been made for the effect of mortality (that is, of the original brides concerned, those who have died or been widowed are excluded) in the rates calculated in this way and shown in Table XXXVII.

Table XXXVII.—Divorce* Rates per 1,000 Married Women at risk by Wife's Present Age and Duration of Marriage, 1950, England and Wales.

Present Age of Wife	Duration of Marriage in Years						
	0-3†	3-5	5-7	7-10	10-15	15-20	20 and over
Under 25	0.2	7.8	16.9	44.2	—	—	—
25-29	0.2	4.2	7.9	10.2	13.4	—	—
30-34	0.3	3.0	5.2	5.2	6.0	12.4	—
35-39	0.3	2.6	4.7	4.1	3.2	4.7	8.2
40-44	0.4	2.4	3.3	3.2	2.2	2.3	4.1
45-49	0.6	2.1	2.6	2.2	1.7	1.7	2.2

Divorces within 3 years of marriage are a special class, consisting only of those suits for dissolution for which special authority has been given to petition within 3 years of marriage, and suits for nullity. It is not therefore surprising that, as shown in Table XXXVII, divorce rates at durations under 3 years do not follow the general pattern. In any event the rates at these durations are negligible.

At other durations the same pattern is seen without exception, namely the divorce rates decrease continuously with the age of the woman. It is also notable that the decline in the divorce rate with advancing woman's age is not steady, but starts very steeply and subsequently becomes less steep.

An outstanding rate is that of 44.2 divorces per 1,000 married women aged under 25 at duration 7-10 years. Since the women concerned have been married for at least 7 years and none had reached their 25th birthday at the time of their divorce, none could have reached their 18th birthday at marriage; they are in fact a group of women married at extremely young ages. It should be noted also that they were married in the war years 1941-1943. It is perhaps not unexpected that these marriages at a disturbed time, of extremely young girls should have proved abnormally unstable, but it is perhaps somewhat surprising that, even 7 years after marriage, as many as 4 per cent. of them should be divorced in a single year.

The data from which Table XXXVII was calculated may be re-arranged to give an approximate indication of divorce rates by age at marriage (instead of present age) and duration of marriage, as follows. Women who have been married for 0 to 5 years, i.e., on average say for 2½ years, were 2½ years younger when they married than they are now. If they are now aged 25-29, they were therefore aged 22½-27½ at marriage. Similarly the approximate age at marriage of other groups may be deduced. Divorce rates produced by such a re-arrangement of the data are recorded at Table XXXVIII. This shows, as before, that at each duration of marriage, the women who had married at the younger ages experience the higher divorce rate. It also shows that for each age at marriage

*Decrees Absolute for dissolution and nullity of marriage.

†Under the Matrimonial Causes Act, 1937, a petition for dissolution may only under exceptional circumstances be filed within 3 years of marriage.

Table XXXVIII.—Divorce* Rates per 1,000 Married Women at risk, by Nominal Age at Marriage of Wife and Duration of Marriage, 1950, England and Wales.

Nominal Age at Marriage of Wife	Duration of Marriage in Years			
	0-5	5-10	10-15	15-20
Under 17½†	} 2.1 {	19.2	13.4	12.4
17½-22½		9.1	6.0	4.7
22½-27½	2.2	5.2	3.2	2.3
27½-32½	1.7	4.3	2.2	1.7
32½-37½	1.4	3.2	1.7	—
37½-42½	1.3	2.3	—	—
42½-47½	1.2	—	—	—

the divorce rate declines with increasing duration of marriage after the group 5-10 years (the divorce rate for the first 5 years of marriage includes, of course, the first 3 years when hardly any divorces are permitted). This decline is not very steep for women married at young ages—for nominal marriage age under 17½ the rate at duration 15-20 years (12.4) is nearly ⅔rds that at duration 5-10 years (19.2)—but the decline is steeper for women who are older when married—for nominal marriage age 27½-32½ the rate at duration 15-20 years (1.7) is only a little more than ⅓rd of that at duration 5-10 years (4.3). It is thus seen that the women married at young ages, not only suffer a substantially higher divorce rate at short durations than those who are older when married, but also that a relatively high rate is maintained for a longer period of their marriage.

If the rates of Table XXXVIII may be taken as indicative of the rates that will hold on average in the next twenty years, then about 1 in 4 of the women marrying now at ages 16-18, 1 in 10 of those marrying at ages 19-22 and 1 in 16 of those marrying at ages 23-27 will have been divorced by the twentieth anniversary of their marriage.

Age of Wife and Number of Children of the Marriage.—Table P4, Part II, 1950, shows the number of decrees absolute granted in 1950 tabulated according to the age of wife at divorce and the number of surviving children of the marriage. Childless couples of all ages were 37 per cent. of the total divorced in 1950 and 34 per cent. had only one child. The corresponding percentages for women aged 25-29 were 43 and 40 respectively and decreased with advancing age of the wife to about 31 and 24 per cent. for wives aged 50-59.

It is, however, more informative to relate the numbers of divorces according to wife's age and number of children to the number of married women in the general population of England and Wales at the corresponding ages and with a corresponding number of children. Approximate populations of this kind have been derived from the 1951 Census 1 per cent. Sample and rates based upon them are shown in Table XXXIX. Reading along the rows of this table it will be seen that for wives of each age-group divorce rates tend to decrease with size of family.

Whilst the tendency for the rates to decrease along the rows exists, the rates throughout the table are, in general, within the range 2 to 3, or not far from this range. The outstanding exceptions are the rates for childless couples of 10.6 for wife's age 25-29, 11.7 for age 30-34 and 9.2 for age 35-39. If these women had not been married for very long, it would not be surprising that they had no children, and this point is examined below.

*Decrees Absolute for dissolution and nullity of marriage.

†The rates given for this nominal age group correspond to those of a group of average actual age at marriage of about 18½ years.

Table XXXIX.—Divorce* Rates per 1,000 Married Women at risk by Wife's Present Age and Size of Family, 1950, England and Wales.

Present Age of Wife	Number of Children						
	0	1	2	3	4	5-6	7 and over
Under 25 ..	3.3	3.8	2.9	2.8	0.8	—	—
25-29 ..	10.6	6.8	3.4	2.8	2.3	1.6	—
30-34 ..	11.7	5.6	2.7	2.4	2.5	2.5	0.6
35-39 ..	9.2	4.5	2.5	2.1	2.0	2.0	1.4
40-44 ..	5.3	3.2	2.1	2.0	1.8	1.5	1.3
45-49 ..	3.1	2.2	1.8	1.6	1.7	1.4	0.7

An analysis of the number of women divorced, at age 30-34 for instance, in 1950, irrespective of the sizes of their families but according to the duration of their marriages in Table P3 of Part II shows that only 383 had been married less than 5 years. The rate of 11.7 for childless women aged 30-34 in Table XXXIX, was derived from 2,375 divorces shown in Table P4 of Part II. Thus, since at most 383 could have been at durations under 5 years, nearly 2,000 at least were at durations over 5 years, and had had plenty of time to have children. If each age group from 25 to 40 is examined, the same thing is found. The deductions that can be made from such an examination concerning the distribution over durations of marriage of childless couples at the time of their divorce are as follows:—

Present Age of Wife	MAXIMUM Percentage at Short Durations, of (years)				Remainder MINIMUM percentage of:—
	0-3	3-5	5-7	7-10	
25-29	1.5	40.5	—	—	58.0 at durations over 5 years
30-34	1.4	14.7	27.0	—	56.9 " " " 7 "
35-39	1.1	7.9	13.2	36.3	41.5 " " " 10 "

Thus it is seen, not only that divorce rates are abnormally high in childless marriages, but also that the majority of the marriages involved have been of sufficient duration to allow the couple to have had children.

Re-marriage of Divorced Persons

Matters which are closely related to any statistical study of the incidence of divorce are the extent to which divorced persons re-marry, the marital condition of the spouse and the ages at which such re-marriages are most frequent.

The general trend of the numbers of divorced persons who re-married in England and Wales during the twenty-five years from 1926 to 1950 is shown in Table XL.

Expressed as percentages of the number of persons divorced in the same period the averages for the five quinquennial periods 1926-1930 to 1946-1950 of re-marriages of divorced persons (columns (2) and (3) of Table XL), were:—

Period	1926-1930	1931-1935	1936-1940	1941-1945	1946-1950
Percentage of divorced who re-married ..	58.3	64.2	69.2	60.4	61.1

*Decrees Absolute for dissolution and nullity of marriage.

Table XL.—Annual Number of Persons Divorced and of Divorced Persons who Re-married, 1926 to 1950, England and Wales.

Period	Number of persons divorced in the period	Number of divorced persons who re-married in the period							
		Persons	Men	Women	Divorced men marrying spinsters	Divorced men marrying widows	Divorced men and women inter-marrying	Divorced women marrying bachelors	Divorced women marrying widowers
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1926-30	6,716	3,917	2,128	1,789	1,662	270	392	1,225	368
1931-35	8,022	5,154	2,777	2,377	2,179	302	592	1,597	484
1936-40	12,361	8,558	4,580	3,978	3,641	464	949	2,746	758
1941-45	20,778	12,548	7,093	5,455	5,453	874	1,532	3,587	1,102
1946-50	79,803	48,898	26,273	22,625	17,767	3,303	10,406	14,271	3,151
1936	8,114	6,468	3,507	2,961	2,788	354	730	2,009	587
1937	9,772	6,988	3,759	3,229	2,964	374	842	2,192	616
1938	12,500	8,179	4,404	3,775	3,467	471	932	2,576	733
1939	15,910	10,698	5,715	4,983	4,558	550	1,214	3,480	896
1940	15,510	10,458	5,514	4,944	4,430	571	1,026	3,474	957
1941	12,786	9,378	5,091	4,287	4,028	575	976	2,900	899
1942	15,236	9,706	5,437	4,269	4,214	664	1,118	2,815	895
1943	20,024	11,049	6,157	4,892	4,712	797	1,296	3,237	1,007
1944	24,624	13,728	7,914	5,814	6,009	981	1,848	3,693	1,197
1945	31,268	18,879	10,867	8,012	8,303	1,355	2,418	5,292	1,511
1946	59,658	29,636	16,479	13,157	11,781	2,287	4,822	8,596	2,150
1947	120,508	56,945	30,751	26,194	21,272	3,980	10,998	17,277	3,418
1948	87,396	58,728	31,201	27,527	21,072	3,812	12,634	17,541	3,669
1949	69,712	51,494	27,645	23,849	18,150	3,400	12,190	14,435	3,319
1950	61,740	47,687	25,290	22,397	16,558	3,038	11,388	13,503	3,200

Divorced persons who re-marry during any period are not confined to those granted a decree absolute during the same period, so that the above figures do not precisely represent the proportion of divorced persons who ultimately re-marry but, to some extent, will be an understatement even when the number of divorces is increasing slowly. In the period under review, when the increase in divorce has been so rapid, and when the war may have imposed an enforced delay on re-marriage, it may well be that the proportion of divorced persons who ultimately re-marry will be substantially higher than the 60 or 61 per cent. shown for those who were divorced and re-married during 1941 to 1950; for while the rise from 58 per cent. to 69 per cent. between 1926-1930 and 1936-1940 indicates a rise in the proportion of divorced persons re-marrying in keeping with the general rise in the proportion of persons married in the population as a whole during that time, the subsequent fall to 60 per cent. may merely be a feature of the distortion referred to above.

It may be concluded from the trend of the above-mentioned figures that about two-thirds to three-quarters of persons obtaining a divorce will ultimately re-marry.

Throughout the period covered by Table XL the number of divorced men who re-married exceeded that of divorced women, the latter being on average about 84 per 100 men. The percentage ratios of divorced women to divorced men re-marrying rose slightly between 1926-1930 and 1936-1940 from 84.1 to 86.9, fell to 76.9 in 1941-1945 and rose to 86.1 in 1946-1950.

The divergence from the general trend in 1941-1945 is shown in detail in the following statement:—

Divorced women remarrying per 100 divorced men remarrying:—
[columns (4) and (5) of Table XL].

1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
84.4	85.9	85.7	87.2	89.7	84.2	78.5	79.5	73.5	73.7	79.8	85.2	88.2	86.3	88.6

The sharp rise in 1939 and 1940 might be attributable to the operation of the Matrimonial Causes Act, 1937. After 1940 the ratios fell to a trough in

1944 and 1945 and then recovered each year so that the average for the period 1941 to 1950 as a whole was 84.2 per cent. indicating that the relative excess of divorced women re-marrying in the years 1947 to 1950 almost compensated for the deficiency in the period 1941 to 1946.

The Partners of Divorced Persons re-marrying

Table XLI shows the proportion of bachelor and widower bridegrooms whose brides were divorced women (Col. (2)), of divorced men whose brides were divorced women (Col. (3)) and the ratio of these proportions in Col. (4). Similar figures for women are in Cols. (5) to (7).

Table XLI.—Absolute and Relative Proportions of Bachelors and Widowers and of Divorced Men Bridegrooms marrying Divorced Women and of Spinsters and Widows and of Divorced Women Brides marrying Divorced Men, 1935 to 1950, England and Wales.

Year	Marriages with divorced women per cent. of all marriages, of:		Ratio (2) ÷ (3)	Marriages with divorced men per cent. of all marriages, of:		Ratio (5) ÷ (6)
	Bachelors and Widowers	Divorced Men		Spinsters and Widows	Divorced Women	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1935	0.7	11.0	0.06	0.8	12.9	0.06
1936	0.7	10.4	0.07	0.9	12.3	0.07
1937	0.8	11.2	0.07	0.9	13.0	0.07
1938	0.9	10.6	0.08	1.1	12.3	0.09
1939	1.0	10.6	0.09	1.2	12.2	0.10
1935-39	0.8	10.7	0.07	1.0	12.5	0.08
1940	1.0	9.3	0.11	1.1	10.4	0.11
1941	1.0	9.6	0.10	1.2	11.4	0.11
1942	1.0	10.3	0.10	1.3	13.1	0.10
1943	1.5	10.5	0.14	1.9	13.2	0.14
1944	1.7	11.7	0.15	2.4	15.9	0.15
1945	1.8	11.1	0.16	2.5	15.1	0.17
1940-45	1.3	10.6	0.12	1.7	13.5	0.13
1946	2.9	14.6	0.20	3.8	18.3	0.21
1947	5.6	17.9	0.31	6.7	21.0	0.32
1948	5.8	20.2	0.29	6.7	22.9	0.29
1949	5.1	22.0	0.23	6.1	25.6	0.24
1950	5.0	22.5	0.22	5.8	25.4	0.23
1946-50	4.9	19.8	0.25	5.8	23.0	0.25

The increase in divorce, and thus the greater proportion of divorced persons in the marriageable population, is reflected by the rise from 1935 to 1950 in the proportions of bachelors and widowers marrying a divorced woman from 0.7 per cent. to 5.0 per cent. (Col. (2)), and of divorced men marrying a divorced woman from 11.0 to 22.5 per cent. (Col. (3)). Similar increases are shown for spinsters and widows marrying divorced men, from 0.8 to 5.8 per cent. (Col. (5)) and from 12.9 to 25.4 per cent. for divorced women marrying divorced men (Col. (6)).

The ratios shown in Cols. (4) and (7) may be interpreted as representing the fraction of their "share" of divorced persons which bachelors and widowers

and spinsters and widows took for their partner in marriage. It might have been expected that the increased proportions from 1935 to 1950 referred to above would have been about the same pro rata for each of the four Classes considered but the substantial rise in the ratios shown in Cols. (4) and (7) between 1935 and 1946-1950 shows that bachelors, widowers, spinsters and widows took only 6 per cent. of their share of divorced persons for their spouse in 1935 and 25 per cent. in 1946-1950; the implication appears to be that there is less reluctance on their part to marry a divorced person today than there was 15 years ago.

Ages at which the Divorced remarry

In Table XLI no account was taken of the age factor in the remarriage of divorced persons and an analysis by three age-groups at which remarriage is frequent is shown in Table XLII in a similar form to that of Table XLI. It will suffice to show the figures for selected years of the period 1935-1950 analysed by ages 25-29, 30-34 and 35-39. It will be seen from Table XLI that a steady progression was followed from 1935 to 1946 and this period will be adequately covered by 1937—the year before the coming into operation of the Matrimonial Causes Act 1937—and 1946. A new phase commenced in 1947 and this year and 1950 will represent the current trend.

Table XLII.—Absolute and Relative Proportions of Bachelors and Widowers and of Divorced Men Bridegrooms marrying Divorced Women, and of Spinsters and Widows and of Divorced Women Brides Marrying Divorced Men, for selected age groups, 1937, 1946, 1947 and 1950, England and Wales.

Year	Age of Bride-groom	Marriages with divorced women per cent. of all marriages, of :		Ratio (3) ÷ (4)	Age of Bride	Marriages with divorced men per cent. of all marriages, of :		Ratio (7) ÷ (8)
		Bachelors and Widowers	Divorced Men			Spinsters and Widows	Divorced Women	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1937	25-29	0.5	8.5	0.06	25-29	1.0	10.4	0.10
	30-34	1.3	8.2	0.16	30-34	2.5	14.1	0.18
	35-39	2.8	10.6	0.26	35-39	3.7	15.6	0.24
1946	25-29	2.0	7.7	0.26	25-29	4.8	13.5	0.36
	30-34	5.2	10.8	0.48	30-34	10.0	18.7	0.53
	35-39	8.5	14.0	0.61	35-39	13.5	22.1	0.61
1947	25-29	4.8	10.1	0.48	25-29	9.3	15.5	0.60
	30-34	10.3	14.3	0.72	30-34	17.7	23.1	0.77
	35-39	15.6	20.4	0.76	35-39	22.4	27.2	0.82
1950	25-29	4.3	12.4	0.35	25-29	8.7	19.7	0.44
	30-34	10.0	19.4	0.52	30-34	17.2	27.0	0.64
	35-39	15.3	24.9	0.61	35-39	21.6	32.0	0.68

The effect of ignoring the differences in age structure of bachelors, widowers and divorced men and spinsters, widows and divorced women is seen by comparing Columns (5) and (9) of Table XLII with Columns (4) and (7) of Table XLI. At each age bachelors and widowers and spinsters and widows are seen to marry a larger fraction of their "share" of divorced persons than Table XLI

implied, especially so as age advances. At age 35-39 even before the war they took a quarter of their share and since 1946 have taken well over a half. In 1947, the year in which 60,254 decrees absolute were granted, the fraction of their "share" of divorced persons taken by the non-divorced was highest at each age group being about one half at 25-29, and about three-quarters at 30-34 and 35-39.

The explanation is that bachelors and spinsters numerically are predominant at the younger ages of marriage and will look for their partner among persons of similar age to their own, an age at which divorced persons are relatively few. As about 47 per cent. of bachelors and 69 per cent. of spinsters marry under 25 years of age the inclusion of this large section in the analysis shown in Table XLI masks the pronounced age factor which is brought out in Table XLII. The relative reluctance of the younger bachelors and spinsters to marry a divorced person is shown in Table XLII by the increase of the ratios with age for each year in Columns (5) and (9).

An analysis in greater detail of age and marital condition is given in Table XLIII for the calendar year 1950 showing the percentage distribution of brides by their marital condition with bachelor, widower and divorced bridegrooms at each age group up to 60 and a similar distribution of bridegrooms by the marital condition and age of bride.

Table XLIII.—Distribution by Marital Condition of Brides according to Ages and Marital Conditions of Bridegrooms; and of Bridegrooms according to Ages and Marital Conditions of Brides; 1950, England and Wales.

Age of Bride-groom	Marital Condition of Bride	Percentage Distribution of Brides by Marital Condition, the Bridegroom being :			Age of Bride	Marital Condition of Bridegroom	Percentage Distribution of Bridegrooms by Marital Condition, the Bride being :		
		Bachelor	Widower	Divorced Man			Spinster	Widow	Divorced Woman
Under 25	Spinster	98.5	94.4	90.1	Under 25	Bachelor ..	97.0	89.7	85.9
	Widow ..	0.5	2.8	4.3		Widower ..	0.7	3.1	2.8
	Divorcee	1.0	2.8	5.6		Divorcee ..	2.3	7.2	11.3
25-29	Spinster	94.1	83.6	83.7	25-29	Bachelor ..	88.9	78.1	75.5
	Widow ..	1.7	7.4	3.9		Widower ..	2.6	7.4	4.8
	Divorcee	4.2	9.0	12.4		Divorcee ..	8.5	14.5	19.7
30-34	Spinster	85.5	74.9	73.7	30-34	Bachelor ..	76.1	65.3	63.7
	Widow ..	4.7	11.2	6.8		Widower ..	7.3	13.4	9.3
	Divorcee	9.8	13.9	19.5		Divorcee ..	16.6	21.3	27.0
35-39	Spinster	75.4	64.5	63.2	35-39	Bachelor ..	62.3	55.4	53.2
	Widow ..	9.8	16.7	11.9		Widower ..	17.0	20.6	14.8
	Divorcee	14.8	18.8	24.9		Divorcee ..	20.7	24.0	32.0
40-44	Spinster	66.5	57.8	56.6	40-44	Bachelor ..	46.9	44.3	44.0
	Widow ..	16.4	23.1	15.3		Widower ..	31.9	35.8	23.0
	Divorcee	17.1	19.1	28.1		Divorcee ..	21.2	19.9	33.0
45-49	Spinster	58.8	49.0	54.0	45-49	Bachelor ..	36.0	32.9	35.7
	Widow ..	23.4	31.5	17.8		Widower ..	48.7	50.8	36.2
	Divorcee	17.8	19.5	28.2		Divorcee ..	15.3	16.3	28.1
50-54	Spinster	51.6	42.7	50.3	50-54	Bachelor ..	26.2	23.1	31.4
	Widow ..	31.9	40.8	20.5		Widower ..	59.8	66.0	47.9
	Divorcee	16.5	16.5	29.2		Divorcee ..	14.0	10.9	20.7
55-59	Spinster	48.3	40.7	50.0	55-59	Bachelor ..	20.8	19.3	26.6
	Widow ..	38.3	46.7	28.7		Widower ..	72.2	74.7	56.8
	Divorcee	13.4	12.6	21.3		Divorcee ..	7.0	6.0	16.6

The general features of the table are that the highest proportion of spinster brides is at the younger ages and of widow brides at the older ages of bridegrooms which merely reflects the greater proportion of spinsters at the younger ages and of widows at the older ages in the marriageable population of the country. The highest proportions of divorced women remarrying correspond

to bridegrooms aged 45-54. The figures on the right-hand side of the table are similar, the highest proportions of divorced men remarrying corresponding with brides aged 35-44.

Comparing the figures in the three columns on the left it is seen that almost without exception the proportion of spinster brides is highest for bachelor bridegrooms, of widows it is highest for widower bridegrooms and for divorced women it is highest when the bridegroom is a divorced man. Taking account of the fact that husbands are usually older than their wives an examination of the right-hand side of the table reveals a similar pattern.

Proportion of Divorced Persons in the population and proportions marrying in a year

The distributions shown in the previous tables have to some extent been reflections of the age and marital condition structure of the unmarried population of the country. In order to clarify this, Table XLIV has been prepared from the one per cent. sample of the Census of population of Great Britain as at the 8th April, 1951, and the marriages registered in England and Wales in 1950. The proportion per cent. of all non-married men in the population at each age-group from 20-24 to 55-59 is shown by marital condition, and corresponding proportions of men who married in 1950. Similar proportions are shown for women in the lower half of the table. It is unlikely that the population distribution in England and Wales will be very different from that of Great Britain or that the difference between the date of the Census and the date of the marriages will materially affect conclusion drawn from the figures.

Comparing the distribution of the marriages with that of the population it is seen that elderly bachelors are relatively unlikely to marry, for although they are 60 per cent. of the non-married population aged 55-59 they are only 17 per cent. of those who married at this age, but widowers of the same age are much more likely to marry again, for although they form only 37 per cent. of the non-married population aged 55-59, they form 68 per cent. of bridegrooms of this age, and divorced men of this age are even more likely to re-marry. Spinsters aged 55-59 were 47 per cent. of the non-married women of that age and 29 per cent. of the brides of the same age. Widows of this age, forming 51 per cent. of the population and 63 per cent. of the marriages, are more likely to marry than spinsters, and divorced women are even more likely to marry.

At all ages a much higher rate of marriage is shown for divorced men and women than for the other marital conditions. The ratio of the proportion of divorced persons among bridegrooms or brides to the proportion among non-married men or women in the population is relatively steady at 4 or 5. The corresponding ratio for widowers and widows is only $1\frac{1}{2}$ or 2, for bachelors it is even lower, decreasing from 1 at the youngest ages to just over $\frac{1}{4}$ at age 55-59, while for spinsters it decreases from 1 to nearly $\frac{2}{3}$, as shown by the following statement of the values of this ratio, derived from Table XLIV, for each age-group and marital condition of men and women.

Marital Condition	Ages							
	20-	25-	30-	35-	40-	45-	50-	55-59
Bachelors	1.0	1.0	0.9	0.7	0.6	0.5	0.4	0.3
Widowers	1.0	1.6	1.6	2.0	2.2	2.2	2.1	1.9
Divorced	—	3.9	4.0	5.0	4.7	5.6	4.5	4.8
Spinsters	1.0	0.9	0.8	0.7	0.7	0.6	0.6	0.6
Widows	0.7	1.3	1.3	1.4	1.3	1.4	1.3	1.2
Divorced	4.0	3.3	2.8	3.4	4.1	4.7	4.6	5.3

Table XLIV.—Distribution of Various Age Groups by Marital Condition: Non-Married Population, 1951, Great Britain, and Bridegrooms and Brides, 1950, England and Wales.

Distribution of Non-Married MEN, Great Britain, 1951								
Marital Condition	Non-married men aged							
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
Bachelors	99.9	98.6	94.4	90.5	85.1	80.3	70.8	60.4
Widowers	0.1	0.5	2.1	4.3	8.0	14.4	24.2	36.6
Divorcees	0.0	0.9	3.5	5.2	6.9	5.3	5.0	3.0
All non-married men	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Distribution of Bridegrooms, England and Wales, 1950								
Marital Condition	Bridegrooms aged							
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
Bachelors	99.7	95.7	82.6	65.1	50.1	38.2	27.0	17.2
Widowers	0.1	0.8	3.4	8.8	17.6	32.1	50.5	68.4
Divorcees	0.2	3.5	14.0	26.1	32.3	29.7	22.5	14.4
All non-married men	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Distribution of Non-Married WOMEN, Great Britain, 1951								
Marital Condition	Non-married women aged							
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
Spinsters	99.5	95.2	84.6	78.9	74.5	69.8	58.6	47.1
Widows	0.3	2.1	7.8	13.4	19.3	25.9	38.3	51.3
Divorcees	0.2	2.7	7.6	7.7	6.2	4.3	3.1	1.6
All non-married women	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Distribution of Brides, England and Wales, 1950								
Marital Condition	Brides aged							
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
Spinsters	99.0	88.2	68.2	55.4	49.0	43.0	34.5	28.8
Widows	0.2	2.8	10.4	18.2	25.5	36.7	51.3	62.8
Divorcees	0.8	9.0	21.4	26.4	25.5	20.3	14.2	8.4
All non-married women	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

BIRTHS, FERTILITY AND REPRODUCTIVITY

Live Births—Legitimate and Illegitimate Combined

Number of Live Births and crude birth rates per 1,000 population

The live births occurring in the five immediate post-war years 1946 to 1950 numbered in all 3,904,666, representing an annual average of 781 thousands which may be compared with the annual average of 656 thousands for the 6 war years 1940 to 1945 and 610 over the 5 immediate pre-war years 1935 to 1939.

The figures are taken from Table B of Part II of the 1950 Annual Review. It is to be noted that the basis of the period assignment was changed after 1938, the record for that and preceding years being the numbers of births registered in the calendar year, while those for 1939 and later years refer to the numbers which actually occurred in the calendar year; reference is made on pages 126-127 to the effect of registration time lag, from which it will be seen that the change of basis is of advantage to the comparisons made in this commentary.

Expressed in the customary crude rate form, namely, in terms of the total population of all ages, the 1946-1950 experience represents an average annual rate of 18.0 live births per 1,000 population, marking an increase of 15 per cent. over the corresponding 1940-1945 average of 15.6 per 1,000 and of 21 per cent. over the pre-war average of 14.9 per 1,000*.

Averages thus expressed, however, fail to portray the important aspects of the situation. The events of the period under review, 1946-1950, are in large measure complementary to those of the war years themselves and thus form part only of a combined experience of which the outstanding features are those of change and fluctuation; these were initially set in motion during the war period and were influenced to a large extent by the varying phases of the conflict, but their resultant effects have been extended into the post-war years, and, for a proper appreciation of them, regard must be had to the records of the individual years and quarters of the period which are regularly shown in Tables B and D of Parts II of the successive Statistical Reviews. The salient facts have been extracted in adjoining Table XLV and, in order that they may be seen in perspective, the main totals have been extended in both directions, repeating the records of immediate pre-war years which have been dealt with in earlier reports and adding those of two later years from records so far provisionally reported in the Quarterly Returns or otherwise available.

The course of events thus set out will be more readily appreciated from their portrayal in the diagram annexed (D). The thin rectangular lines show the live birth rates in successive calendar quarters, in which form the progression will be seen to be dominated by the cyclical seasonal variations which have always been associated with the birth experience. The prominence of this feature tends to mask somewhat the underlying changes, and in order to avoid this and to show the progression in a more continuous form, the thick line has been superimposed from which the seasonal movements have been averaged out, each point in the thick line representing the average of the four quarters of which it is the centre.

* Basic populations for 1939 and earlier years excluded Armed Forces and merchant seamen overseas (about 182 thousands in 1939). Allowance for this would raise the 21 per cent. increase to one of 23 per cent.

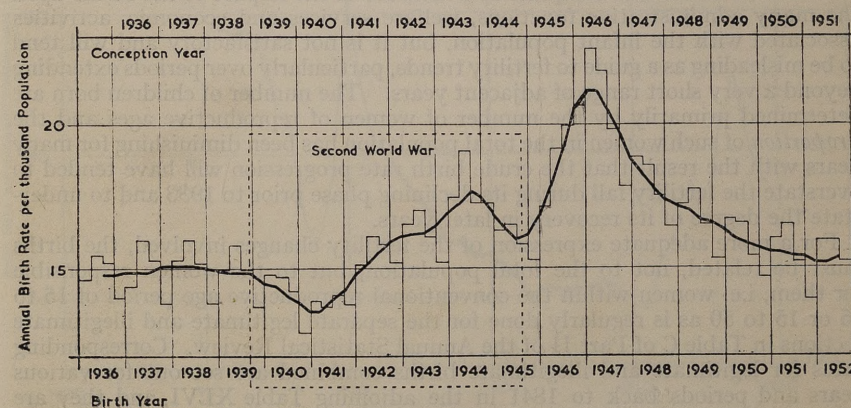
Table XLV.—Live Births and Live Birth Rates (per 1,000 population), England and Wales.

Calendar Year	Number of Live Births (thousands)					Live Births per 1,000 population (in the form of Annual Rates)				
	Year	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Year	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.
1936	605	148	158	156	144	14.8	14.6	15.5	15.2	14.0
1937	611	145	164	159	143	14.9	14.4	16.0	15.3	13.8
1938	621	155	164	158	144	15.1	15.3	16.0	15.2	13.8
1939	614	153	163	155	143	14.8	14.9	15.8	14.9	13.7
1940	590	154	153	149	134	14.1	14.8	14.7	14.2	12.8
1941	579	143	143	148	145	13.9	13.9	13.7	14.1	13.8
1942	652	156	168	167	160	15.6	15.1	16.1	15.8	15.2
1943	684	172	179	171	162	16.2	16.5	17.0	16.1	15.2
1944	751	184	201	184	183	17.7	17.4	19.0	17.2	17.2
1945	680	171	175	169	164	15.9	16.3	16.5	15.8	15.3
1946	821	180	204	214	223	19.2	17.1	19.1	19.9	20.7
1947	881	240	234	214	193	20.5	22.6	21.8	19.8	17.8
1948	775	203	201	192	180	17.8	18.8	18.6	17.5	16.4
1949	731	186	193	182	169	16.7	17.2	17.7	16.5	15.3
1950	697	181	182	171	163	15.8	16.7	16.6	15.4	14.7
1951	678	174	181	168	154	15.4	16.0	16.5	15.2	13.9
*1952	674	174	174	168	158	15.3	15.9	15.9	15.2	14.3

Table XLV and its accompanying diagrammatic representation serve to bring out the nature and magnitude of the disturbance imposed by the war upon the comparatively slow and even tempo of change which had been characteristic of preceding peace years and which may be expected to be resumed again over the years now coming into sight.

Following the outbreak of the war in late 1939, the birth rate, which for some years had been little different from 15 per thousand population per annum, at once took a downward turn, falling to 14.1 per 1,000 in 1940 and finally to 13.9 in 1941, a point which marks the lowest national rate ever to have been recorded in the registration history of this country. The fall was associated with and probably explained by the circumstances of the first two war years which marked the occasion of spectacular enemy successes and the heaviest

DIAGRAM D.—Birth Rates per 1,000 Population by Birth and Conception Periods, 1936-1952, England and Wales.



* Provisional.

aerial attack upon the civilian population of this country with its tremendous interference in the normal habits and amenities of life. With the easing of the extreme tension of the early years after Russia and the United States of America entered the war on the side of the Allies, not only did the rate recover itself but there began a period of resurgence of a quite unforeseen character; within three short years the rate rose from its unprecedented minimum of 13.9 in 1941 to 17.7 per 1,000 in 1944, a position not hitherto recorded since the early twenties; and would seemingly have gone on rising but for the wholesale removal of young men from the country on D day (6th June, 1944) which resulted in a temporary recession in the following year reducing it to 15.9 per 1,000 at the close of hostilities in 1945. The experience of the war years was examined in considerable detail in the last Text Volume covering the years 1940-1945 and this should be consulted for any enlargement of the brief summary given in this paragraph.

A feature emerging from the consideration of the material then available which is relevant to the subsequent period now under consideration was the evidence that, notwithstanding the recorded rise in the birth rate from 1942 onwards, a number of births which might otherwise have been expected, had in fact been suppressed or at any rate were being deferred during the war period itself and were in the course of being made up in the immediately following years. The full effect of this making up process is now to be seen in the movement of the rate during the years subsequent to 1945. Following the cessation of hostilities, the birth rate at once resumed an upward movement on a steepened gradient taking it to 19.2 per 1,000 in 1946 and ultimately to 20.5 in 1947 with a maximum point in excess of 21 during the early part of that year. Thereafter the rate subsided, sharply at first (17.8 in 1948) but with diminishing intervals to 16.7 in 1949 and 15.8 in 1950. The general shape of the curve over the years 1946 to 1950 with its high initial incidence and later tapering decline suggests that the whole period has been affected in greater or lesser degree by the post-war adjustment process; from the advance records of later years there would appear to have been a further fractional fall to 15.4 in 1951 at which the rate appears to have levelled itself out for the time being and from which it seems reasonable to assume that the adjustment was virtually completed in 1950 restoring the rate thereafter to a more normal peace time level, which, when expressed in relation to the total population, is roughly similar to what it was at the outbreak of war twelve years earlier.

Birth Rates per 1,000 Women aged 15-45

The expression of the births in the form of the crude population rates so far used is both useful and adequate as a measure of the impact of the births upon the many administrative functions, welfare services and economic activities associated with the infant population, but it is not satisfactory and will tend to be misleading as a guide to fertility trends, particularly over periods extending beyond a very short range of adjacent years. The number of children born are determined primarily by the number of women of reproductive ages and the *proportion* of such women in the total population has been diminishing for many years with the result that the crude birth rate progression will have tended to overstate the fertility fall during its declining phase prior to 1933 and to understate the degree of its recovery in later years.

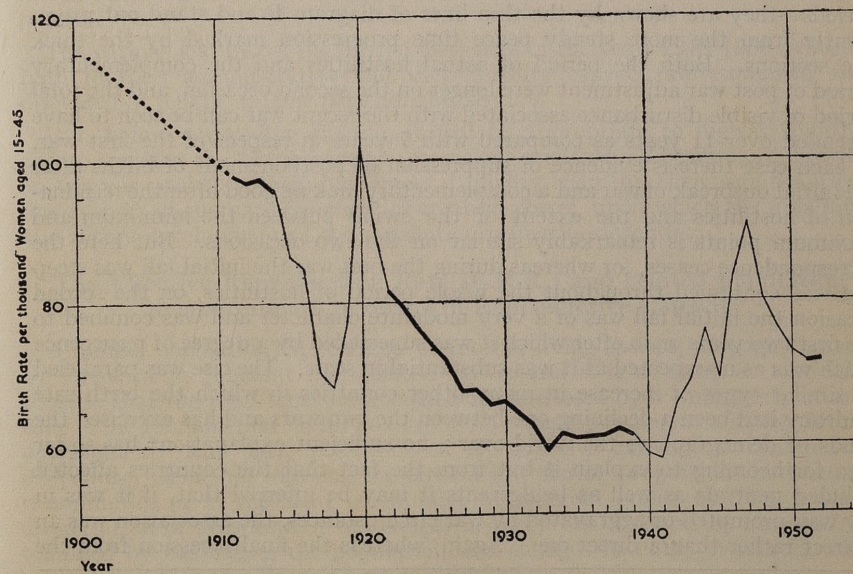
For a more adequate expression of the fertility changes involved, the births must be related, not to the total population, but to the women responsible for them, i.e. women within the conventional reproductive age period of 15 to 45 or 15 to 50 as is regularly done for the separate legitimate and illegitimate sections in Table C of Part II of the Annual Statistical Review. Corresponding rates for legitimate and illegitimate births combined are set out for various years and periods back to 1841 in the adjoining Table XLVI, and they are supplemented by a pictorial representation of the latter half of the period in Diagram E.

Table XLVI.—Live Births. Rates per 1,000 Women aged 15-45: 1841-1952, England and Wales.

Year	Live Births per 1,000 women 15-45	Ratio to 1938 (taken as 100)		Year	Live Births per 1,000 women 15-45	Ratio to 1938 (100)	Year	Live Births per 1,000 women 15-45	Ratio to 1938 (100)
		Direct (Un-standardised)	Standardised for age						
Long Range (3 year averages)				Individual Years from 1912					
1841	148.3	238	—	1912	97.0	156	1933	59.4	95
1851	149.8	241	—	1913	97.6	157	1934	61.4	99
1861	151.1	243	—	1914	95.8	154	1935	60.9	98
1871	155.7	250	—	1915	86.6	139	1936	61.0	98
1881	147.7	238	235	1916	83.9	135	1937	61.2	98
1891	129.8	209	205	1917	70.5	113	1938	62.2	100
1901	114.8	185	179	1918	68.1	109	1939	61.3	99
1911	98.3	158	155	1919	77.6	125	1940	58.7	94
1921	90.9	146	147	1920	101.8	164	1941	57.9	93
1931	64.3	104	102	1921	89.6	144	1942	65.2	105
1941	60.7	98	98	1922	81.6	131	1943	68.6	110
1951*	72.1	116	117	1923	79.5	128	1944	75.7	122
				1924	76.3	123	1945	68.8	111
				1925	73.9	119	1946	83.3	134
				1926	71.9	116	1947	90.6	146
				1927	67.5	109	1948	80.2	129
				1928	67.8	109	1949	76.0	122
				1929	65.9	106	1950	73.0	117
				1930	66.2	106	1951	71.5	115
				1931	64.3	103	1952*	71.5	115
				1932	62.6	101	1953	75.5	

DIAGRAM E.—Live Birth Rates per 1,000 Women aged 15-45: 1901-1952, England and Wales.

(The thin lines cover the periods of disturbance associated with the two world wars.)



* Provisional.

In this form the rates provide a reasonably reliable guide to the course of fertility over periods of any length of time, long or short. Over the period since compulsory civil registration was introduced in 1837, the incidence was at its maximum in the early years when the annual numbers of births were in the neighbourhood of 150 per 1,000 women aged 15 to 45, a general level which was maintained with little change over the middle half of the nineteenth century. In the last quarter of that century however the long decline set in, during the course of which the rate fell almost continuously for 50 years or more to a point some 60 per cent. below its earlier level; from the aforesaid 150 per 1,000 at the beginning it declined to 96 per 1,000 at the outbreak of the first war in 1914 and then, after some marked fluctuation associated with that war, went on falling to reach an ultimate minimum of 59 in 1933. That year appears to have marked a turning point, for the fall which, up to then, had been maintained on a steep gradient, was somewhat abruptly arrested and was replaced by an improvement, which, though of no great substance, was more or less maintained, raising the rate to 62.2 per 1,000 in 1938. With the onset of the second war, the steady course of the rate was again interrupted and the births have been subject to the more violent fluctuations which have already been described and which only now appear to be giving place once more to the less spectacular conditions of peace time continuity; as expressed in relation to the women at risk (ages 15 to 45), the 1938 rate of 62.2 per 1,000 fell to an all time low of 57.9 in 1941 which was immediately followed by the sharp but broken rise which in 6 years took it to 90.6 (i.e. in 1947) from which a final recession—this time on a diminishing scale—has reduced it to between 71 and 72 per thousand.

The gradual tapering away of the 1947-51 fall is consistent with the final shedding of the disturbing war elements and from the facts that the provisional 1952 figure is much the same as that of 1951 and that there appear to be no solid grounds for expecting any marked change either way it seems reasonable to contemplate a period of stability in the neighbourhood of present levels at least over the immediate years ahead.

From the longer range portrayal of events can be seen and compared the major similarities and dissimilarities of the movements during the two war periods—they are shewn by the thin lines of diagram E and stand out prominently from the more steady peace time progression marked by the thick line sections. Both the period of actual hostilities and the complementary period of post war adjustment were longer on the second occasion, and the total period of visible disturbance associated with the recent war can be seen to have extended over 11 years as compared with 7 years in respect of the first war. In each case there is evidence of suppression or postponement of births after the initial outbreak of war and a complementary making good after the termination of hostilities and the extent of the swing between the minimum and maximum points is remarkably similar on the two occasions. But here the correspondence ceases, for whereas during the first war the initial fall was steep and was continued throughout the whole period of hostilities, on the second occasion the initial fall was of a very moderate character and was confined to the first two years or so after which it was superseded by a degree of resurgence which was as unexpected as it was substantial in scale. The rise was paralleled by similar types of increase in many other countries in which the birth rate tendency had been a declining one between the two wars and has exercised the minds of demographers the world over; no sufficient explanation* has so far been forthcoming to explain it but from the fact that the countries affected included neutrals as well as belligerents it may be inferred that, if it was in any way prompted or aggravated by war circumstances, the association was an indirect rather than a direct one. Again, whereas the final recession from the

* But see reference to possible generation influence in Appendix III, pages 224-225.

maximum in the first post-war period was short and sharp, picking up the pre-war rate and direction of fall at a point which might have been reached had there been no war, the initial steepness of the second post-war fall has flattened out to an ultimate peace time level some 15 per cent. in excess of the corresponding pre-war position.

Perhaps the most important feature of this demonstration is its revelation that the reproductive women of today are bearing rather more than 8 children for every 7 they were bearing in the years just before the war, an improvement which is completely masked in the crude birth rate comparison where the births are related to the total population.

Age Standardisation

In basing the fertility rates upon the total women in the 15-45 age field, changes of age incidence within the field have been disregarded. Since however the intensity of fertility varies over the reproductive period, rising from zero at the beginning to a maximum from which it returns again to zero at the end, it will be seen that changes in the fertility rates used above will have been affected by changes in the ages of the women at risk as well as by changes in fertility. The element of distortion introduced thereby can be eliminated by subjecting the comparison to an age standardization process under which the recorded births of each year are compared with the calculated number which would have occurred if the females at successive ages had borne children at certain fixed rates employed as a standard. An indication of the effect of the distortion and the improvement introduced by its removal is provided in the 3rd and 4th columns of Table XLVI, in which the fertility experiences of various periods are shown as ratios of that of 1938, two ratios being calculated for each experience, that in the 3rd column representing the position before standardization and that of the 4th column after standardization on the basis of the 1938 age fertility rates. The degree of distortion in the unstandardized values revealed thereby is not of great significance in relation to the changes in fertility over the 70 years for which the comparison is available, though it may be noted, for what it is worth, that the improvement in fertility between 1938 and the present time is slightly increased in the more accurate measure provided by the standardized comparison.

The various features of the birth experiences of the years 1946-1950, relating both to their administrative and their fertility aspects, are examined and discussed at length in later pages of this section.

But, before proceeding thereto, it will be appropriate to digress slightly, and to consider the births from an alternative angle which bears more directly on what is probably their fundamental quality, namely, their significance as replenishers of the national stock of creative power, upon which the moulding and future development of the population primarily depends.

The Effective Reproduction Rate (E.R.R.) and related population measurements in terms of Reproductive Capacity

A human population, in common with other living species, propagates itself by virtue of its inherent reproductive power and it is assumed as a general premise that the total reproductive capacity possessed by a community at any time is the fundamental factor governing its prospective potentiality for future development. And since possession of reproductive capacity is confined to its younger elements, who may be present in differing proportions in different communities or in the same community at different points of time, a truer appreciation of prospects or of changes in prospects in course of time will be obtained by evaluating the population and changes in terms of reproductive capacities rather than in numbers of individuals.

In the course of a population through time, its total reservoir of capacity is being constantly depleted on the one hand as its members steadily pass through and beyond the reproductive ages and at the same time it is being constantly replenished by the latent capacity possessed by the newly-born children; the level of the reservoir thus going up or down according as the added capacity of the children is greater or less than that expended in the course of their production.

In the development of this approach, which was described in the preceding volume of this series (Statistical Review 1940-1945 Text, Vol. II, Appendix III, p. 204), it was necessary to envisage the said reproductive capacity in measurable quantitative form, and the following definition of unit capacity was adopted for the purpose.

Unit of Reproductive Capacity.—"The total ability to bear live born children exercisable by an average woman who lives throughout the full range of child-bearing ages"; the verbal concept being qualified for the purpose of quantitative interpretation by the conventions (a) that the child-bearing range is limited to ages between 15 and 45 and (b) that the unit is to be treated as distributed over that age range in the following proportions:—

Ages	15-	20-	25-	30-	35-	40-	Total unit
							15-45
	.12	.22	.21	.19	.17	.09	1.00

So that on reaching age 30, for example, a woman would be regarded as having expended .55 of her unit capacity leaving only .45 of a unit as outstanding and available.

With the aid of a unit so defined and circumscribed, a capacity value can be associated with any and every female in the community at any time. The said value in the case of a girl under age 15 is the full unit discounted by the chance of loss through her dying before she reaches age 45; in the case of a female over age 15, it is the unexpended portion of the unit similarly discounted by the remaining mortality risk. For females born more than 45 years ago, the relevant mortality is known and the capacity value can be calculated exactly; for females born within the past 45 years, part of the mortality will not yet have been experienced and will need to be estimated, but experience suggests that the degree of approximation likely to be introduced thereby need not be regarded as of great significance in the general perspective of the conditions they are designed to illumine.

In terms of the unit so conceived, figures were provided showing for a series of calendar years over the period 1871 to 1948, (a) the total reproductive capacity of the population, (b) the capacity consumed in the year and (c) the new capacity created by the births of the year.

It was shown that the measure of replacement given by the ratio of capacity created to capacity consumed was the practical equivalent of the E.R.R., which, for some years, has been employed as the Department's birth replacement index and which from now on is being assessed in its new form of a capacity replacement ratio.

The general subject is developed further in Appendix III on p. 210 of this volume. The matters of interest arising from the aspects there treated are indicated below, but for details of the constructional work, etc., reference should be made to the Appendix itself.

Modification and Extension of Capacity Measurements on basis of revised mortality projections

It will have been understood from the above that capacity measurements in respect of females who have not yet attained the age of 45 involve forecasts of the mortality to be experienced by them over the period still to be passed

through before reaching that age. With the passage of time the actual mortality experienced gradually emerges and thus opportunities are provided for adjusting the measurements at suitable intervals to bring in the new known mortality element and to revise the outstanding projected element in the light of the later knowledge available.

The completion of the 1946-50 quinquennium provides such an opportunity and a new assessment of the relevant capacity values which allows for the actual mortality experienced in 1946-1950 and revised projections thereafter is provided in Table 2 on p. 213 of Appendix III, where the coverage is also extended to include years up to 1952.

Total Reproductive Capacity of the Population

The leading feature of this table is undoubtedly that provided by col. (2) which purports to show the total reproductive capacity of the population at the several dates identified from 1871 to the present time. Three fairly well marked phases of development can be distinguished over the period.

The first is the one of rapid growth over the earliest years which must have commenced some decades before 1871—the first year shown in the table—but which raised the total capacity of the population from the 6 million odd units in that year to the maximum of about 9½ million units reached during the first world war, the highest yearly figure being that of 9,671 thousands in 1916; it was this rise that was not only responsible for the rapid growth of the population prior to 1916 but, by virtue of its delayed action, was largely responsible for the continued increase in population which has been maintained since that date though with diminished incidence.

The second phase covers the decline in reproductive power which was a feature of the inter-war period, when from the 1916 maximum of 9,671 thousand units it fell steadily to just below 8,900 thousands at the outbreak of the second world war. The immediate influence of the decline was to slow up the momentum of population growth derived from the earlier capacity increases, and, had it continued, there is no doubt that it would have culminated in an actual decline in the numbers of the population; it was undoubtedly this prospect which gave rise to the public uneasiness that led to the setting up of the Royal Commission in 1944.

But from about the outbreak of the recent war the declining phase appears to have been arrested and to have given place to a period of comparative stability. It is true that there was a slight further fall during the period of hostilities but it has been countered during the post-war adjustment years by a corresponding rise with the final capacity now settling down to a level little different from what it was at the outbreak of war. If, as may well be the case, the recent fluctuations are little more than war disturbances, the present phase would appear to be one of stability which has now lasted for thirteen or fourteen years; and as the present level of 8,900 thousand capacity units in conjunction with mortality at rates contemplated for the future is commensurate with a stabilised population above rather than below present numbers, it seems not unreasonable to hazard the view that no serious decline in the total population need be contemplated at least over the next 20 years or so.

Effective Reproduction Rate (E.R.R.)

The columns of Table 2 more directly associated with the birth experiences of the successive years are column (5) which shows the capacity units created by the new births of each year and column (3) which shows the units consumed in the course of the production of the births, the difference between them (column (6)) being the amount added to or deducted from the total capacity by the process. This in general is small in relation to the total and it is quite obvious

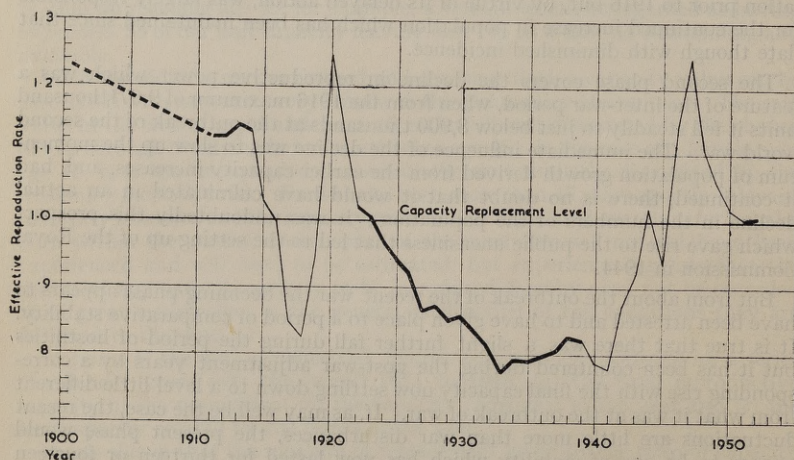
that the effect of the births of a single year or even of two or three adjacent years are rarely sufficient by themselves to make any great impression on the fundamental future population producing prospects of the community—a self evident fact which is not always appreciated and therefore needs to be emphasised if misunderstanding is to be avoided. This relative non-significance of a single year's experience is one to be borne in mind when the units consumed and the units created are considered in terms of the ratio between them which, as already explained, measures the Effective Reproduction Rate.

E.R.R.'s based on the revised mortality prospects are shown in column (7) of Appendix III, Table 2, and are to be regarded as superseding hitherto published rates in this series. The values for years since 1938 are repeated below.

1938 ..	0.829	1943 ..	0.922	1948 ..	1.107
1939 ..	0.822	1944 ..	1.021	1949 ..	1.054
1940 ..	0.788	1945 ..	0.936	1950 ..	1.017
1941 ..	0.778	1946 ..	1.138	1951 ..	1.001
1942 ..	0.873	1947 ..	1.244	*1952 ..	1.003

Their recent course and its relation to that of earlier years of the present century will be more readily appreciated from their portrayal in diagram F.

DIAGRAM F.—Effective Reproduction Rates. 1901–1952. England and Wales.



It will at once be seen that the year to year gradations of the E.R.R. follow the similar gradations of the fertility curve depicting the births per 1,000 women aged 15–45 shown on page 77, with faithful consistency over the whole range portrayed so that presentation in this form is not advanced as throwing new light on the factors responsible for the moulding of events over the period. The virtue of the E.R.R. as an index lies in its superiority as a standard of measurement bearing on the future survival of the nation, showing directly—within a small margin of approximation—whether the births of each year or period are themselves sufficient to maintain the basic population producing power of the community over the year or period, or alternatively, whether and to what extent the said births are superfluous or deficient for that purpose.

*Provisional.

Like the crude birth rate (births per 1,000 population) or the fertility rate (births per 1,000 women aged 15–45), the E.R.R. is a collective index summing up the effect of all the factors or forces operating to determine the births of a period. The said forces have all been profoundly influenced by war conditions which have been responsible for the comparatively violent fluctuations of the index over recent years, and which have been sufficient to obscure any underlying trends of a continuing nature. The most that appears possible to say at the moment is that, with the gradual disappearance of the temporary war abnormalities, the E.R.R. appears to be settling down in the neighbourhood of the 100 per cent. replacement level and that, though a number of further years' records will be necessary before the coming peace time tendencies can be in any way established, there appear to be no sufficient grounds at the present time for anticipating changes of any significantly disturbing character.

Generation Achievements in the replacement of females and their Reproductive Capacities

An alternative arrangement of the birth records likely to throw more direct light on changes of fertility tendencies amongst the women involved is one which relates the successive births, not to the calendar years in which they occur, but to the successive generations of women responsible for them and an attempt so to classify the 37 million female births which have occurred in England and Wales since 1856 amongst the 19 generations of women who produced them and who were themselves born at 5 yearly intervals from 1841 to 1931, is described on page 216 of Appendix III.

In terms of the girl progeny produced by successive generations, the results are set out in Section 10 of Table 4 on page 220 which shows that the first generation for which the necessary information exists, viz., that of the women born round 1841, 110 years ago, had replaced itself in the numbers of its female progeny before reaching age 35 and that thereafter it went on reproducing until by the end of its reproductive period, the total progeny was over 40 per cent. in excess of the generation originally responsible for them. It shows also that the achievement was at a maximum for the earliest generation recorded, and that ever since, the successive performances have declined, continuously and fairly steeply, right down to the generation which has only just completed its reproductive period, viz., that of 1906, with a total achievement barely more than two thirds of its originating element.

Perhaps the most surprising feature of this demonstration is the revelation that the last generation in this country to reproduce itself completely was born as long ago as 1876 or thereabouts.

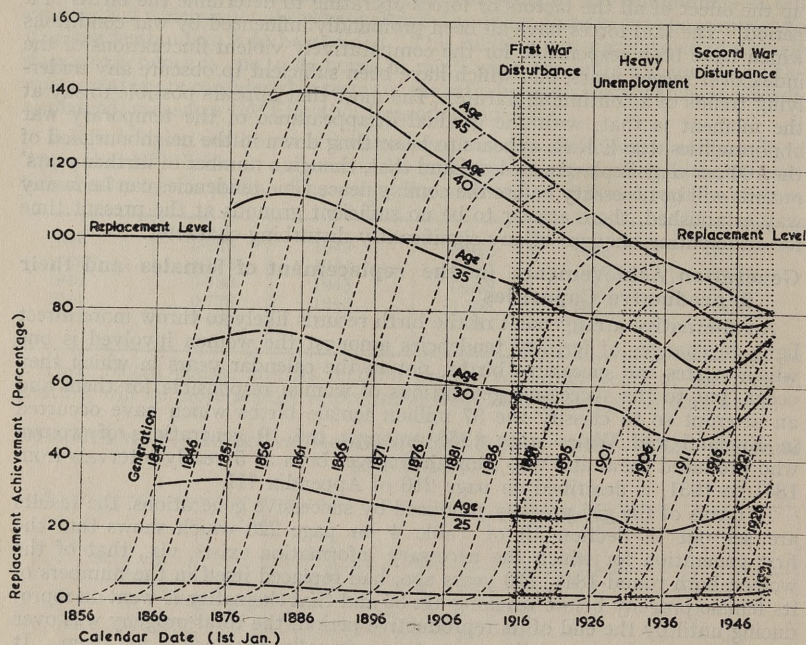
From the partial achievements available for generations subsequent to 1906, there is evidence that the record for that generation may prove to be a minimum which is being succeeded by a steady improvement, steeper apparently than that of the preceding fall.

As population producers, however, it is not so much the number of girl children born that matters, as the numbers of them who survive to their reproductive ages, and as indexes of population producer sufficiency, the generation replacement rates hitherto expressed in terms of girls born, need adjusting to take account of the consistently higher survival rates exhibited by the progeny over that of its progenitors.

This is carried out by expressing the progenitors and progeny in terms of the units of reproductive capacity they represent, and the successive generation achievements in this form are set out in Section 15 of Table 4.

As was anticipated, the relative replacements in terms of reproductive capacity are higher throughout than the corresponding replacements expressed in terms of girls born and to enable the changes and trends associated with them to be more readily seen and appreciated, the figures of Section 15 are supplemented by their representation in picture form in Diagram G.

DIAGRAM G.—Rates of Reproductive Capacity Replacement by successive generations 1841–1931. England and Wales.



The performance of each generation is shown in the diagram by a broken line curve of S shape passing across the 30 calendar years during which the reproductive ages (15–45) of the generation were spent. Thus the curve to the extreme left depicts the way and extent to which the generation born round 1841 replaced itself (in terms of reproductive capacity units) over the calendar years 1856 to 1885 which covered its reproductive period; it shows that by the time the generation had reached age 25 in 1866 it had produced progeny with a capacity equal to 32 per cent. of its own original capacity and 21 per cent. of the total capacity it was destined ultimately to produce; by age 35 in 1876 it had more than replaced itself (108 per cent.) and thereafter still went on producing to reach an ultimate achievement 52 per cent. in excess of its own original reproductive capacity. Similar S curves exhibit the like performances of successive generations at five year intervals down to the present time, and the whole taken together provides a vivid visual image of the contraction which has taken place in the reproductive habits of the community over the past century.

The transverse thick line curves drawn through the successive S curves indicate the relative degrees of replacement achieved by the successive generations on reaching ages 25, 30 etc., up to 45 at which reproduction is assumed to end.

From the bottom line of Section 15 of the table or its representation by the top transverse line of the diagram, it will be seen that, in terms of capacity replacement, reproduction was at a maximum for the earliest generations recorded; that of the first, viz. 1841, was more than 50 per cent. above the par level and this position was more or less maintained by the generations of the following 10 years. After that, the picture changed and from then onwards the

position deteriorated through the long spell covered by the successive generations of 55 years. From the diagram it will be seen that the decline was not only steep but was remarkably steady and continuous from beginning to end. From the surplus position represented by the excess of 51 per cent. above par produced by the 1851 generation, it declined to the par level in 35 years and it may be noted that the 1886 generation was the last in this country to have reproduced its own capacity in entirety. Thereafter the fall, which prior to the 1886 generation had been represented by a series of declining surpluses, now became one of increasing deficiencies leading ultimately, over a further 20 year span, to the minimum position of 80 per cent. of the full replacement standard achieved by the 1906 generation—the last generation so far wholly to have completed its reproduction performance.

But the issue of immediate importance overshadowing all other features emerging from the generation analysis, lies not in the achievements of the generations whose fertility is complete—that is up to and including the generation of 1906—but in the partial performances of all the subsequent generations down to the latest falling within the picture.

The feature in question is the rise in the transverse age curves of partial performances, i.e., for ages up to 40, which shows itself with unbroken consistency over successive generations since 1911. The importance of the change is not so much in the fact that the long fall has now been transformed to a rise, as in the amount of the rise that has been recorded and the steepening of the rise with each fresh record on the several age lines. The 1916 generation for example has now (by the end of the year 1950) reached age 35 and its performance to date is 13 per cent. in excess of the 1911 generation's achievement at that age; the latest performance record of the 1921 generation—at age 30—is 20 per cent. higher than that of the preceding 1916 generation and 33 per cent. in excess of the corresponding 1911 achievement; the latest record for the 1926 generation (at age 25) is higher than any corresponding generation performance back to 1841, the earliest shown in the table, it is 30, 47 and 66 per cent. in excess of the 1921, 1916 and 1911 records respectively.

The progressive rises are such as almost certainly to ensure that the last record of completed fertility, viz., that of the 1906 generation of women will prove to be a minimum of the series, to be followed by a rise which may well be steeper than the preceding fall; the replacement by the 1926 generation of as much as 34 per cent. of its capacity before reaching the age of 25 would seem to be more than enough to encourage the expectation of an ultimate achievement of 100 per cent. or more.

The prospects indicated by these improving achievements, as indeed those derived from other aspects of the birth analysis suggested elsewhere in this commentary are admittedly more favourable than those contemplated by the Royal Commission on Population when they published their report in March 1949. It is of course recognised that any view of future birth conditions is bound to be subject to a large element of conjecture, but in view of the authority attaching to the Commission's statement and of the wide publicity given to it, it will be a matter of public interest and importance to compare emerging facts with the Commission's expectations as and when opportunities become available. A first such opportunity is now forthcoming following the announcement of the 1952 births registered in Great Britain. On page 82 of the Commission's report a table was given setting out the numbers of births at successive intervals over the next century based on assumptions reflecting the way the Commission thought that fertility might reasonably be expected to develop in the future; and in that table the numbers expected for the five years 1947–1952 were set out and expressed in the form of an annual average of 804 thousands. Since, however, the actual births of the period mid-1947 to December 1948

(1,335 thousands) were already known, the projection element was limited to the final $3\frac{1}{2}$ years of the period for which an annual average of 767 was thus contemplated. Compared with this expectation, it is now known that the actual births in Great Britain in the $3\frac{1}{2}$ years January 1949 to mid-1952 have been 2,778 thousands representing an annual average of 794 thousands which is some $3\frac{1}{2}$ per cent. in excess of the Commission's expectation.

The reservations necessarily attaching to any attempt at projection were fully recognised by the Commission, and by way of illustration, the Statistics Committee of the Commission published a series of no less than 16 separate projections based on 16 different sets of basic assumptions ranging above and below the mean levels adopted for the Commissions' report. The average annual births adopted therein for the period 1949 to mid-1952 varied from a minimum of 730 to a maximum of 788, from which it will be seen that the actual average of 794 which has in fact emerged has exceeded even the most favourable outcome then thought worthy of numerical demonstration.

The experience of $3\frac{1}{2}$ years cannot, of course, be regarded, taken by itself, as having any significant bearing upon ultimate projections extending over 100 years, but in respect of the nearer distance, within which considered views might have been thought to possess greater objective validity, the fact that the actual births have so soon outstripped not only the mean value contemplated by the Commission but also their most sanguine expectation above the mean, will, in the minds of many, be treated as a ground for suspecting that the Commission's sights, as evidenced in their Report, may have been set too low.

Analysis of Changes in the E.R.R.

The numbers of births occurring from time to time are influenced by a variety of factors of differing intensities operating with or against one another; and the supreme merit of collective indexes like crude rates or the E.R.R. lies in their summing up of the several factors with automatic allowance for any interacting relationship that may exist between them, the net result of the whole necessarily being of greater significance and importance than that of the separate parts of which it is composed. But changes in the total throw no light on changes in the separate parts and since it is of interest to consider the behaviour of the separate forces and—in normal periods—the trends, if any, associated with them, it will be of advantage to provide a breakdown of the net total change so far as this can be done.

A method of analysis appropriate for the purpose was provisionally introduced and described in the 1938-39 Text (page 212) and this is re-examined and its coverage extended on pages 225 to 231 of Appendix III. The method is described in relation to changes in the E.R.R., but it is applicable—with appropriate adaptation—for analysis of changes in crude birth rates or in the actual numbers of births.

Apportionment of successive changes in the E.R.R. over the years 1911 to 1950 amongst their several contributory factors is given in Table 5 on page 230.

Over the earlier portion of the period covered by the analysis, viz. from 1911 to 1933, during which the E.R.R. was rapidly falling, the decline may be seen to have been due primarily to the diminution of the legitimate fertility component. The decline in family building reflected by this component was considerable and though its full impact on total birth capacity production was offset to some extent partly by simultaneous improvement in the marriage factor reflecting an increase in the number of couples available to have families and partly by the mortality factor indicating improvement in the survival power of the new births—neither of these compensations was sufficient to do more than mitigate an otherwise serious decline. Within this period the sections for 1914-1918 and 1918-1923 should preferably be read together in that to a

large extent they are dominated by complementary effects arising from the abnormalities associated with the first world war and its aftermath.

In 1933 the E.R.R. touched its lowest point and from then up to the outbreak of the second world war, the earlier fall was superseded by a small but steady improvement. The analysis shows that this was due, not to any increase in the rate of family building (legitimate fertility) but to the considerable increase in the marriage contribution which was more than enough to counteract the decline in family building, which still went on though on a much smaller scale than had characterized the preceding years.

From 1938 up to the present time the record is overshadowed by temporary fluctuations originated during the initial period of hostilities but continued thereafter throughout the post war adjustment years. For the period as a whole—as shown by the bottom line of the table—there would appear to have been a further decline in the legitimate fertility component but it is relatively small, and even so may to some extent be a matter of record rather than reality for the last column of the table indicates that more than half has been due to the decline in legitimate births arising from premarital conception, a decline which appears to have been compensated by an increase in the illegitimate factor of a not dissimilar order. The whole of the considerable increase in the E.R.R. which has been recorded is shown to be due to the positive marriage and mortality contributions, the former reflecting the large increase in the proportion of married women at the reproductive ages which has been so outstanding a feature of recent years.

The significance of the mortality factor lies not in its contribution in a single year but in its persistency over the whole period covered. Its cumulative effect over the period from 1911 to 1938 resulted in a positive contribution to the E.R.R. of .14, to which has been added a further .04 over the remainder of the period up to the present date.

The identification of four minor factors helps to sharpen the definition of the picture but individually they are not of significance except perhaps that reflecting the improvement arising from the decline in stillbirth incidence, which, like the mortality factor already mentioned, is cumulative in character. But with stillbirths as with mortality, the lower the incidence becomes, the less room is there for further fall and, though some further contribution from these sources may be anticipated, they will tend to be of a diminishing character.

Movements in the primary factors over recent years have been far too disturbed by temporary abnormal features to enable any satisfactory inferences to be drawn concerning their future movements, and experience of their behaviour under more stable conditions must be awaited before it can be seen whether and to what extent this type of analysis may assist in the assessment of birth expectations of the future.

Tabulation Design

Owing to the complexity of tabulation involving identification of legitimacy, mother's age, duration of marriage, number of previous children and their various combinations, it has not been deemed feasible to provide completely parallel classifications of both births and maternities. The course followed has been to provide full analyses by the two features of legitimacy and mother's age for both births and maternities (Annual Review, Part II, Tables AA to HH and YY), but for legitimate fertility tabulations involving duration of marriage or number of previous children (Tables II to SS), to restrict the analyses in the main to maternities. Maternities are slightly greater in number than the corresponding number of live births involved (the stillbirth element included in the former being in excess of the plural births excluded) but the difference is not great and the maternity tabulations can be converted to live birth tabulations with sufficient accuracy for most purposes by the application of the appropriate live birth-maternity ratio shown in Table XLVII.

Table XLVII.—Ratio of Legitimate Live Births to Legitimate Maternities by Mother's Age at Maternity, 1946 to 1950, England and Wales.

Calendar Year	Mothers' Age at Maternity						
	All Ages	Under 20	20-	25-	30-	35-	40 and over
1946 ..	0.986	0.984	0.989	0.990	0.988	0.981	0.958
1947 ..	0.989	0.987	0.991	0.992	0.989	0.983	0.965
1948 ..	0.989	0.989	0.992	0.993	0.990	0.985	0.966
1949 ..	0.990	0.989	0.992	0.994	0.991	0.985	0.963
1950 ..	0.990	0.988	0.992	0.994	0.991	0.986	0.965

A further difficulty encountered in endeavouring to follow the course of legitimate fertility arises from the fact that the records of successive years have been subject to varying degrees of incompleteness through the failure to obtain a record of the mother's age, her duration of marriage, or the number of her previous children at the registration of some births. The proportion of "not stated" cases of various types in the records for the year 1938, the first of the series, and for the years 1944 to 1950 are given in Table XLVIII.

Table XLVIII.—"Not Stated" Cases per 10,000 Total Legitimate Maternities, 1938 and 1944 to 1950, England and Wales.

Type of information Not Stated	1938	1944	1945	1946	1947	1948	1949	1950
Age only	21	20	20	20	19	17	19	18
Age and Duration	5	4	3	3	3	2	2	2
Age and Children	—	—	—	—	—	—	—	—
Age, Duration and Children ..	25	11	11	10	13	8	6	6
Duration only	89	42	40	41	34	27	22	20
Children only	44	17	32	25	30	27	24	20
Duration and Children	7	5	6	7	3	3	4	3
Total All Types	190	99	112	106	102	84	77	70
All Age types	51	36	34	33	35	27	28	26
All Duration types	125	62	60	61	53	39	34	31
All Children types	76	33	50	42	46	38	34	29

In 1938, the first year of the operation of the Population (Statistics) Act, the additional information at the registration of a birth required by that Act was deficient in one form or another in 1.9 per cent. of total registrations but by 1950 the deficiency had fallen to 0.7 per cent. The date of marriage, from which the duration of the marriage is obtained, was generally the most frequent item of information omitted but such omissions have become much less frequent of recent years falling from 125 per 10,000 legitimate maternities in 1938 to only 31 per 10,000 in 1950.

The number of previous children was omitted in 76 per 10,000 registrations in 1938 but had fallen to 29 per 10,000 in 1950. The mother's age was not stated in 26 per 10,000 registrations in 1950, the corresponding proportion for 1938 being 51.

The usual practice of identifying the "not stated" items in the published Tables of the annual Parts II has been continued during 1946 to 1950.

There is no reason to suppose that the bulk of the omissions were intentional or prejudiced so that tables incorporating a rateable distribution of the "not stated" amongst the "stated" cases would, from the users' point of view, be a useful form of presentation. It would not be practicable to treat all the analyses in this manner but Table SS which deals with the three fertility characteristics, mother's age, duration of marriage and number of previous children in combination, has been selected for an orderly distribution of the "not stated" cases, those of each type being dealt with separately, thus providing "Controls" to which any of the other tables can be adjusted as required. Tables SS for 1946 to 1950 thus modified are shown in Appendix II on pages 200-209. Comparable Tables for 1938 to 1945 were published in the 1940-1945 Civil Text in Appendix I, Table VI, pages 176 to 191.

Where appropriate, rates have been based on populations provisionally adjusted in the light of the 1951 Census one per cent. sample (see page 12).

Illegitimate Births and Pre-marital Conceptions

Of the 3,904,666 live births which occurred from 1946 to 1950, 214,253 or 5.5 per cent. were registered as illegitimate, compared with 229,827 or 6.9 per cent., in 1941 to 1945 and 4.2 per cent. in 1936 to 1940. In terms of the numbers of single, widowed and divorced women aged 15 to 44 in the population, the illegitimate birth rate which had fallen from 18.8 per 1,000 related women in 1861-1865 to 8.4 in 1901-1905 and 5.5 in 1931-1935, rose to 10.4 in 1940-1945 and 11.7 in 1946-1950. The numbers of illegitimate births registered from 1851 are published in Table B of Part II and rates are in Table C.

Table XLIX.—Illegitimate Live Births, 1911 to 1923 and 1934 to 1950, England and Wales.

First World War				Second World War			
Period	Number of illegitimate births	Rate per 1,000 non-married women aged 15-44	Illegitimate births per 1,000 total births	Period	Number of illegitimate births	Rate per 1,000 non-married women aged 15-44	Illegitimate births per 1,000 total births
1911-1914 Annual average	37,600	8.0	43	1934-1939 Annual average	25,512	5.5	42
1915	36,245	7.6	44	1940	25,633	5.9	43
1916	37,689	7.8	48	1941	31,058	7.4	54
1917	37,157	7.7	56	1942	36,467	9.0	56
1918	41,452	8.5	63	1943	43,709	10.9	64
—	—	—	—	1944	55,173	13.8	73
—	—	—	—	1945	63,420	16.1	93
1915-1918 Annual average	38,136	7.9	53	1940-1945 Annual average	42,577	10.4	64
1919	41,876	8.6	60	1946	53,919	13.8	66
1920	44,947	9.3	47	1947	46,603	12.4	53
1921	38,618	7.9	45	1948	41,574	11.4	54
1922	34,138	7.0	44	1949	36,907	10.4	51
1923	31,522	6.5	42	1950	35,250	10.2	51
1919-1923 Annual average	38,220	7.9	48	1946-1950 Annual average	42,851	11.7	55

In Table XLIX the numbers of illegitimate births, rates per 1,000 non-married women aged 15-44 and the proportion of illegitimate births in 1,000 total births are shown for periods covering the years of the two world wars and the immediate pre-war and post-war years. In the first war there was very little change in the incidence of illegitimacy but the experience of the second war was in noticeable contrast when the rate per 1,000 women at risk rose sharply each year and by 1945 was nearly three times as high as the pre-war level. Expressed in the form of the proportion of illegitimate to total births, the 1945 figure was 121 per cent. in excess of pre-war. After the war a decline set in and continued each year but even in 1950 the rate per 1,000 women was 85 per cent., and the proportion of illegitimate to total births was 21 per cent., above the corresponding pre-war figures.

Without under-rating the seriousness of the increase in the numbers of illegitimate births, with all the social problems it involves, the record in the above table should not by itself be taken as the measure of the loosening of restraint in the sexual behaviour of people during the war. In Table L a more comprehensive record of the incidence of sexual irregularity during the years 1938 to 1950 is provided by combining the illegitimate births with legitimate births which occurred within 8½ months of marriage, the period which for statistical purposes in this review has been regarded as indicating pre-marital conception.

Table L.—Illegitimate Maternities and Pre-maritally conceived Legitimate Maternities, 1938 to 1950, England and Wales.

Year	Illegitimate maternities	Pre-maritally conceived legitimate maternities	Total maternities conceived out of wedlock		Percentage of irregularly conceived maternities regularized by marriage of parents before birth of child
			Numbers	Per cent. of all maternities	
1	2	3	4	5	6
1938	28,160	66,221	94,381	14.6	70.2
1939	26,569	60,346	86,915	13.8	69.4
1940	26,574	56,644	83,218	13.7	68.1
1941	32,179	43,362	75,541	12.7	57.4
1942	37,597	40,705	78,302	11.8	52.0
1943	44,881	37,271	82,152	11.8	45.4
1944	56,477	37,746	94,223	12.3	40.1
1945	64,743	38,176	102,919	14.9	37.1
1940-1945	262,451	253,904	516,355	12.9	49.2
1946	55,138	43,488	98,626	11.8	44.1
1947	47,491	59,633	107,124	12.0	55.7
1948	42,402	62,304	104,706	13.4	59.5
1949	37,554	59,185	96,739	13.1	61.2
1950	35,816	54,188	90,004	12.8	60.2
1946-1950	218,401	278,798	497,199	12.6	56.1

A prominent feature of the new information derived from the Population (Statistics) Act of 1938 has been the revelation of the large number of legitimate births that are conceived before marriage. The conception conditions of the mothers of illegitimate children and of mothers of children conceived before marriage are in a sense similar and in any statistics employed to indicate the

incidence of sexual irregularity (resulting in childbirth) the two classes should be combined and related to the unmarried section of the female population to which the mothers of the pre-maritally conceived legitimate children should be restored.

It may be seen from column (2) of Table L that the number of illegitimate maternities, which rose from 26,569 in 1939 to 64,743 in 1945, fell each year thereafter to 35,816 in 1950. Column (3) shows the numbers of pre-maritally conceived legitimate maternities, taken for statistical purposes as those occurring within 8½ months of marriage. After a sharp decline in 1941 the numbers remained more or less constant until 1945 at about 58 per cent. of the pre-war numbers, but they increased substantially in the following years while at the same time the numbers in column (2) decreased. These changes reflect the restoration of opportunity for parents to marry before the birth of the child, an opportunity of which many of them must have been deprived by separation during the years of war. It is therefore more informative to combine the numbers in columns (2) and (3) in order to study the course of irregular conceptions during the period under review. This has been done in columns (4) and (5) which show the numbers of maternities conceived out of wedlock and the percentages that these numbers form of all maternities. In this form it will be seen that it was not until 1945 that the pre-war numbers and proportions were exceeded, while the average proportion for the period 1940-1945 fell to 12.9 from 14.6 per cent. in 1938. During the period 1946 to 1950 the proportions rose from 11.8 per cent. in 1946 to 13.4 in 1948 and then declined to 12.8 in 1950, the average for 1946-1950 being 12.6 per cent. compared with 14.6 in 1938. The final column of Table L expresses the figures in column (3) as percentages of those in column (4) and thus shows the extent to which parents of irregularly conceived children married before the birth of the child, thus ensuring normal legitimate status for it.

The difficulties of enforced separations during the war years which prevented many parents from taking this course are apparent in the decline of the figures in column (6) from 70.2 in 1938 to 37.1 in 1945. The proportions for 1946 to 1950, while increasing substantially, have failed to reach the pre-war level, being 60.2 per cent. in 1950 compared with 70.2 in 1938.

The magnitude of the inadvertent transfer from the legitimate to the illegitimate class during the eleven years 1940 to 1950 may be approximately estimated by assuming that the 1938-1939 proportion of parents of irregularly conceived children who married before the child's birth, i.e., about 70 per cent., had been maintained throughout the period. On this assumption about 177,000 of the illegitimate maternities would have been registered as legitimate and would have been distributed over the eleven years (in thousands) as follows (but see footnote on page 97) :—

1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Total
1	10	14	20	28	34	26	15	11	9	9	177

On page 97, in column D, these numbers have been returned to the legitimate section in the analysis there portrayed.

In Table LI the extent of irregular conception at each age group is identified and related to the unmarried women at risk to whom the mothers of pre-maritally conceived legitimate children have been restored.

From the bottom two lines of Table LI it may be seen that irregularly conceived maternities during the six years 1940 to 1945 as a whole showed a very slight increase of 7 per cent over 1938 when allowance has been made for changes in age structure of the population. This increase was concentrated in the last two years of the war with 18 per cent in 1944 and 32 per cent. in 1945. In 1940 to 1942 there were slight decreases and in 1943 an increase of only 4 per cent. The five years 1946 to 1950, on average, showed an age-standardized

Table LI.—Irregularly conceived maternities per 1,000 unmarried females, (see Text), 1938 to 1950, England and Wales.

Age of Mother	1938	1939	1940-1945 Average	1946	1947	1948	1949	1950	1946-1950 Average
15-	12.0	12.1	11.1	11.4	12.6	14.3	15.5	15.2	13.8
20-	37.1	36.5	36.5	42.3	49.7	50.8	47.4	44.7	47.0
25-	27.6	26.6	35.0	44.3	50.6	47.5	40.9	41.4	44.9
30-	16.0	15.8	23.5	33.6	35.3	33.4	32.7	29.7	32.9
35-	10.6	10.0	13.0	17.9	18.9	18.5	18.1	17.6	18.2
40-44	4.2	4.0	5.2	6.0	6.2	6.0	5.8	5.4	5.9
15-44	19.8	19.0	20.9	25.0	28.1	28.3	26.8	25.6	26.8
Ratio to 1938									
Crude ..	1.00	0.96	1.05	1.26	1.41	1.42	1.35	1.29	1.35
Standardized	1.00	0.98	1.07	1.27	1.44	1.45	1.38	1.33	1.37

increase over 1938 of 37 per cent. This figure rose from 27 per cent. in 1946 to 45 per cent. in 1948 and then declined to 33 per cent. in 1950, but it must be remembered that the general birth rate was high during this period.

The age analysis in Table LI shows that during the war years the rates at ages under 25 decreased compared with 1938 but increased at all the older ages, especially at age group 30-34 where it was 47 per cent. in excess of the 1938 rate. After the war increases in the rates, compared with 1938, are seen at every age group, the former slight decrease at the younger ages having become an increase of 15 per cent. at age 15-19 and 27 per cent. at 20-25. The increase at the older groups noticed during the war years continued in 1946 to 1950 at a greater rate, with the 30-34 group still showing the greatest relative increase. The averages of the rates in the two periods 1940-1945 and 1946-1950 expressed as percentages of the corresponding 1938 rate are shown below :—

	Age of Mother					
	15-19	20-24	25-29	30-34	35-39	40-44
1938	100	100	100	100	100	100
1940-1945	93	98	127	147	123	124
1946-1950	115	127	163	206	172	140

The increases in the rates at the ages over 30 although striking are not as important, from the point of view of the resulting increase in the numbers of irregularly conceived maternities, as the much smaller increases at the younger ages, the population at risk at ages over 30 being only some 25 per cent. of the total aged 15-44. The proportions of the total irregularly conceived maternities at each age group in 1946-1950, distinguishing the illegitimate and legitimate sections, were :—

	Age of Mother						
	15-	20-	25-	30-	35-	40-44	15-44
Illegitimate ..	13.4	30.7	26.0	15.8	10.2	3.8	100
Legitimate (pre-marital conceptions)	23.7	49.4	17.6	5.9	2.7	0.7	100
Combined ..	19.2	41.2	21.3	10.2	6.0	2.1	100

Mothers under 30 years of age account for 82 per cent. of all pre-marital conceptions, 70 per cent of the illegitimate and 91 per cent. of the legitimate. The share of the total at each separate age for illegitimate and pre-maritally conceived legitimate maternities in the same period was :—

	15-	20-	25-	30-	35-	40-44
Illegitimate ..	30.7	32.8	53.7	67.9	74.9	81.1
Pre-marital (legitimate) ..	69.3	67.2	46.3	32.1	25.1	18.9
Both ..	100	100	100	100	100	100

It is noteworthy that the young women tend to marry before the birth of their pre-maritally conceived children to a far greater extent than do those of more mature age.

Legitimate Births and Fertility

Of the total live births which occurred in the five years 1946 to 1950, 3,690,413 were registered as legitimate compared with 3,116,516 in the preceding five years 1941 to 1945 and 2,913,834 in 1936 to 1940. Thus the total for 1946-1950 was 18.4 per cent. and 26.7 per cent. in excess of those for 1941-1945 and 1936-1940 respectively. Although the number of women aged 15-44 of all marital conditions has been declining, as pointed out on page 11, the number of married women in this age group, to which it has been customary to relate the legitimate births, has been increasing. In 1950 the proportion of the female population in this class was some 14 per cent. above the 1931 figure, the increase being relatively greater at the younger and more fertile ages. The legitimate birth rate per 1,000 married women aged 15-44 was 122.5 in 1946-1950 compared with 105.4 and 107.3 in 1941-1945 and 1936-1940 respectively; that is the 1946-1950 rate was 16.2 per cent. and 14.2 per cent. in excess of those for 1941-1945 and 1936-1940 respectively.

Owing to the substantial fluctuations in the rate during and after the war, it is better to examine in the first place the course followed by single years. Table LII shows the legitimate births and rates for single years over periods covering the First and Second World Wars divided into the Pre-War, the War and the Post-War years.

It may be seen from the table that in some respects the behaviour of the legitimate birth rate was similar in the two periods. The immediate impact of each war led to a steep fall, with later recovery to a post-war boom and final recession to a steadier trend. It may be presumed that the underlying cause was the postponement of births and later making good of some of those postponed—some would be irretrievably lost from, for instance, the death of one or other of the prospective parents in the meantime. In other respects there are outstanding differences between the behaviour of the rate in the two periods.

During the whole of the First World War the rate fell steadily and substantially so that the minimum value, reached in 1918, was no less than 30 per cent. below the 1911-1914 average. The 1919 rate, 142.5, showed only a slight recovery and was still well below the 1911-1914 average. The peak in the post-war boom was reached in the next year, 1920, but with a rate only 3 per cent. above the 1911-1914 average and by 1921 the rate had again fallen below this pre-war average by 9 per cent. By the next year it had fallen still lower, being 17 per cent below the pre-war average.

Table LII.—Legitimate Births and Rates per 1,000 Married Women aged 15-44, 1911 to 1922 and 1934 to 1950, England and Wales.

Pre-War Years			War Years			Post-War Years		
Year	Legitimate Births (thous.)	Rate per 1,000 Married Women aged 15-44	Year	Legitimate Births (thous.)	Rate per 1,000 Married Women aged 15-44	Year	Legitimate Births (thous.)	Rate per 1,000 Married Women aged 15-44
FIRST WORLD WAR								
1911	843.5	196.6	1915	778.4	175.6	1919	650.6	142.5
1912	835.2	193.9	1916	747.8	166.9	1920	912.8	199.9
1913	844.0	195.1	1917	631.2	139.4	1921	810.2	176.3
1914	841.8	192.7	1918	621.2	136.2	1922	746.0	160.7
Average (4 years)	841.1	194.6	Average (4 years)	694.6	154.5	Average (4 years)	779.9	169.8
SECOND WORLD WAR								
1934	571.9	112.9	1940	564.5	98.8	1946	766.8	128.7
1935	573.7	111.5	1941	548.0	94.1	1947	834.4	139.7
1936	580.4	110.9	1942	615.0	103.8	1948	733.7	121.7
1937	585.2	110.2	1943	640.6	107.6	1949	693.6	114.4
1938	594.8	110.0	1944	696.3	117.4	1950	661.8	108.6
1939	588.9	107.0	1945	616.5	103.9	—	—	—
Average (6 years)	582.5	110.4	Average (6 years)	613.5	104.3	Average (5 years)	738.1	122.6

In contrast, the trough was reached in the Second World War by 1941, and this lowest value was only 15 per cent. below the 1934-1939 average; thereafter a steady recovery brought the rate above this average even before the war had ended—the 1944 rate was 6 per cent. above the 1934-1939 average. After a temporary set back in 1945, following the removal abroad of large forces on D day in the previous year, this recovery took the rate up to a peak in 1947 no less than 27 per cent. above the 1934-1939 average, and the pre-war average was also exceeded in 1946, 1948 and 1949. Even in 1950, five years after the war, the rate was only 2 per cent. below the 1934-1939 average.

The war (1914-1918) and post-war (1919-1922) averages of the First World War were 21 per cent. and 13 per cent. respectively below that for the pre-war years (1911-1914). The Second World War (1940-1945) average was a mere 5 per cent. below that for the pre-war (1934-1939) period, whilst the post-war (1946-1950) average exceeded the pre-war by 11 per cent. The fluctuations of the First World War were superimposed on a steadily declining birth rate, whilst the underlying trend in the period around the Second World War was substantially a constancy in the rate.

Since the war and immediate post-war periods are to some extent complementary, in that some births were postponed from the former to the latter, the two periods have been combined in Table LIII which shows the legitimate live birth rates before, and some time after, each of the two world wars with the annual average of the intermediate disturbed period. This table shows that the rate during the disturbed period around the First World War was, on average, 165.6, that is 15 per cent. below the pre-war rate, and in 1923 after the disturbance had passed it was 20 per cent. below the pre-war rate. Similar comparisons for the period covering the Second World War show an average rate for the disturbed period of 112.5, that is only 2 per cent. above the pre-war rate and in 1950, after the disturbance, only 1 per cent. below the pre-war rate, in fact the rates for 1938, 1950 and the average rate for the intermediate period were substantially the same.

Table LIII.—Comparison of Legitimate Live Birth Rate per 1,000 Married Women aged 15-44 in periods covering the First and Second World Wars, England and Wales.

Description of Period	First World War			Second World War			Ratio of Second World War rate to that of First World War (per cent.)
	Period	Legitimate Live Birth Rate		Period	Legitimate Live Birth Rate		
		Per 1,000 Married Women aged 15-44	Ratio to pre-war rate taken as 100		Per 1,000 Married Women aged 15-44	Ratio to pre-war rate taken as 100	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pre-War	1913	195.1	100	1938	110.0	100	56
War and Immediate Post-War .. .	1914-22*	165.6	85	1939-49*	112.5	102	68
Later Post-War .. .	1923	155.3	80	1950	108.6	99	70

It was shown in the marriage section on page 28 that the marriage intensity of 1938-1950 was, for so prolonged a period, an outstanding record in the whole time for which records for this country are available. It must therefore be expected that the age and duration structure of the population of married women, who are those responsible for legitimate births, has undergone considerable changes. For a proper examination of the trend of legitimate fertility, account should be taken of these changes and a comparison produced from which their influence has been removed by the familiar process of standardisation. Such comparisons are as follows, Column A being a crude comparison, Column B being age standardised and Column C being standardised for both age and duration of marriage.

Year	A. Crude rate per 1,000 Married Women aged 15-44 compared with 1938 taken as 1,000	B. Standardised comparison from which the influence of age change has been eliminated	C. Standardised comparison from which the influence of both age and duration change has been eliminated
1938	1,000	1,000	1,000
1939	973	967	967
1940	898	871	860
1941	855	821	813
1942	944	899	899
1943	978	935	949
1944	1,067	1,031	1,061
1945	945	918	948
1939-45	951	920	928
1946	1,170	1,143	1,177
1947	1,270	1,246	1,282
1948	1,106	1,076	1,105
1949	1,040	1,007	1,035
1950	987	960	989
1946-50	1,115	1,086	1,118

*Annual Averages.

Before examining the trend of fertility as shown by these standardised ratios, it is enlightening to examine the effect which standardisation has had and to determine its cause. Comparing Column B with Column A, that is examining only the effect of age standardisation, it may be seen that from 1939 onwards the ratio in Column B is always less than that in Column A. This may be attributed to the abnormally high marriage incidence during the period, which will have inflated the younger age groups of married women more than the older. The fall from Column A to Column B was 6 in 1939 (from 973 to 967) and this increased to a maximum of 45 in 1942 (from 944 to 899) following the high marriage rates of 1939 to 1941. In 1943 and 1944 marriage rates passed through a trough and the difference between the ratios of Column A and B narrowed to a minimum of 24 in 1947 (from 1,270 to 1,246) to increase slightly to a second maximum of 33 in 1949 (from 1,040 to 1,007) following the smaller post-war peak in marriage rates. By 1950 the difference had declined to 27 (from 987 to 960). For the period 1939-1945 the difference was on average 31 and for 1946-1950 it was 29.

By comparing Column C, standardised for both age and duration, with Column B, standardised only for age, the additional effect of duration standardisation may be seen. Family building is concentrated into the early years of marriage and, age for age, birth rates are higher at shorter than at longer durations. Consequently, following a jump in marriage incidence and the creation of an abnormally large proportion of married women at short durations, a rise would be expected in the birth rate based solely on the number of married women without distinction of duration of marriage. The effect of duration standardisation is to discount the actual rate to the extent of this expected rise. Conversely, as marriage rates decline somewhat, following the passing of a peak, the abnormally large numbers of married women who had married in the peak period, appear at successively longer durations, and the abnormally high proportions, which at first are at short durations, steadily move up year by year to longer durations. There comes a time then, before the married women concerned pass out of the range of reproductive ages, when the distribution of married women by duration of marriage changes from being more favourable to being less favourable to the production of children.

The actual values of the difference "Column C minus Column B" are as follow:—

1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
0	0	-11	-8	0	14	30	30	34	36	29	29	29

The first stage referred to above, when an excess of married women at the shorter durations creates an abnormally favourable situation which standardisation must discount, may be seen to last only through 1940 and 1941. From 1943 the brides of the 1939-1941 marriage boom have been a liability which even the brides of the post-war boom could not entirely offset; indeed the discrepancy increased through 1946 and 1947 (to a maximum of 36 in 1947) and only since has a lowering occurred. The figures for 1948 to 1950 have been more or less constant at just under 30. Thus in 1940 and 1941 the birth rate was, in theory at least, artificially inflated by the marriage boom of the early war years; in practice, of course, the impact of the war led to a far greater deficiency than the trivial 1 per cent. inflation involved here. Thereafter any artificial effect was on the other side of the balance, temporarily depressing the birth rate. Again, the 3 or 4 per cent. depression in 1946-1948, the years of the post-war boom in births, is trivial compared with the effect of other factors, notably the impact of peace and the re-union of potential parents who had been separated by war-time conditions. It is nevertheless important to realise that the current birth rates cannot be discounted on the grounds of their being artificially inflated by temporary influences of the recent marriage trend.

In addition to the age and duration of marriage structure of the population of married women, there is another factor which has influenced the trend of the legitimate birth rate in the period under review, the influence of which may be isolated and removed. On pages 90-91 of this commentary in the section dealing with illegitimate births and pre-marital conceptions, evidence was advanced that a number of births, which in more normal times would have been registered as legitimate, were transferred to the illegitimate section by the war-time conditions preventing or militating against the parents marrying after the conception but before the birth of their child. On page 91 are set out estimates of the number of births transferred in this way from the legitimate to the illegitimate sections under the assumption that the 1938 proportion of irregularly conceived maternities regularised by the marriage of the parents before the child's birth—70 per cent.—was a normal standard to which there would ultimately be a return*. In section D below the standardised ratio of the legitimate birth rate to that in 1938 of Column C on page 95 has been modified by the restoration of these births fortuitously lost from the legitimate section. Section E below shows the ratio obtained by the application of an alternative method, also designed to eliminate this distortion, namely by the exclusion of premaritally conceived births from the comparisons.

Standardised comparisons of C adjusted as follows:—

	D. To allow for inclusion of births assumed to have been registered inadvertently as illegitimate	E. To limit the comparison to births conceived after marriage
1938	1,000	1,000
1939	967	980
1940	862	893
1941	827	837
1942	920	935
1943	978	978
1944	1,103	1,096
1945	1,000	988
1939-45 ..	951	958
1946	1,216	1,232
1947	1,306	1,329
1948	1,122	1,131
1949	1,049	1,054
1950	1,002	1,005
1946-50 ..	1,139	1,150

In all years the Column D and E ratios exceed that of Column C, the excess being small in 1939, rising to a maximum of 52 (1,000-948) in 1945 for Column D and 55 (1,232-1,177) in 1946 for Column E, and subsequently declining almost to nothing in 1950, 13 (1,002-989) for column D and 16 (1,005-989) for Column E. The average excess of Column D was 23 (951-928) in 1939-1945 and 21 (1,139-1,118) in 1946-1950, and of Column E was 30 (958-928) in 1939-1945 and 32 (1,150-1,118) in 1946-1950.

In all comparisons A to E the average ratio for 1939-1945 was somewhat below 1,000 (951, 920, 928, 951 and 958 respectively) and for 1946-1950 was somewhat

*From Table L on page 90, it may be seen that the proportion appears to be stabilising at about 60 per cent. and not 70 per cent. The calculation of Section D above on the basis of 60 in place of 70 per cent. would lower the Section D proportions by 1 to 1½ per cent.

above (1,114, 1,086, 1,118, 1,139 and 1,150 respectively), demonstrating again the deficiency in births over the war period and the compensating post-war boom as postponed births were made good. It is enlightening therefore to aggregate the ratios for the disturbed period 1939-1949 as follows:—

	A	B	C	D	E
1938	1,000	1,000	1,000	1,000	1,000
1939-49 average	1,022	992	1,009	1,032	1,041
1950	987	960	989	1,002	1,005

The ratios of Column B, which are age-standardised only, appear to show a continuing decline in legitimate fertility but the inclusion of duration-standardisation also, in Column C, partly discounts this, the average ratio for the period 1939-1949 being 1 per cent. above that for 1938, and the 1950 ratio being only 1 per cent. below. Allowance for the transfer of some legitimate births to the illegitimate section, in the form of either Column D or E, shows an excess of some 3 to 4 per cent. for the war period, and virtual parity between the rates of 1938 and 1950.

Family building and the adequacy of family size to carry on the race are matters in which there has been no little public interest during the last twenty years and it is natural therefore to suppose that the implications of the above results against this background will be of some interest. But it must be remembered that the question under discussion here—the study of the process of married women building their families—is only a part of the picture. As far as population replacement is concerned, it is also necessary to consider what proportion of women will ultimately marry. It has already been shown in the marriage section that a substantially higher proportion of women are marrying to-day than before the war, and that a more or less permanent factor—namely a change from a deficiency to an excess of males in the unmarried population of marriageable age—may well ensure that a high proportion of women marry in the future. Under these circumstances families of the same size to-day as those of pre-war might now be adequate to replace the population when they were not adequate to do so formerly, since the families would, as it were, have to compensate for a lower proportion of unmarried women with no families at all.

Nevertheless, there is a limit to the extent to which rising marriage rates can compensate for falling birth rates. In the extreme case, if 100 per cent. of women ultimately married, no further assistance could be looked for from this source, and the present position is not far from this—about 95 per cent. of women would ultimately marry if the 1950 spinster marriage rates were maintained. The decline in legitimate fertility had been going on more or less continuously for 60 years up to the beginning of the war, and a cessation in this decline had become essential if the race was to be maintained.

It is perhaps a little early to draw far reaching conclusions on the post-war trend of legitimate fertility from the scanty data available; the records for 1939-49 were not entirely satisfactory for this purpose since the period was so disturbed. But as far as can be seen the results are of considerable significance, since they seem to indicate that at last a halt has been called in this long decline. This is not to say that there will be no minor fluctuations from year to year; moreover, records for a few more years will be required to confirm this tentative conclusion.

Legitimate Fertility by Mother's Age and Duration of Marriage

Legitimate maternities at successive marriage durations are classified by individual ages of the mother in Table OO of Part II of each year. As there published, the records are seen to be subject to a degree of incompleteness on

account of the inclusion of varying numbers of cases in which the age of the mother or the duration of her marriage was not recorded. With the object of presenting the serial record in a consistent and complete form, the "not stated" cases have been distributed as described on pages 88-89 and the maternities so adjusted are shown for the years 1946-1950 by quinary groups of age in Table 4 of Appendix II on page 188. The corresponding maternities for 1938-1945 were shown in Table VI of Appendix I on page 176 of the 1940-1945 Civil Text.

Annual rates corresponding to the adjusted maternities are shown in Table 5 of Appendix II on page 192 and have been obtained by relating them to the estimated years of married life exposed to risk, the ascertainment of which was described in Appendix II of the 1940-1945 Civil Text. Similar Annual rates for 1938-1945 appeared in Table V of Appendix I on page 172 of the same volume. It should be noted that a maternity rate expressed per year of married life may be regarded as equivalent to the rate per married woman except where the duration is less than a full year in which case the married woman's rate is a fraction of the rate per year of married life corresponding to the fraction of a full year represented by the duration identified. Again the rates shown are maternity rates and to obtain equivalent birth rates they should be multiplied by the appropriate ratios of births to maternities.

Analysis by Age.—Dealing first with the distribution by mothers' age at maternity, Table LIV shows the numbers of legitimate maternities for the pre-war year 1938, the average for the war years 1939-1945, for each post-war year 1946 to 1950 and the average for these post-war years. In the lower part of the table is shown the distribution of these maternities per thousand total over the six quinary age groups of mothers between 15 and 45 (the few cases at ages over 45 being included in the final group).

Table LIV.—Distribution of Legitimate Maternities by Mothers' Age, 1938 to 1950, England and Wales.

Mothers' Age	1938	Average 1939-45	1946	1947	1948	1949	1950	Average 1946-50
Total number of maternities (in hundreds)								
	610.7	622.5	777.6	844.0	741.5	700.5	668.3	746.4
Age distribution per 1,000 total								
15- ..	36	32	23	27	34	38	39	32
20- ..	233	242	231	255	268	274	272	260
25- ..	324	302	304	321	325	338	332	324
30- ..	237	240	253	225	204	190	199	214
35- ..	126	137	146	132	128	121	120	130
40 and over	44	47	43	40	41	39	38	40

Throughout the period the largest proportion of maternities occurred to mothers between the ages of 25 and 30, a large proportion of the remainder being associated with mothers in the immediately older and younger groups. Altogether, the maternities between ages 20 and 35 have accounted for between three quarters and four fifths of the total in each year. The pre-war proportion of 79.4 per cent. in 1938 was followed by an irregular decline to a minimum of 76.4 per cent. in 1945, the war-time average being 78.4 per cent. for 1939-1945. After the war a sharp rise was registered, to 78.8 per cent. in 1946 and 80.1 per cent. in 1947, since when a steady proportion has been maintained, the 1948 to 1950 proportions being 79.7 per cent., 80.2 per cent. and 80.3 per cent. The average for 1946-1950 was 79.8 per cent.

During the war the proportions of maternities attributed to each of the three quinary age groups over 30 more or less steadily increased to reach a maximum

at the end of the war, whilst each of the three quinary age groups under age 30 declined to a minimum. Since then a reverse process has been operating, the proportions for each of the three younger groups rising, and by 1950 they had passed their 1938 position, whilst those for the older groups have fallen and by 1950 they too had passed their 1938 positions. There is one exception to this pattern, the proportion for 20-24 dropping from 23.3 per cent. in 1938, to a minimum of 22.3 in 1939, and rising sharply to 24.9 per cent. in 1941 and 1943, but thereafter this proportion followed the general pattern.

In the top portion of Table LV the numbers of maternities are shown in the form of rates per 1,000 married women at each age in each year as extracted from Table 5 of Appendix II of the present volume and Table V of Appendix I of the 1940-1945 Civil Text and in the lower half of the table these age rates are compared with those of 1938. Fertility varies with duration of marriage independently of age and to eliminate the duration factor the comparisons are shown in a standardised form, representing the percentage ratio which the maternities actually recorded at each age bear to those which would have emerged had the married women been subject to the 1938 age-duration rates.

Table LV.—Legitimate Maternity Rates by Age, 1938 to 1950, England and Wales.

Mothers' Age	1938	Average 1939-45	1946	1947	1948	1949	1950	Average 1946-50
Experienced Maternity Rates per 1,000 Married Women								
15- ..	550	332	348	469	468	472	461	444
20- ..	272	227	252	310	284	270	255	274
25- ..	175	161	210	228	191	182	173	197
30- ..	112	110	143	142	119	109	106	124
35- ..	61	65	81	79	67	60	57	69
40- ..	23	23	26	26	23	20	19	23
15-44 ..	113	107	131	141	123	116	110	124
Ratio to 1938 Rate taken as 100 (Duration Standardised)								
15- ..	100	60	64	85	86	88	86	82
20- ..	100	84	94	116	106	101	95	102
25- ..	100	94	126	137	115	109	104	118
30- ..	100	99	134	134	111	102	99	116
35- ..	100	105	133	130	110	98	93	113
40- ..	100	101	111	112	99	86	80	98
*15-44 ..	100	92	116	126	109	102	97	110

The general course of the age rates as shown by the percentage ratios in the lower half of the table is dominated by abnormal influences following as an aftermath of the war. The most notable in the period 1946 to 1950, to which reference has already been made, is the making good of births postponed from the war period. It is not unreasonable to suppose that the greatest extent of postponement, coupled with the ability to make good such postponement, will have fallen on the middle age groups of the reproductive range. In addition the married women of these ages may well have felt a strong urge to hurry on with their family building before it was too late. It is not surprising therefore that the highest percentage excesses over the 1938 rates were recorded by these middle age groups. The greatest excess in a single year is 37 per cent., in 1947 at the group 25-29, who also recorded the greatest average excess (18 per cent.) for the period 1946-1950. They are followed by group 30-34, with 34 per cent.

* Standardised for age and duration.

in 1946 and again in 1947 and a 1946-1950 average of 16 per cent., and by group 35-39 with 33 per cent. in 1946 and a 1946-1950 average of 13 per cent.

Several factors, for instance the difference in liability of husbands of different ages to service in the armed forces and to being sent abroad, and their different times of demobilization, have combined to produce a marked pattern in the later war and post-war peaks in the birth rate which are seen to occur progressively later in calendar time with decreasing age of mother. For age group 40-44 the peak was reached in 1944, for 35-40 in 1946, 30-34 in 1946-7, 25-29 and 20-24 in 1947, and under 20 in 1949. By 1950 only the rate for age-group 25-29 was in excess of the corresponding rate for 1938. At this age the number of maternities is greater than for any other quinary age-group and accounts for one-third of all maternities. From this 25-29 age-group the comparisons with 1938 show deficiencies which become progressively greater at the younger and older groups to extremes of 14 per cent. at 15-19 and 20 per cent. at 40-44, the combined effect of these changes compared with 1938 resulting in a deficiency of only three per cent. for the group 15-44 as a whole. A similar progression is followed by the 1946-1950 average rates, but all except those for the extreme age groups register excesses over 1938. These average rates vary from an excess of 18 per cent. for 25-29 to deficiencies of 18 per cent. and 2 per cent. for 15-19 and 40-44 respectively, with a 10 per cent. excess for 15-44 as a whole.

The particularly low rates recorded for this youngest age group 15-19 compared with 1938 are a notable feature of the lower half of the table. On pages 91-92 reference was made to the changes since 1938 in the proportion of irregularly conceived maternities subsequently regularised by the marriage of the parents before the birth of the child. This phenomenon has a far greater relative influence on legitimate maternity rates for ages under 20 than for older ages, as a high proportion of legitimate maternities to mothers under 20 are premaritally conceived. In 1938 there were 4,934 illegitimate maternities to mothers under age 20 and 21,878 legitimate, 15,513 of these being premaritally conceived. The corresponding annual average figures for 1946-1950 were 5,857 illegitimate, and 23,704 legitimate of which 13,237 were premaritally conceived. Thus in 1938 of the 20,447 irregularly conceived maternities, 15,513 or 76 per cent. were subsequently regularised by the marriage of the parents before the birth, whilst in 1946-1950 on average 19,094 maternities were irregularly conceived but only 69 per cent. were similarly regularised. If again 76 per cent. had been regularised, the number of legitimate maternities, 23,704, would have been increased by 13 hundred or nearly 6 per cent.

When birth rates for all ages or for 15-44, the reproductive ages, have been under discussion, some clarification of the nature of birth rates during the disturbed period associated with the Second World War has been achieved by aggregating the complementary periods 1939-1945 and 1946-1949. This process is less satisfactory when distinction is made of mothers' age, since a postponed birth may be made good after the mother has passed into a higher age group. A summary of the lower half of Table LV in this form is as follows:—

	15-	20-	25-	30-	35-	40-	15-44
1938	100	100	100	100	100	100	100
1939-49 average ..	68	91	104	107	109	101	100
1950	86	95	104	99	93	80	97

It may be seen that, as expected, the 1939-1949 average rates have a different structure from those of either 1938 or 1950, being higher at the older ages and lower at the younger. Apart from providing confirmatory evidence of the

concept of postponement, this summary is not in fact very informative. To avoid this distortion it is necessary to aggregate the experience of successively older mothers, which may be done by an analysis by generations, such as that on page 218, or by marriage cohorts, such as that on pages 196 to 199.

Analysis by Duration of Marriage.—The distribution of legitimate maternities according to marriage duration* is shown for 1938, 1939–1945 and individual years from 1946 to 1950 in Table LVI.

Table LVI.—Distribution of Legitimate Maternities by Marriage Duration, 1938 to 1950, England and Wales.

Marriage Duration	1938	Average 1939–45	1946	1947	1948	1949	1950	Average 1946–50
Pre-maritally conceived per 1,000 total legitimate maternities of each year								
0–8½ mths.	106	73	56	71	84	84	81	75
Distribution per 1,000 total conceived after marriage in each year								
8½–11½ mths.	60	57	61	69	74	63	62	66
1–yr.	154	148	123	152	159	167	155	151
2–yrs.	122	117	78	95	120	125	127	109
3–yrs.	104	102	77	73	86	107	109	90
4–yrs.	88	89	89	77	65	77	96	81
5–6 yrs.	131	141	197	166	135	119	117	147
7–8–9 yrs.	138	140	169	180	177	166	146	168
10 and over	203	206	206	188	184	176	188	188

The biggest change shown by this arrangement of the data is that associated with the first duration identified, namely 0–8½ months, the duration adopted as statistically reflecting the incidence of premaritally conceived maternities. In 1938 these maternities accounted for 106 per 1,000 of the total legitimate maternities recorded but, for the reasons already discussed, this proportion fell rapidly during the course of the war to 53 in 1944 and for the seven years 1939–1945 taken together it averaged only 73. Table LVI shows that, from 56 in 1946, this proportion has risen to just over 80 in 1950 and as yet there is little indication of a return to the pre-war level.

To avoid the influence of this very exceptional section upon the later durations, the proportions for the latter are shown per 1,000 conceived after marriage. From the 1938 column it may be seen that conceptions were highest immediately after marriage and thereafter steadily and substantially declined at each succeeding year of marriage duration; 21.4 per cent. of the maternities occurred before the end of the second year and were thus products of conceptions within 15 months of marriage, while 52.8 per cent. occurred before the end of the fifth year (conceptions within four-and-a-quarter years of marriage); about one fifth of the total occurred after 10 years of marriage.

Although the distributions in the individual war years showed a marked variation amongst themselves, the proportions at shorter durations tending to fall during the war whilst those at longer durations experienced a complementary rise, on average the 1939–1945 distribution was not very different from that of 1938. There was a slight tendency for the proportions at under 5 years' duration to fall short of and those at durations over 5 years to exceed those of 1938. The 1946–1950 average distribution differs similarly from that of 1938, but to a greater extent, the proportion of maternities at durations under 5

* Durations shown in years, e.g., 1-, 2-, etc., should be read as strictly meaning 1½ mths.–1 yr. 11½ mths., 1 yr. 11½ mths.–2 yrs. 11½ mths., etc.

years being 49.7 per cent. compared with the 52.8 per cent. of 1938 mentioned above. The phenomenon of postponement, to which attention has already been drawn, would lead to a transfer from the shorter to the longer durations in this way. In addition, the wide fluctuations in the incidence of marriage since 1938, and consequent changes from year to year in the numbers of married women at risk of having a child at the different durations of marriage, prevent a clear understanding of the import of these distributions. The effect of these variations in the annual numbers of marriages has been removed in Table LVII where the numbers of maternities at each marriage duration are expressed as a rate per 1,000 married women aged 15–44 passing through the duration identified.

Table LVII.—Legitimate Maternity Rates by Duration of Marriage, 1938 to 1950, England and Wales.

	1938	Average 1939–1945	1946	1947	1948	1949	1950	Average 1946–1950
Experienced Rates per 1,000 Married Women aged 15–44 at each duration								
0–8½ months	187	124	117	159	162	164	158	152
8½–11½ months	98	91	120	151	130	110	109	124
1 year	244	237	283	332	295	283	266	292
2 years	203	185	213	242	230	222	209	223
3 "	177	163	194	218	193	197	189	198
4 "	156	147	189	213	173	167	172	183
5 "	138	133	182	196	162	148	143	166
6 "	119	119	175	176	143	146	123	153
7 "	105	105	154	155	126	118	114	133
8 "	94	93	132	132	111	95	98	114
9 "	81	83	115	114	96	87	84	99
10 years and over	46	47	57	55	46	41	40	48
All Durations	113	107	131	141	123	116	110	124
All Durations from 8½ months	106	104	129	137	118	110	105	120
Ratio to 1938 rate taken as 100 (age standardised)								
0–8½ months	100	60	60	83	83	82	78	77
8½–11½ months	100	93	123	157	135	114	113	128
1 year	100	95	113	135	121	115	108	118
2 years	100	89	102	116	112	108	102	108
3 "	100	91	104	118	105	109	105	108
4 "	100	94	117	131	107	103	108	113
5 "	100	96	130	137	112	102	99	116
6 "	100	100	145	145	115	116	98	124
7 "	100	102	148	146	116	106	102	124
8 "	100	100	142	140	114	95	96	117
9 "	100	104	144	142	117	104	100	121
10 years and over	100	103	123	119	100	89	84	103
*All Durations	100	92	116	126	109	102	97	110
*All Durations from 8½ months	100	96	123	132	112	104	99	114

From the lower half of Table LVII it may be seen that rates at durations under 8½ months, that is those effectively relating to pre-maritally conceived maternities, were exceptional in that they alone were substantially lower for the whole of the period 1946–1950 than in 1938. In 1946 they were 40 per cent.

* Standardised for age and duration.

lower and for each of the other years about 20 per cent. lower. The average rate for this duration for the war years 1939-1945 was also 40 per cent. below the 1938 rate, the rate for the individual years of this period varying from 16 per cent. below in 1939 to 47 per cent. below in 1945 (1940-1945 Civil Text Table XL., page 93). The 40 per cent. deficiency in 1946 thus represents a partial recovery from the minimum rate of 1945, and this recovery continued on to 1947 and 1948, but there is as yet no sign of a complete return to the 1938 level. However, these rates do more than reflect the feature discussed fully on page 91 in the section Illegitimate Births and Premarital Conceptions, namely the tendency during the war for a lowering of the proportion of irregularly conceived maternities subsequently regularised by the marriage of the parents after the conception but before the birth.

At durations over 8½ months, almost without exception the average rates for the period 1946-1950 exceeded those of 1938 and were complementary to those of the war years 1939-1945 which fell short of, or exceeded by only a small amount, the 1938 rates. The rates of Table LVII thus demonstrate again the outstanding feature of the period, to which attention has already been drawn, namely the lowering of birth rates during the war years attributed to postponement of births, and the subsequent rise when these births, were, to some extent, made good. The identification of duration of marriage in the table permits a closer examination of this phenomenon since postponement inevitably implies a transfer from shorter to longer durations.

The average rates for the combined period 1939-1950 of war and post-war years for successive durations, related to those of 1938 taken as 100, that is the averages of the rates in the lower half of Table LVII, are as follow :—

Months	Years									
Duration: 8½-11½	1-	2-	3-	4-	5-	6-	7-	8-	9-	10 and over
107	104	97	98	102	104	110	111	107	111	103

Excluding durations under 2 years, which are considered later, it may be seen from this summary that from a deficiency of 3 per cent. and 2 per cent. at durations 2- and 3-, the rates rise continuously to a maximum at duration 7- of an 11 per cent. excess, which is repeated at duration 9-. The high marriage rates recorded in the second half of 1945 and in the two years 1946 and 1947 suggest that a proportion of these marriages were postponements from the war years and if this were so they would influence the maternity rates at durations of under 2 years in the 1946-1950 period. The partners of such marriages would, no doubt, also feel that they had postponed their family building and make some attempt to make good the lost ground, but their efforts would lead, not to transfer of births from short to long durations, but to a concentration at short durations in the immediate post-war years. It may in fact be confirmed from Table LVII that there are outstandingly high rates at duration 8½-11½ months in 1946, and at this duration and 1 year in 1947 and 1948. This evidence, though perhaps not conclusive, must have some weight in a consideration of the factors which resulted in the high maternity rate at these short durations in 1947 and 1948.

As was pointed out in the section dealing with maternity rates by age of mother, a major interest attaches to aggregations in which the war time deficiencies in births due to postponement were offset by the post-war excesses when the postponed births were so far as possible made good. A simple aggregation of the experience of 1939-1950 for individual durations does not achieve this; in fact such an aggregation has been employed above to contrast the shorter and longer durations. In the arrangement of Table LVII, the rates for a given cohort of married women appear at successive durations in successive calendar years, that is to say on a falling diagonal, and compensation of war time deficiencies by post-war excesses is therefore achieved

by aggregation along these diagonals. Furthermore, if the aggregation is commenced with the achievement in the first year of marriage and the accumulated total is noted after the achievement in each succeeding year is added, the total achievement at successive durations is obtained, and may be compared with the total achievement of another cohort at the same durations.

Distinction of age at marriage may be made by calculating the maternity rate per 1,000 women exposed to risk of maternity in a given calendar year at duration under 1 year at, for example, age 25-29 at maternity. To this may be added the rate in the next calendar year at duration 1- year and age 26-30 at maternity and so on, advancing the age at maternity and duration of marriage by one year for each succeeding calendar year of maternity experience. By accumulating the rates at each duration the total fertility achievement by given cohorts of women marrying are obtained at the end of any duration up to 10 years. The accumulated totals at successive durations of rates calculated in this way are shown in Appendix II Table 6 on page 196 and the section relating to all ages at marriage under 45 is shown graphically at Diagram H.

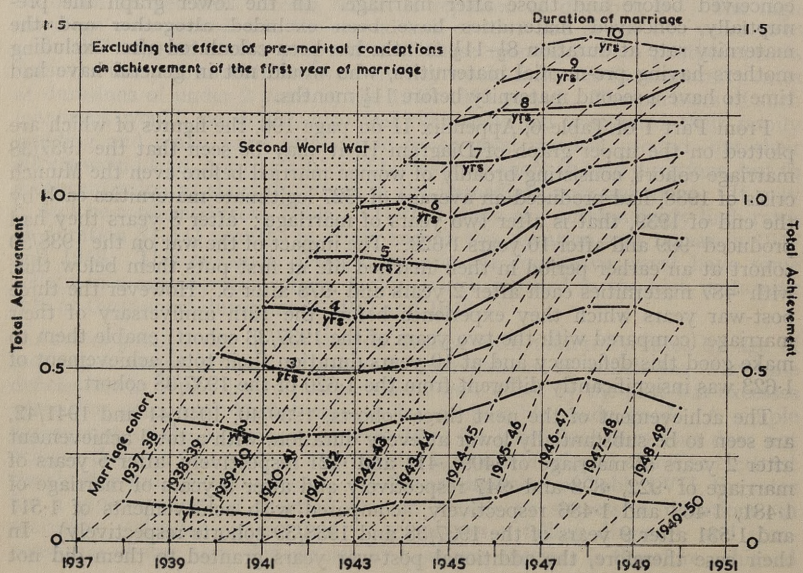
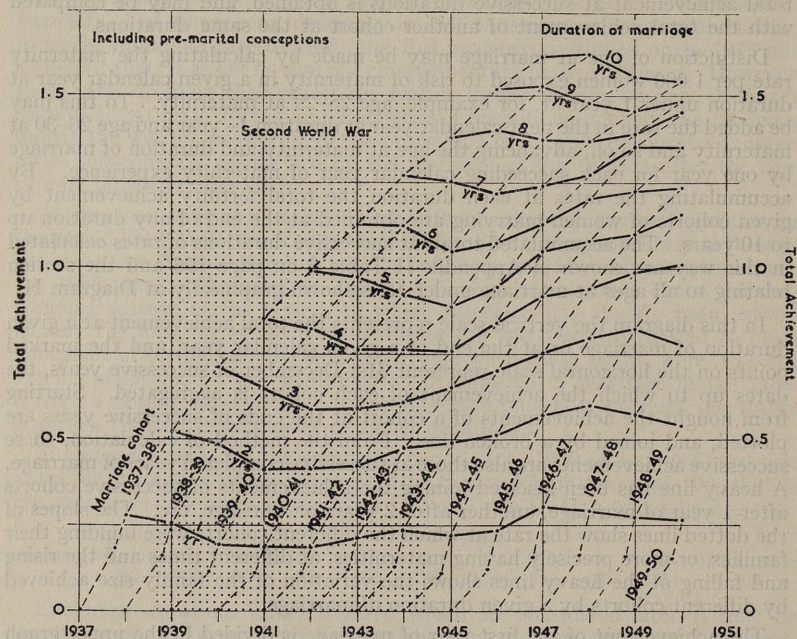
In this diagram the vertical scale represents the total achievement at a given duration of marriage or at the end of a given calendar year, and the marked points on the horizontal scale represent 31st December of successive years, the dates up to which the achievement of each cohort is aggregated. Starting from nought the achievements of a cohort at the ends of successive years are plotted, and joined by a broken line. From the method of calculation, these successive achievements are also those at successive completed years of marriage. A heavy line has been inserted joining the achievements of successive cohorts after 1 year of marriage, another after 2 years of marriage, etc. The slopes of the dotted lines show the rate at which the different cohorts were building their families, or more precisely having maternities, at different times and the rising and falling of the heavy lines shows the variation of the family size achieved by different cohorts by a given duration of marriage.

The achievement of the first year of marriage is divided in the upper graph by an intermediate point broadly dividing the maternities involved into those conceived before and those after marriage. In the lower graph the pre-nuptially conceived maternities have been excluded altogether and the maternity rate at duration 8½-11½ months has been calculated after excluding mothers having pre-nuptial maternities, who would not in general have had time to have a second maternity before 11½ months.

From Part I of Table 6, Appendix II on page 196, the figures of which are plotted on the upper graph of Diagram H, it may be seen that the 1937/38 marriage cohort, consisting broadly of women married before even the Munich crisis of 1938, had produced an average of .527 legitimate maternities each by the end of 1939, that is after two years of marriage; after 5 years they had produced .999 and after 10 years 1.620. The impact of the war on the 1938/39 cohort at an earlier period in their married life at first puts them below this, with .487 maternities each after 2 years and .978 after 5. However the three post-war years which they experience before the 10th anniversary of their marriage (compared with the two years of the 1937/38 cohort) enable them to make good this deficiency and at 10 years duration their total achievement of 1.623 was insignificantly different from the 1.620 of the 1937/38 cohort.

The achievement of the next three cohorts, 1939/40, 1940/41 and 1941/42, are seen to be substantially lower at every duration, with a total achievement after 2 years of marriage of .409, .411 and .421 respectively, after 5 years of marriage of .922, .898 and .947 respectively and after 9 years of marriage of 1.481, 1.463 and 1.486 respectively, (compared with achievements of 1.511 and 1.531 after 9 years of the 1937/38 and 1938/39 cohorts respectively). In their case therefore, the additional post-war years granted to them did not

DIAGRAM H.—Total Achievement (legitimate maternities per woman married under age 45) of Marriage Cohorts at Successive Durations. (See Text)



permit their making good their earlier deficiencies. Attention has already been drawn to the decrease during the war in legitimate, but pre-nuptially conceived, maternity rates and it may be seen that this loss accounts for the bulk of the deficiency of the 1939/40, 1940/41 and 1941/42 cohorts. Part II of Table 6 of Appendix II on page 196 and the lower graph of Diagram H, in which the effect of these maternities has been removed, show the total achievement after 9 years of marriage to have been 1.347 and 1.385 for the pre-war cohorts 1937/38 and 1938/39 respectively and 1.375, 1.364 and 1.386 for the cohorts 1939/40, 1940/41 and 1941/42.

Returning to a consideration of total achievement including pre-nuptially conceived maternities, the 1942/43 cohort, the next after the three considered together above, is seen to show a definite superiority over these three at all durations, indeed its achievement of 1.462 after 8 years duration is not far short of the 1.463 to 1.486 of the cohorts 1939/40 to 1941/42 after 9 years duration. The diagram illustrates the outstanding behaviour of this cohort, its graph pushing up towards that of its predecessor of 1941/42 and to some extent leaving behind that of its successor of 1943/44. A particularly outstanding feature is the achievement of the members of the cohort aged 35 and over at marriage. In the Appendix table the achievement after 8 years of marriage of the group aged 35-39 at marriage is shown to be 0.628, a figure substantially in excess of the achievements of neighbouring cohorts at similar durations. This feature is confirmed by the entirely independent data of the Census 1 per cent. Sample.

This resurgence continues, but at a lower tempo, in the achievement of successively later cohorts until a maximum is reached by the 1946/47 cohort, and thereafter there has been a slight decline. It was to be expected that the women who married immediately after the war might have included those who had postponed their marriages and might therefore tend to build their families abnormally quickly to make up for lost time.

The 1937/38 cohort, the first of the series, is by no means a true standard against which to judge the performance of the other cohorts since the war must be considered to have influenced it no less than the others. It is nevertheless convenient to employ it as an arbitrary datum line, and this has been done in Table LVIII.

In the upper part of this table the total achievement of the various cohorts at each duration is related to that of the 1937/38 cohort taken as a 1,000, and in the lower part is shown a similar comparison after the influence of pre-nuptially conceived legitimate maternities had been removed from the maternities of the first year of marriage. The table relates to all women married under the age of 45.

In the upper part the relatively low achievement in the first 8½ months of marriage may be seen, varying from under 60 per cent. to 88 per cent. of the achievement of the 1937/38 cohort. When this effect is removed, in the lower part of the table, the achievement by the end of the first year of marriage of all the earlier cohorts is seen to fall below that of the 1937/38 cohort whilst the later cohorts show a superiority, the 1946/47 cohort being outstanding with an achievement nearly 50 per cent. above that of the 1937/38 cohort. In this lower part of the table, the earliest cohort to show a superior achievement at duration one year to that of the 1937/38 cohort is the 1943/44 cohort. The earlier cohort 1942/43 did not achieve parity until 4 years of marriage had elapsed, the 1941/42 cohort took 5 years, the 1940/41 cohort 6 years, the 1939/40 seven years, and the 1938/39 cohort took 6 years. It will be noticed that the 1943/44 and 1938/39 cohorts achieved parity by the end of 1944, the others by the end of 1946. The birth rate in the intermediate year, 1945, was lower than in either 1944 or 1946, on account of the removal abroad of large numbers of the Armed Forces on D Day in 1944.

Table LVIII.—Total Maternities per Woman Married under age 45, achieved by successive Marriage Cohorts, expressed as a ratio to those of the 1937/38 cohort taken as 1,000, by duration of marriage, England and Wales. (See Text)

(a) Each cohort associated with two calendar years represents the number of married women exposed to risk at durations under one year in the second of the associated years.

(b) The durations 1 yr., 2 yrs., etc., are more precisely 11½ mths., 1 yr. 11½ mths., etc.

Original Cohort of New Marriages	Duration of Marriage										
	8½ mths.	1 yr.	2 yrs.	3 yrs.	4 yrs.	5 yrs.	6 yrs.	7 yrs.	8 yrs.	9 yrs.	10 yrs.
	Total Achievement										
1937/38	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1938/39	877	898	924	923	968	979	995	984	1,014	1,013	1,002
1939/40	626	698	776	840	894	923	923	958	993	980	966
1940/41	583	660	780	833	894	899	946	980	991	968	953
1941/42	588	663	799	858	892	948	1,001	1,002	1,006	983	
1942/43	663	740	898	916	989	1,054	1,064	1,060	1,056		
1943/44	717	842	934	990	1,079	1,090	1,083	1,060			
1944/45	604	793	966	1,055	1,104	1,106	1,093				
1945/46	626	832	1,080	1,122	1,165	1,163					
1946/47	850	1,088	1,148	1,162	1,188						
1947/48	866	1,025	1,089	1,098							
1948/49	877	961	1,025								
1949/50	845	937									
	Total achievement excluding the effect of pre-nuptial conceptions on the maternities of the first year of marriage.										
1937/38	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1938/39	909	939	932	987	996	1,012	997	1,031	1,028	1,014	
1939/40	769	835	898	953	977	969	1,005	1,039	1,021	1,002	
1940/41	736	860	901	964	957	1,004	1,035	1,043	1,013	992	
1941/42	736	884	932	959	1,014	1,067	1,060	1,059	1,029		
1942/43	818	994	985	1,062	1,127	1,128	1,116	1,107			
1943/44	1,008	1,030	1,071	1,164	1,163	1,145	1,111				
1944/45	1,050	1,129	1,190	1,224	1,205	1,176					
1945/46	1,124	1,289	1,274	1,297	1,271						
1946/47	1,488	1,309	1,272	1,282							
1947/48	1,281	1,204	1,177								
1948/49	1,091	1,096									
1949/50	1,066										

It is of interest to examine the impact of the war on the family building of sub-cohorts in which distinction is made of age at marriage. Such comparisons may be made from Table LIX, prepared from Table 6 of Appendix II, on page 196, in which as before achievement is related to that of the 1937/38 cohort. The comparison is made for various ages at marriage but restricted to the achievement by 5 and 10 years duration. In all cases the lowest ratios are recorded by one or other of the extreme age groups, under 25 and 40-44. For total achievement, including the effect of pre-nuptially conceived maternities, at 5 years duration the youngest age group (under 25) is usually the lowest, but at 10 years duration the oldest age group (40-44). When the effect of

Table LIX.—Total Maternities per Married Woman achieved during the first 5 and 10 years of marriage by successive Marriage Cohorts expressed as a ratio to those of the 1937/38 cohort taken as 1,000, by age at marriage, England and Wales. (See Text)

(a) Each cohort associated with two calendar years represents the number of married women exposed to risk at durations under one year in the second of the associated years.

(b) The periods involved are more precisely 4 years 11½ months and 9 years 11½ months.

Original Cohort of New Marriages	Total Achievement						Total Achievement, excluding the effect of pre-nuptial Conceptions on the Maternities of the First Year of Marriage					
	Nominal Age at Marriage						Nominal Age at Marriage					
	All Ages Under 45	Under 25	25-29	30-34	35-39	40-44	All Ages Under 45	Under 25	25-29	30-34	35-39	40-44
	Duration: 5 Years											
1937-38	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1938-39	979	963	1,002	996	974	960	996	984	1,018	1,004	991	964
1939-40	923	878	960	968	947	873	977	941	996	999	979	937
1940-41	899	843	961	978	968	967	957	912	995	1,004	1,005	1,018
1941-42	948	880	1,018	1,012	978	913	1,014	963	1,054	1,036	1,009	964
1942-43	1,054	979	1,142	1,089	1,085	1,053	1,127	1,073	1,177	1,112	1,121	1,045
1943-44	1,090	1,014	1,187	1,145	1,067	1,047	1,163	1,110	1,224	1,163	1,093	1,027
1944-45	1,106	1,023	1,235	1,174	1,101	1,040	1,205	1,142	1,298	1,216	1,152	1,108
1945-46	1,163	1,090	1,313	1,215	1,115	993	1,271	1,219	1,376	1,264	1,171	1,081
	10 Years											
1937-38	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1938-39	1,002	987	1,020	1,013	985	968	1,014	1,002	1,030	1,019	1,000	974
1939-40	966	935	978	973	957	884	1,002	978	999	993	985	948
1940-41	953	920	972	965	977	974	992	970	991	981	1,008	1,026

pre-nuptially conceived maternities is removed (on the right-hand side of the table), both at 5 years and 10 years duration the lowest value is usually recorded by the oldest group (40-44).

The maximum ratio is most frequently recorded by age group 25-29, the exception occurring in the cohorts married in the early war years when an older group recorded the maximum, possibly because older husbands and wives were affected less by the war.

The records are inadequate as yet to permit a clear picture to be seen. Only one post-war cohort has passed through even 5 years of marriage and this cohort, deriving from the marriages celebrated immediately after the war, can hardly be considered typical of all post-war marriages. Only the cohorts deriving from pre-war marriages and those of the early war years have reached the more reliable 10-year duration point.

Analysis by Age and Duration Combined.—The analyses so far examined show that fertility declines with advancing age of mother and also with lengthening duration of marriage when these factors are considered separately but to what extent either or both are responsible for the decline is not clear, since the shorter durations tend to be associated with the younger mothers and the longer durations with the older mothers, so that arrangements of the data by either factor alone automatically involve and reflect the influence of the other. For an appreciation of the separate and independent effects of these factors tabulations of birth or maternity rates are required in which distinction is made simultaneously of age of mother and duration of marriage. Such tabulations of maternity rates for each year from 1938 to 1945 were shown in

Table V of Appendix I of the Civil Text, 1940-1945, on pages 172-174, and for each year 1946-1950 in Table 5 of Appendix II of the present volume on pages 192-194. A summary of the Appendix Table for 1946-1950 and a comparison of the periods 1939-1945 and 1946-1950 with 1938 are shown in Table LX. It should be noted that the rates in the Appendix Tables are expressed as per year of exposure and those in Table LX are per married woman. The two sets of rates differ only at durations of marriage under one year, the important feature to recognise being that the numerically low rates at duration $8\frac{1}{2}$ - $11\frac{1}{2}$ months in Table LX reflect the shortness of the period—only a quarter of a year—in which the women concerned could have a maternity to count in this class. They do not imply a low *intensity* of reproduction by this group of married women. A comparison of the intensity of reproduction by quarters of the first two years of marriage duration is made in Table LXI on page 112.

Table LX.—Legitimate Maternity Rates per Married Woman distinguishing both Age and Duration of Marriage, 1939-1945 and 1946-1950, England and Wales.

Age	All Durations	Duration (Years from 1-)										10 and over
		0- $8\frac{1}{2}$ m.	$8\frac{1}{2}$ - $11\frac{1}{2}$ m.	1-	2-	3-	4-	5-	6-	7-	8-		9-
Average Annual Rates, 1946-50												
15-	-444	-343	-136	-368	-312	-297	—	—	—	—	—	—
20-	-274	-155	-136	-321	-253	-234	-226	-218	-225	-244	-294	—
25-	-197	-118	-131	-299	-231	-206	-194	-183	-175	-158	-146	-153
30-	-124	-101	-110	-259	-197	-177	-164	-151	-143	-131	-116	-106
35-	-069	-077	-071	-183	-138	-127	-118	-110	-103	-098	-086	-081
40-	-023	-034	-023	-071	-053	-049	-045	-039	-040	-037	-033	-032
15-44	-124	-152	-124	-292	-223	-198	-183	-166	-153	-133	-144	-099
1939-45 Average Compared with 1938 taken as 100												
15-	60	48	91	91	78	80	—	—	—	—	—	—
20-	84	61	93	95	87	86	90	91	88	88	76	—
25-	92	79	97	97	92	93	94	94	98	98	96	104
30-	98	84	87	98	93	96	96	101	104	104	99	102
35-	106	82	90	99	92	100	99	102	107	108	110	107
40-	103	89	81	97	101	98	93	102	102	102	99	108
15-44	94	67	93	97	91	94	96	99	101	101	99	103
1946-50 Average Compared with 1938 taken as 100												
15-	81	65	132	119	85	95	—	—	—	—	—	—
20-	101	74	131	114	102	99	103	102	102	98	83	—
25-	113	106	136	128	117	116	118	118	124	116	107	111
30-	111	100	108	120	112	116	119	123	131	134	123	122
35-	113	91	100	114	103	113	112	117	124	132	130	133
40-	100	84	81	111	106	104	105	105	114	116	110	123
15-44	110	81	127	120	110	112	117	120	129	127	121	122

With a few minor exceptions the rates for 1946 to 1950 may be seen from the Appendix Tables to follow the general pattern of those of earlier years. At each duration the rates decline, more or less consistently, with increasing age of mother and at each age with lengthening duration of marriage, being at a maximum immediately after marriage at every age group. In this connection the first year of marriage is peculiar as it includes a substantial period during which the births must be the result of pre-marital conceptions and only a brief reference to the rates at this duration will be made here, their examination in greater detail being made on pages 89-93.

The disturbances of normal married life due to the war and its aftermath have not upset the maternity rates to such an extent as to reverse their characteristic pattern, referred to above, but they appear to have affected the relative magnitude of rates at different ages and durations of marriage.

A consideration of this point may be made by reference to the central and bottom sections of Table LX in which the average maternity rates of 1939-1945 and 1946-1950 are expressed as percentages of the corresponding rates in 1938. From the central section of the table it will be seen that in 1939-1945 for almost every duration the highest rates, compared with 1938, were for mothers aged 35-39; but the columns of the bottom section of the table show no evidence of this consistent superiority of the rates at age 35-39 in the period 1946-1950, when it was only at durations of 8 years or more that they were highest compared with 1938. The consistency of this relative magnitude, compared with 1938, of the rates at age 35-39 during the war years suggests an explanation specifically associated with the conditions of the time such as for instance, that older husbands were less likely to be separated from their wives by service in the Armed Forces, although this alone would imply that the highest rates relative to 1938 would be experienced by mothers aged 40-44, but against this it might well be that the reproductive powers of the older woman had become more impaired than those of the younger group and this outweighed any advantage they may have had through their lesser liability to separation from their husbands. If the separate years of the period 1939 to 1945 are examined, the superiority of the ratio to 1938 for age group 35-39 at most durations is not apparent until 1942 or 1943 after which it continues until 1945. In 1946 however, there is a change in the pattern and the maximum is at age 25-29 or 30-34 for all durations of 1 to 7 years and at 35-39 for the longer durations. In 1947 the shift to a lower age is still more pronounced, the maximum being at age 25-29 for durations 1 to 5 years, at 30-34 for duration 6-7 years and at 35-39 for 8 or more years duration, while the average for the whole period 1946-1950 resulted in a maximum ratio at 25-29 for the first 3 years duration, at 30-34 for durations 3 to 7 years and 35-39 at durations 8 years or over.

Legitimate Fertility in the First Two Years of Marriage.—In the Supplement to Table IV of Appendix I of the 1940-1945 Civil Text legitimate maternities occurring within the first two years of marriage during the period 1938 to 1945 were analysed by quarter years of marriage duration and corresponding analyses for the years 1946 to 1950 are shown in the Supplement to Table 4 of Appendix II of the present volume, page 190. These analyses are summarised in Table LXI with an additional section showing approximate conception rates in the first five quarters of marriage (corresponding to births in the fourth to eighth quarters) related not to all married women passing through the marriage duration but restricted to those not pregnant at the beginning of each quarter. In 1938, for example, the maternity rates per 1,000 married women in the first three columns of Table LXI show that 187 out of 1,000 women were already pregnant at the date of their marriage so that the 98 maternities per 1,000 married women shown for duration $8\frac{1}{2}$ - $11\frac{1}{2}$ months were conceived by the 813 women not pregnant at the date of marriage which gives a conception rate of 121 in the first quarter of marriage per 1,000 women not already pregnant at the beginning of the quarter. The rates for the succeeding quarters have been similarly obtained by dividing the maternity rate for the appropriate quarter by 1,000 minus the sum of the rates in the three preceding quarters. The rates in this section are of special interest since reproductive behaviour is subject to least restraint in the immediate vicinity of marriage, in consequence of which the children born within two years of marriage represent a large proportion of all legitimate births, 30 per cent. in 1938, 26 and 27 per cent. in 1939-1945 and 1946-1950 respectively, of which about one third in 1938 and about one quarter in the other two periods were represented by children conceived before but born after marriage. The fall in the proportions pre-maritally conceived accounts in the main for the decline from 30 per cent. to 27 per cent. mentioned above.

Table LXI.—Legitimate Maternities within the first two years of Marriage, 1938 to 1950, England and Wales.

Maternity Rates per 1,000 Married Women at the following Marriage durations (months)										Corresponding Conception Rates* in the five quarters following marriage amongst women not already pregnant at the beginning of each quarter												
										1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	5th Qtr.								
										0-2½	2½-5½	5½-8½	8½-11½	11½-14½	14½-17½	17½-20½	20½-23½					
All Ages (15-44) Rates in Successive periods																						
<i>Period</i>	20	81	86	98	97	63	43	42	121	132	88	58	53									
1938																						
1939-45 average	13	48	65	91	82	61	51	44	105	103	81	66	54									
1946	11	39	65	120	90	70	60	57	136	116	97	83	73									
1947	15	54	92	151	110	82	72	89	180	156	127	110	94									
1948	16	57	89	130	96	72	64	62	155	131	105	91	81									
1949	16	61	87	110	96	68	60	59	132	129	96	83	76									
1950	14	60	83	109	85	66	59	56	129	114	91	80	71									
1946-50 average	14	54	83	124	95	72	63	61	146	129	103	89	79									
Nominal Age† at marriage																						
Average Annual Age Rates—1938																						
15-	63	243	226	104	107	81	52	34	222	251	144	73	45									
20-	19	88	98	102	106	68	49	44	128	149	98	68	57									
25-	11	44	53	97	92	59	38	44	109	114	78	51	54									
30-	12	40	46	98	82	52	33	38	109	100	67	43	46									
35-	15	32	35	65	53	36	23	24	71	61	43	27	27									
40-	8	15	15	24	20	12	8	7	25	21	13	8	7									
15-44	20	81	86	98	97	63	43	42	121	132	88	58	53									
1939-45																						
15-	27	109	127	94	92	69	55	44	128	137	100	74	56									
20-	11	46	67	96	88	67	54	46	110	111	89	72	58									
25-	9	30	46	92	78	58	48	43	101	94	74	62	53									
30-	10	29	43	86	70	51	42	36	94	83	64	53	43									
35-	11	26	30	58	48	34	28	24	62	54	39	33	27									
40-	8	14	12	19	16	12	10	8	20	17	13	10	8									
15-44	13	48	65	91	82	61	51	44	105	103	81	66	54									
1946-50																						
15-	30	137	185	136	102	86	81	79	210	188	149	120	108									
20-	12	52	86	136	104	77	68	66	160	143	114	100	88									
25-	13	38	63	128	98	72	62	59	144	127	101	88	77									
30-	14	32	52	104	82	60	51	47	115	101	79	68	58									
35-	12	25	36	64	52	39	34	29	69	59	46	40	33									
40-	7	12	12	19	18	13	12	10	20	19	14	13	10									
15-44	14	54	83	124	95	72	63	61	146	129	103	89	79									

* The rates refer to conceptions which result in childbirth.
 † Actually age at duration 0-2½ months.

Table LXI shows that the highest rate in 1938 for women aged 15-44 was at 8½-11½ months duration, representing conceptions within the first quarter following marriage. The rate at 11½-14½ months was only very slightly lower and those in the pre-maritally conceived classes 2½-5½ months and 5½-8½ months were not far behind. After 14½ months the rates declined at each succeeding quarter, very steeply at first and then more gently to a rate in the final quarter less than half of that at 8½-11½ months.

During the period 1939-1945 the rate at 8½-11½ months was outstandingly high compared with the other durations while those of the pre-maritally-conceived group fell sharply. The decline from 8½-11½ months to 11½-14½ months in 1939-1945 was well marked but later durations followed much the same pattern as in 1938. In the post-war period this predominance of the rate at 8½-11½ months was continued and increased, especially in the years 1946

and 1947. These changes are brought out in the following summary showing the rates at durations 2½-5½ months to 11½-14½ months expressed as percentages of the rate at 8½-11½ months.

	2½-5½	5½-8½	8½-11½	11½-14½
1938	83	88	100	99
1939-1945	53	71	100	90
1946	32	54	100	75
1947	36	61	100	73
1948	44	68	100	74
1949	55	79	100	87
1950	55	76	100	78
1946-1950	44	67	100	77

The lower section of Table LXI shows the maternity rates with corresponding conception rates, at quinary groups of mothers' nominal age at marriage for 1938, 1939-1945 and 1946-1950. The rates for the pre-maritally conceived maternities at ages under 20 at durations 2½-8½ months are substantially higher than those at 8½-11½ months but as age advances they become relatively of less importance. For the younger mothers the rates at 11½-14½ months were little different from those at 8½-11½ months in 1938 and 1939-1945 but for the older mothers they were from 15 to 20 per cent. lower. In 1946-1950, however, whilst the rates for mothers aged 30 or over followed a similar pattern to those of the war and pre-war years, those of the younger mothers declined from 8½-11½ months to 11½-14½ months by 23 to 25 per cent. The following statement shows the rates at 11½-14½ months expressed as percentages of those at 8½-11½ months:—

	15-19	20-24	25-29	30-34	35-39	40-44
1938	103	104	95	84	82	83
1939-1945	98	92	85	81	83	84
1946-1950	75	76	77	79	81	95

The lower part of Table LXI shows that the rates at duration 8½-11½ months in 1946-1950 were in excess of those in 1939-1945 at every age-group, except 40-44 at which they were equal, and that the relative inferiority of the rates at 2½-8½ months and 11½-14½ months, compared with the 8½-11½ months rate, appears to be due to an absolute superiority of the latter. Indications of the postponement of marriage from the war to the immediate post-war years have been discussed in the marriage section of this volume and in these cases it might be expected there would be an early commencement of family-building. The outstanding maternity rates at marriage duration 8½-11½ months in 1946-1950 are an indication of the post war effort to make good the commencement of family building inevitably postponed through the war. Further light is thrown on this by reference to the conception rates on the right-hand side of Table LXI, in the upper part of which the conception rates for mothers of all ages 15-44 are given for each of the post-war years. These show that the decline in the rates from the first to the second quarter following marriage was greater in the immediate post-war years than in 1949 and 1950 and suggest that the high rates for the first quarter are associated more with postponed marriages than as indicating any more permanent change. In the lower part of the table, which distinguishes age of mother, it can be seen that the superiority of the conception rates in the first quarter of marriage for 1946-1950 over those for 1938 and 1939-1945 is mainly concentrated at ages 20 to 29. This is consistent with the idea of postponement of marriage since it seems reasonable to assume

that it is at these ages that the war would most likely have led to such postponement.

Maternities by Number of Previous Children

Legitimate maternities occurring in the calendar year are classified for various ages of mothers at the time of the maternities, according to the size of the existing families to which the new children were born and are published in Tables II, KK and MM of the successive Parts II. The types of analysis provided by these tables are as follows:—

Table II.—The number of previous children (surviving, dead or stillborn) by the present and any previous husband.

Table KK.—The number of surviving previous children by the present and any previous husband.

Table MM.—The number of previous children (surviving, dead or stillborn) by the present husband only.

An additional analysis of the information in Table MM by the duration of the present marriage is provided in Table SS (Part II). The object of these analyses is to show how families are growing by ascertaining the frequencies at which first, second, third, etc., children are being born to mothers of different ages, and thus to throw light on the family building habits of the community; but an adequate statistical examination of the records must await knowledge of the size distribution of the total families in the country as a whole to which the new maternities can be related. From the maternity analyses alone, however, a broad conspectus of the experience of the years 1938 to 1950 is provided by the summary of the information in Tables II, KK and MM for mothers of all ages shown in Table LXII.

Table LXII.—Average size of existing families to which children were born to Mothers of All Ages and Durations of Marriage, 1938 to 1950, England and Wales.

Type of family measurement	Average size of family to which children were born in:—												
	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
All children by all husbands (II) ..	1.441	1.417	1.394	1.381	1.275	1.236	1.281	1.293	1.185	1.114	1.182	1.199	1.244
Surviving children by all husbands (KK) ..	1.242	1.228	1.218	1.213	1.123	1.092	1.144	1.157	1.066	1.009	1.070	1.093	1.140
All children by present husband (MM)	1.413	1.393	1.370	1.359	1.255	1.217	1.262	1.272	1.163	1.089	1.150	1.165	1.209
Children by previous husband (II-MM) ..	0.028	0.024	0.024	0.022	0.020	0.019	0.019	0.021	0.022	0.025	0.032	0.034	0.035
Stillborn or dead children (II-KK) ..	0.199	0.189	0.176	0.168	0.152	0.144	0.137	0.136	0.119	0.105	0.112	0.106	0.104

The spate of new marriages in the earlier years of the war introduced into the field of potential mothers abnormally large numbers with no previous children and the average size of family to which children were born declined progressively from 1.441 in 1938 to 1.236 in 1943. The restriction on new entrants to the field as marriage incidence passed into the trough of the later years of the war, coupled with the resurgence of the birth rate at that time, led to a recovery in family size to 1.281 in 1944 and 1.293 in 1945. There followed the secondary post-war wave of new marriages, again the field of potential mothers was swamped by the new entrants and the average size of families to which children were born in 1946 and 1947 fell to 1.185 and 1.114 respectively. However the

high birth rates of these years, and of 1948, made considerable strides in building up the families of these newly-wed couples and, since 1947, a continuing rise has been recorded in the average size of families to which children have been born, which had brought it up to 1.244 by 1950. It will, however, take some years of uninterrupted family building before a recovery to the pre-war level may be expected.

The last two lines of Table LXII show the average number of children by former husbands, and of stillborn or dead children, of women who gave birth to children during the period under review. The number of children by former husbands was relatively insignificant and showed little variation from about 2 per cent. throughout the years 1939 to 1947. A definite rise is evident in 1948 to 1950, a reflection of the increase in remarriage incidence, following the spate of divorces granted in and around 1947 and referred to on page 55. The last line, which shows the average portion of the total previous children who were stillborn or dead, is of more interest and significance. The surviving families to which children were born in 1938 averaged 1.242 out of a total of 1.441, or 86.2 per cent.; in 1945 the corresponding proportion was 89.5 per cent. and by 1950 it had risen to 91.6. This improvement derives mainly from, and demonstrates, the remarkable decline in stillbirth rates and infant and child mortality which has taken place in recent years.

The general distribution of legitimate maternities of 1938 to 1950 according to the number of previous children is shown in Table LXIII, which is based on the data of Table MM in the successive Parts II.

Table LXIII.—Legitimate Maternities distributed according to the number of Mothers' Previous Children by Present Husband, 1938 to 1950, England and Wales.

Number of previous Children	1938	1939	Average 1940-1945	1946	1947	1948	1949	1950	Average 1946-1950
	Number of Maternities (hundreds)								
0	257.5	257.9	271.9	333.3	381.8	314.7	286.4	261.8	315.6
1	154.8	157.7	168.1	231.0	245.2	225.6	221.2	211.6	226.9
2	78.9	78.4	82.5	104.8	109.3	101.5	99.1	100.8	103.1
3	42.3	41.7	41.6	46.9	47.2	44.4	42.6	44.0	45.0
4	25.3	25.0	23.3	24.0	23.4	21.7	20.4	20.7	22.0
5-6	27.5	26.4	23.0	21.4	20.9	19.2	17.9	17.4	19.4
7-9	15.4	14.9	11.9	10.4	9.8	9.2	8.3	8.0	9.1
10-14	4.2	4.1	3.3	2.5	2.4	2.3	2.1	2.0	2.3
15 and over	1	1	1	1	1	1	1	1	1
Not stated	4.7	2.9	2.6	3.3	4.0	2.8	2.4	1.9	2.9
Total Stated	606.0	606.2	625.7	774.4	840.1	738.7	698.1	666.4	743.5
Distribution per 1,000 Stated									
0	425	425	435	431	454	426	410	393	424
1	256	260	269	298	292	306	317	318	305
2	130	129	132	135	130	138	142	151	139
3	70	69	66	61	56	60	61	66	61
4	42	41	37	31	28	29	29	31	30
5-6	45	44	37	28	25	26	26	26	26
7-9	25	25	19	13	12	12	12	12	12
10 and over	7	7	5	3	3	3	3	3	3
Total	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

Table LXIII is confined to those families in which births have occurred in the years shown and does no more than portray, in broad outline, changes to which the proportions have been subject during a period in which they will have been influenced substantially by the circumstances of the war and immediate post-war years.

The tendency for an increasing proportion of the new maternities to occur among the smaller families is readily seen from the table. For example, in 1938, 81.1 per cent. of the maternities of that year were to families with less than three children, in 1940-45 the corresponding proportion averaged 83.6 and in 1946-50, 86.8 per cent. When the trend of the proportions with 0, 1, or 2 previous children is examined over the period it is seen that the proportion of first-born increased from 1938, with 42.5 per cent., to 45.4 per cent. in 1947 and then decreased in the three following years to 39.3 per cent. in 1950. At

Table LXIV.—Average Number of Previous Children (surviving, dead or stillborn) by Present Husband of 1939, 1945 and 1950 Mothers, distinguishing Age of Mother and Duration of Marriage, England and Wales.

Age	Duration of Marriage (years)															
	All* Durns.	0-	1-	2-	3-	4-	5-	6-	7-	8-	9-	10-14	15-19	20-24	25-29	30 and over
Absolute Size—1939																
All Ages†	1.39	.02	.18	.51	.78	1.05	1.28	1.54	1.80	2.07	2.35	3.12	5.05	6.87	8.87	10.62
16-	.13	.01	.38	.89	1.27	—	—	—	—	—	—	—	—	—	—	—
20-	.49	.01	.21	.64	1.02	1.42	1.77	2.08	2.43	2.52	—	—	—	—	—	—
25-	.94	.02	.12	.40	.68	1.00	1.30	1.66	2.05	2.41	2.83	3.13	—	—	—	—
30-	1.65	.06	.14	.42	.66	.87	1.07	1.30	1.55	1.90	2.23	3.23	4.82	—	—	—
35-	2.90	.11	.18	.54	.79	1.01	1.22	1.44	1.62	1.81	2.03	2.98	5.07	6.76	—	—
40 & Over	4.64	.15	.20	.59	.92	1.16	1.36	1.64	2.00	2.27	2.43	3.11	5.05	6.89	8.87	10.62
—1945																
All Ages†	1.12	.02	.11	.43	.63	.81	1.02	1.29	1.51	1.71	1.91	2.49	3.94	5.83	7.58	6.82
16-	.08	.01	.20	.68	.84	—	—	—	—	—	—	—	—	—	—	—
20-	.34	.01	.11	.44	.68	.97	1.29	1.77	2.15	2.10	—	—	—	—	—	—
25-	.79	.02	.10	.40	.59	.77	1.01	1.38	1.71	2.06	2.43	2.88	—	—	—	—
30-	1.37	.04	.12	.45	.63	.77	.92	1.12	1.32	1.54	1.80	2.62	4.01	—	—	—
35-	2.27	.07	.14	.42	.69	.88	1.00	1.19	1.34	1.47	1.59	2.28	3.99	5.44	—	—
40 & Over	3.73	.05	.13	.47	.69	.91	1.19	1.32	1.58	1.76	1.86	2.37	3.83	5.92	7.58	6.82
—1950																
All Ages†	1.24	.02	.20	.59	.88	1.11	1.30	1.48	1.61	1.69	1.84	2.51	4.10	5.77	7.38	9.67
16-	.12	.00	.34	.88	1.26	—	—	—	—	—	—	—	—	—	—	—
20-	.46	.01	.20	.64	.99	1.28	1.53	1.85	2.15	2.18	—	—	—	—	—	—
25-	.91	.03	.17	.54	.84	1.08	1.28	1.49	1.67	1.84	2.13	2.74	—	—	—	—
30-	1.50	.06	.20	.57	.84	1.07	1.24	1.42	1.52	1.59	1.75	2.58	4.42	—	—	—
35-	2.43	.08	.21	.56	.86	1.10	1.33	1.48	1.56	1.65	1.74	2.39	4.17	5.73	—	—
40 & Over	3.73	.10	.18	.50	.72	.96	1.23	1.44	1.79	1.74	1.73	2.48	3.88	5.78	7.38	9.67
Size Relative to 1939 taken as 100—1945																
All Ages†	81	77	63	84	81	77	80	84	84	83	81	80	78	85	85	64
16-	64	93	53	76	66	—	—	—	—	—	—	—	—	—	—	—
20-	68	78	51	69	67	68	73	85	88	83	—	—	—	—	—	—
25-	84	88	82	100	87	77	78	83	83	85	86	92	—	—	—	—
30-	83	66	89	107	95	89	86	86	85	81	81	81	83	—	—	—
35-	78	60	77	78	87	87	82	83	83	81	78	77	79	80	—	—
40 & Over	80	32	66	80	75	78	88	80	79	78	77	76	76	86	85	64
—1950																
All Ages†	89	97	110	116	113	106	102	96	89	82	78	80	81	84	83	91
16-	92	68	89	99	99	—	—	—	—	—	—	—	—	—	—	—
20-	94	89	94	109	97	90	86	89	88	87	—	—	—	—	—	—
25-	97	126	139	135	124	108	98	90	81	76	75	88	—	—	—	—
30-	91	99	143	136	127	123	116	109	98	84	78	80	92	—	—	—
35-	84	70	118	104	109	109	109	103	96	91	86	80	82	85	—	—
40 & Over	80	70	88	85	78	83	90	88	90	77	71	80	77	84	83	91

*Standardised to the 1939 distribution of mothers by age and excluding duration not stated.
†Standardised to the 1939 distribution of mothers by duration and excluding age not stated.

the same time the proportions of second and third births were increasing from 29.2 and 13.0 per cent. respectively in 1947 to 31.8 and 15.1 in 1950. Families with three previous children which had 7.0 per cent of the maternities of 1938, declined to 5.6 per cent. in 1947 but by 1950 with 6.6 per cent. had almost regained the pre-war proportion; the larger families now have a substantially lower proportion than in both 1938 and 1940-1945. Notwithstanding this decline in the proportion of births to the larger families it is noteworthy that some 11,800 of the maternities of the years 1946 to 1950 were to existing families of 10 or more children.

The size of family is influenced by both the age of the mother and the duration of her marriage. Table SS of the successive Parts II analyses the annual maternities by the age of mother, duration of her present marriage and the number of previous children, surviving, dead or stillborn, by her present husband. A comparison of the average number of previous children of mothers according to mothers' age and the duration of their marriage for 1939, 1945 and 1950 is shown in Table LXIV.

From the distribution of the previous children shown in Table SS., it is obvious that they could not all have been born within the period of the present marriage. The question asked of the informant at the registration of the birth was "the number of previous children by the mother's present husband" and the answer could therefore include any children, by the husband, born before marriage. An indication of the effect of the inclusion of such children can be inferred from the average number of previous children at duration under 1 year, since practically all such children must have been born before marriage and there is no reason to suppose that the numbers of children born before marriage included in durations of 1 year or over were substantially different from those shown for duration under 1 year.

As would be expected the average number of previous children increases progressively with duration of marriage for each age-group and requires no comment; but when the figures are read down the columns for each duration after 1— it is seen that the average decreases with advancing age of mother at first and then increases up to the oldest age. The minimum is located at 25-29 for duration 2— and shifts slightly to the next higher age as duration advances, being at age 30-34 for durations 3-7 and 35-39 for durations of 8 and 9 years in 1939. Substantially similar experiences were recorded in 1945 and 1950. The explanation of this initial decline and subsequent rise with advancing age is not immediately apparent, since it is well known that the average size of completed families decreases steadily with increasing age at marriage. This is demonstrated by the following analysis of family size of married women aged 45-49 in the 1951 Census One per cent. Sample (whose families may for practical purposes be considered to be complete):

Age at (first) marriage	Under 20	20-24	25-29	30-34	35-39	40-49
Average Number of live born children of All Husbands	3.59	2.60	1.79	1.22	0.88	0.48
Percentage without children	4	11	19	34	51	71
Average Number of live born children by All Husbands of Married Women having at least one child	3.74	2.91	2.21	1.86	1.80	1.64

It may be seen from the second line of this statement that the extent of childlessness varies considerably with age at marriage, and from the last line that,

when allowance is made for this by limiting the married women considered to those with at least one child, the differences between different age groups are narrowed considerably. Since the childless women never appear in the statistics from which Table LXIV has been derived, it might be expected that the family sizes in the table would follow the gentler slope of the last line in the above statement, and not the steeper first line*. The comparisons in the above statement are, however, of the sizes of completed families, whilst the initial decline and subsequent rise with advancing age in family size shown in Table LXIV, to which attention has been drawn, refers to comparisons at given durations of marriage. Precisely comparable figures to those at Table LXIV, but relating to the whole population of married women and not restricted to those bearing a child in the current year, are not available, but figures relating to the size of families by *all husbands* at various intervals after date of *first* marriage (if more than one) may be extracted from the 1951 Census One per cent. Sample tabulations and are shown in Table LXV. These figures also differ from those of Table LXIV by omitting stillborn children, but they are adequate for the purpose to which they are put here.

Table LXV.—Average Number of Live Born Children by All Husbands of Married Women, excluding those with no children, from 1951 Census One per Cent. Sample†, by Age at Census and Interval since (First) Marriage, England and Wales.

Age at Census	Interval since (first) marriage (years)													
	0-	1-	2-	3-	4-	5-	6-	7-	8-	9-	10-14	15-19	20-24	25 and over
Under 20	1.01	1.10	1.29	1.50	—	—	—	—	—	—	—	—	—	—
20-24	1.05	1.09	1.23	1.42	1.68	1.82	1.85	2.50	2.62	—	—	—	—	—
25-29	1.19	1.14	1.23	1.38	1.53	1.65	1.77	1.92	2.00	2.17	2.36	—	—	—
30-34	1.31	1.28	1.40	1.37	1.55	1.58	1.70	1.75	1.84	1.93	2.28	2.97	—	—
35-39	1.23	1.33	1.44	1.44	1.42	1.71	1.75	1.90	1.67	1.87	2.10	2.75	3.66	—
40-49	1.25	2.00	1.72	1.65	1.55	1.71	1.60	1.71	1.82	1.87	1.96	2.18	2.69	3.24

† The irregularity of the fringes of the table derive from the smallness of the numbers, and thus relatively large sampling errors, in these parts of the field.

It may be seen from Table LXV that for married women at large, excepting only the childless, at all durations except the shortest and longest, there is an initial decline of family size and subsequent rise with advancing age similar to that shown in Table LXIV which was restricted to married women currently bearing a child. The explanation would therefore appear to be that women marrying at older ages recognise the shortness of the time available to them in which they can bear children and thus experience a greater intensity of family building in their earliest years of marriage than do those married at slightly younger ages, who have slightly longer to build their families and do ultimately bear more children.

From the lower part of Table LXIV, where average family sizes in 1945 and 1950 are related to those of 1939, it may be seen that the All Ages ratio was particularly low in the second year of marriage at 63 per cent. (The other low figure at duration over 30 years is based on too few cases to be significant). Otherwise the ratio never differs from 80 per cent. by more than a relatively trivial amount, and such differences as there are show no clear pattern. In 1950 however, apart from a ratio below par for women married less than one year, at all the first six years of marriage the sizes are above those of 1939, the superiority decreasing, after the second year of marriage, from the shorter to

* The actual average family sizes of Table LXIV relate to *previous* children excluding the birth currently being registered, and the total sizes would therefore be about one more than this, since stillbirths and multiple births will occur in only a small proportion of cases.

the longer duration. This decline continues past the 6 year duration into durations relating to cohorts married during the war, and whose family building was thereby somewhat upset, until a minimum of about 80 per cent. is recorded for cohorts married at the beginning of the war. Thereafter the ratio for succeeding earlier peace time cohorts shows some slight recovery, although their family building was also liable to have been to some extent upset by the impact of the war.

A warning must be given of the dangers surrounding the interpretation of statistics such as those of Table LXIV, namely those showing the average family size of the mothers of a year. Unless particular care is taken they may be interpreted as being generally indicative of the family sizes of all married women and a simple example will show the danger of such deductions. Suppose the family building habits of the community to alter only to the extent that a proportion of those who would have remained childless under the old habits decide to have just one child. This change will undoubtedly raise the average size of completed families, but amongst the current mothers it will lead to a decline in the average number of previous children, since the mothers entering the field on account of the change will all have had no previous children. In general, other things being equal, any shift from smaller to larger families will, if both sizes are below the average, lead to an effect similar to that described. Furthermore there are signs that shifts of this nature are occurring in the structure of family size to-day: the evidence of Table LXX suggests a decrease in childlessness, and that of Table LXVIII a decrease in families restricted to one child. The conclusion is that, on these grounds alone, the 1950 section of Table LXIV should show an inferiority relative to that for 1939. That it in fact shows a superiority at the shorter durations implies that the marriage cohorts involved are shifting to larger families, not only from the smallest sizes of 0 or 1 child, but at least from a family size of 2 children as well.

It is no cause for concern that 1950 sizes are shown in Table LXIV to be inferior to those of 1939 for the durations relating in 1950 to war and pre-war cohorts, since it would be expected that their enforced postponement of births would have reduced their apparent family sizes measured in this manner, whether or not the postponement leads to a reduction in the size of the families they ultimately achieve.

If the average numbers of previous children for the separate years 1946 to 1950 by age of mother and at various durations are examined it is seen that at each age group and at durations 1 to 5 and 10 to 24 years, corresponding broadly to the cohorts of post-war and pre-war marriages, there was a steady increase each year, with a few minor exceptions, from 1946 to 1950. The averages for those years at the first 5 years of duration and at durations over 10 years are shown in Table LXVI.

Table LXVI.—Average Number of Previous Children (surviving, dead or stillborn) by Present Husband to Married Women bearing children in the calendar years 1946 to 1950, distinguishing Age of Mother and Duration of Marriage, England and Wales.

	1946	1947	1948	1949	1950	1946	1947	1948	1949	1950	1946	1947	1948	1949	1950	1946	1947	1948	1949	1950
Age of Mother	All Durations					Duration of Marriage										1 year				
						0-8 months					9-11 months									
All Ages	1.16	1.09	1.15	1.16	1.21	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.10	0.11	0.17	0.18	0.20
16-19	0.09	0.09	0.11	0.12	0.14	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.18	0.19	0.25	0.28	0.34
20-24	0.38	0.36	0.42	0.46	0.51	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.10	0.12	0.17	0.18	0.20
25-29	0.84	0.82	0.92	0.98	1.03	0.02	0.03	0.04	0.05	0.04	0.01	0.02	0.03	0.03	0.03	0.09	0.10	0.16	0.17	0.17
30-34	1.42	1.41	1.52	1.56	1.58	0.05	0.05	0.08	0.10	0.07	0.02	0.02	0.04	0.05	0.05	0.10	0.10	0.15	0.17	0.20
35-39	2.13	2.10	2.20	2.23	2.29	0.08	0.06	0.09	0.13	0.07	0.04	0.04	0.04	0.05	0.08	0.12	0.12	0.16	0.16	0.21
40 and over ..	3.43	3.32	3.34	3.39	3.40	0.08	0.09	0.12	0.11	0.12	0.10	0.06	0.08	0.13	0.07	0.10	0.12	0.14	0.17	0.18
Age of Mother	2 years					3 years					4 years					5 years				
						0.63					0.74					0.88				
All Ages	0.44	0.45	0.55	0.59	0.60	0.63	0.68	0.79	0.85	0.90	0.74	0.80	1.00	1.06	1.13	0.88	0.93	1.15	1.26	1.31
16-19	0.67	0.67	0.77	0.80	0.88	1.00	1.00	1.01	1.17	1.26	0.93	1.13	1.22	1.20	1.17	—	—	—	—	—
20-24	0.45	0.45	0.57	0.63	0.64	0.66	0.71	0.83	0.92	0.99	0.83	0.88	1.08	1.17	1.28	1.10	1.11	1.32	1.45	1.53
25-29	0.40	0.42	0.52	0.55	0.54	0.59	0.64	0.75	0.81	0.84	0.68	0.76	0.96	1.01	1.08	0.85	0.89	1.11	1.22	1.28
30-34	0.44	0.45	0.55	0.56	0.57	0.63	0.67	0.78	0.82	0.84	0.70	0.77	0.98	1.02	1.07	0.81	0.86	1.08	1.21	1.24
35-39	0.46	0.49	0.50	0.55	0.56	0.66	0.75	0.80	0.84	0.86	0.83	0.87	1.04	1.07	1.10	0.95	0.98	1.13	1.23	1.33
40 and over ..	0.48	0.43	0.46	0.48	0.50	0.72	0.72	0.64	0.77	0.72	0.90	0.89	0.99	0.99	0.96	0.95	1.01	1.11	1.27	1.23
Age of Mother	10-14 years					15-19 years					20-24 years					25 years and over				
						3.90					5.76					7.73				
All ages	2.39	2.38	2.51	2.55	2.51	3.90	3.91	4.03	4.10	4.10	5.76	5.65	5.70	5.85	5.78	7.73	7.49	7.58	7.70	7.43
16-19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20-24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25-29	2.81	2.83	2.93	2.92	2.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30-34	2.50	2.50	2.65	2.67	2.58	4.05	4.13	4.29	4.37	4.42	—	—	—	—	—	—	—	—	—	—
35-39	2.22	2.20	2.32	2.38	2.39	3.95	3.96	4.13	4.17	4.17	5.39	5.28	5.47	5.86	5.73	—	—	—	—	—
40 and over ..	2.31	2.27	2.35	2.42	2.48	3.76	3.76	3.77	3.89	3.88	5.85	5.73	5.75	5.86	5.78	7.73	7.49	7.58	7.70	7.43

Some general indication of the size distribution of families to which children were born in 1939, 1946 and 1950 by mothers of various ages is shown in Table LXVII.

Table LXVII.—Distribution, by Number of Mother's Previous Children (Surviving, dead or stillborn) by Present Husband, of Legitimate Maternities at each Mother's Age ; 1939, 1946 and 1950, England and Wales.

Number of Previous Children	1939					1946					1950				
	Under 25	25-29	30-34	35-39	40 & Over	Under 25	25-29	30-34	35-39	40 & Over	Under 25	25-29	30-34	35-39	40 & Over
0	675	466	296	165	92	721	464	287	194	130	645	363	234	170	136
1	236	296	294	206	109	221	338	353	290	183	269	378	350	268	172
2	67	134	170	171	120	47	128	186	205	169	69	167	212	214	173
3	17	61	98	125	116	9	45	86	118	131	14	60	103	132	135
4	4	27	61	96	104	2	16	44	71	98	3	21	50	79	98
5 to 6	1	15	61	129	175	—	8	34	75	129	—	10	39	84	131
7 to 9	—	1	19	89	187	—	1	9	40	112	—	1	11	44	107
10 and over	—	—	1	19	97	—	—	1	7	48	—	—	1	9	48
All Sizes	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

It may be seen from this table that in both 1946 and 1950 and at every age group, a lower proportion of mothers had families of 4 or more previous children than in 1939. This might be attributable to the set back in family building imposed by the war, or it might be that the proportion of large families is continuing to decline. The more significant feature is that in 1950, at each age group under 35, the proportion of first children was lower than in 1939, with a complementary higher proportion, not only of second children, but also of third and, for ages 30-34, of fourth also.

Attention has already been drawn to the danger of misinterpreting these statistics, restricted as they are to the family sizes of married women currently adding to their families, but it is desirable to stress yet again that caution must be exercised in drawing conclusions on the sizes of families at large from such statistics. Nevertheless the view may be advanced, subject to confirmation from tabulations of fertility questions in future censuses, that it may well be that the size distribution of families currently being built, may differ from the distribution of their predecessors, not only by a dearth of the largest sizes but also of the smallest, with complementary excesses at perhaps sizes of 3 and 4 children. The importance of such a change in size distribution on average family size, if it does occur, should not be under-estimated. It might for instance be thought that the gains to the average family size from what are likely to be but few additional children to a proportion of the smallest families could not be expected to compensate for the losses from the decline of probably a far higher proportion of the largest families, but such an appreciation of the situation would fail to take account of the relatively few large but many small families. A simple example will show this.

The 1951 Census One per cent. Sample Table X.3 shows the following distribution by family size of married women aged 45-49 in England and Wales (i.e. those with, for all practical purposes, completed families).

	0-2	3-4	5 and over	All Sizes
Number of Married Women ..	8,487	2,426	1,121	12,034
Number of their children ..	8,916	8,115	7,352	24,383

If all the 1,121 married women with families of 5 or more children had had only 4 children each, that is a total of 4,484 instead of 7,352, the generation would thereby have lost 2,868 children (7,352-4,484). But if, in addition, even one third of the 8,487 married women with less than 3 children had had, not 3 children each, but just one more than they did have, the 2,829 (8,487 ÷ 3) children gained thereby would have compensated almost entirely for the loss of 2,868 from the shrinkage of the largest families. If alternatively the largest families shrank by only one child on average, the smaller loss of 1,121 children to the generation would be compensated by an increase of 1 child per family occurring in only one seventh of the 8,487 families sized 0 to 2.

It is not to be expected that the actual outcome will follow the simple hypotheses made here, which are not, however, so lacking in realism as to fail to demonstrate that quite a modest advance in the family size at the lower end of the scale can compensate for a substantial decrease in the proportions with the largest family sizes.

First Maternities (Legitimate)

Of the 3,731,942 total legitimate maternities of the post-war years 1946-1950, the modified versions of Table SS in Appendix II, page 200, show that the mothers in respect of 1,584,293 or 42.5 per cent. had not had a previous live or still born child by their existing husbands. The percentage compares with an average of 43.3 for the war years 1939-1945 and 42.9 for the pre-war year 1938.

The incidence of first born children is naturally at a maximum for recent marriages and thus the proportion of first maternities among all legitimate maternities will be raised immediately following a year of abnormally high marriage incidence. If distinction is made of mothers' ages the proportion of first maternities will be highest at the youngest ages, again because their marriages will be comparatively recent. The rapid decline with advance in mother's age and variations from 1938 to 1950 are shown in Table LXVIII.

Table LXVIII.—First maternities to existing marriages per 1,000 total legitimate maternities at each age, 1938 to 1950, England and Wales.

Mothers' Age	1938	1939-45	1946	1947	1948	1949	1950	1946-50
All Ages	429	433	431	454	426	410	393	425
Under 20	890	898	913	912	898	885	868	894
20- ..	644	687	701	710	666	635	613	666
25- ..	469	461	464	470	414	382	362	421
30- ..	296	292	287	293	259	243	234	267
35- ..	166	179	194	202	186	181	170	188
40 and over	95	109	130	143	142	140	136	138

As shown in this table it would appear that little of significance occurred to the proportion in the war years, the all-ages proportion being 42.9 per cent., 43.3 per cent. and 43.1 per cent. for 1938, 1939-45 and 1946 respectively. The aggregation of the years 1939 to 1945 has, however, masked a rise to 45.9 per cent. in 1942, consequent on the peak marriage incidence in 1939 and 1940, and a steep fall to 40.8 and 40.7 in 1944 and 1945, following the trough in marriage incidence in 1943. The proportions of 43.1 per cent. and 45.4 per cent. in 1946 and 1947 are thus seen to represent a resurgence, resulting from the recovery of marriage incidence in 1945. Another factor of some significance, tending to raise the proportion of first maternities after the war, was the start of family building by couples who had postponed it during the war. Since the resurgence in marriage incidence after the war may, at least in part, be attributed

to the making good of marriages postponed from the war, the families deriving from these marriages may, in a sense, be deemed to have been delayed by the impact of the war. Thus the resurgence in 1946 and 1947 in the proportion of first maternities may be attributed to one form or another of family building postponed from the war years.

The abnormally large proportion of families started in 1946 and 1947 have, in later years, as they developed, led to abnormally high proportions of children of the higher parities, and by 1950 the proportion of first maternities had fallen to 39.3 per cent., as shown in Table LXIII. An examination of the proportions for the individual ages demonstrates clearly the reason given above for the decline. The ratios of the 1950 proportions to those of 1938 are as follow:—

	All Ages	Under 20	20-24	25-29	30-34	35-39	40 and over
1950 proportions as a percentage of those of 1938	92	98	95	77	79	102	143

The trough at 25-34 is very marked with substantially higher ratios at the neighbouring ages, locating the deficiency to the maternities of women who had been 20-29 when the war ended and whose family building might therefore have been delayed by the war, whilst their youth permitted them to continue for some years attempting to rectify the deficiencies.

Birth production as a whole tends to be highly concentrated in the few years immediately after marriage and the concentration will necessarily be accentuated when consideration is confined to first births or maternities. In general the war and post-war years were no exception as will be seen from Table LXIX in which the first maternities of successive years and groups of years are classified by marriage duration.

Table LXIX.—Numbers and Distribution by Duration of Marriage of First Maternities by existing husbands to Married Women of all ages, 1938 to 1950, England and Wales.

Calendar Year	Duration of Marriage *											All Durations	
	0-8½ mths.	8½-11½ mths.	1-year	2-years	3-years	4-years	5-years	6-years	7-years	8-years	9-years		10+ years
	Numbers (hundreds)												
1938	632	320	706	354	217	135	80	53	36	27	18	41	2619
1939-45†	443	319	743	407	262	173	114	72	49	34	24	57	2698
1946	430	446	814	342	262	279	249	222	98	63	47	97	3348
1947	589	532	1064	440	244	230	222	177	140	62	42	96	3836
1948	612	493	906	404	206	114	98	92	76	61	29	69	3159
1949	581	397	889	376	214	114	64	58	51	39	35	57	2874
1950	535	375	773	368	198	122	67	39	34	33	26	56	2626
	Distribution per 1,000 total												
1938	241	122	269	135	83	52	31	20	14	10	7	16	1000
1939-45	164	118	276	151	97	64	42	27	18	13	9	21	1000
1946-50	173	142	281	122	71	54	44	37	25	16	11	24	1000

* Durations 1-year, 2-years, etc., are more correctly 11½ mths.-1yr. 11½ mths., 1 yr. 11½ mths.-2 yrs. 11½ mths., etc.

† Annual Average.

From the bottom three lines of the table, in which the numbers of first maternities at each duration are expressed as a proportion of first maternities at all durations, the concentration at early durations may be seen for the war and post-war periods and for the pre-war year 1938. Whilst, however, the

general pattern has remained, a close examination reveals differences, minor relative to the main pattern but important in themselves. The first and outstanding difference—the deficiency at duration 0–8½ months—follows from the decline in legitimate premaritally conceived maternities, a feature which is discussed in greater detail on pages 89 to 93. Being substantial and of a rather special nature, it may be considered desirable to eliminate the repercussion of this feature on the proportions of first maternities at longer durations by considering the distributions per 1,000 first maternities at durations over 8½ months as follow:—

	All over 8½ mths.	8½–11½ months	1–	2–	3–	4–	5–	6–	7–	8–	9–	10 yrs. & over
1938	1,000	161	355	178	109	68	40	27	18	14	9	21
1939–45	1,000	142	329	181	116	77	50	32	22	15	11	25
1946–50	1,000	171	339	147	86	66	53	45	30	20	14	29

A further clarification is possible by expressing the 1939–1945 and 1946–1950 proportions as percentages of the 1938 proportions as follows (from proportions taken to more decimal places than above to avoid excessive rounding errors):—

	8½–11½ months	1–	2–	3–	4–	5–	6–	7–	8–	9–	10 yrs. & over
1939–45	88	93	101	106	113	126	121	122	111	118	122
1946–50	107	95	83	79	96	133	169	170	143	151	138

In the war period, 1939–45, the ratio records a shallow trough of about 10 per cent. below par at durations under 2 years, and an even plateau about 20 per cent. above par at durations over 5 years. The dividing line of 5 years duration cuts the experience into that of war and pre-war brides. The pre-war brides will have borne their first child in the bulk of cases before the war intervened. The implication of the pattern noted above is that the remainder of the pre-war brides did not put off bearing their first child to the same extent as war brides. This is consistent with the suggestion advanced on page 26 that many of the marriages of the early war years would not have taken place until later had there been no war.

In the post-war period 1946–50 the ratio shown above, apart from an above par value at duration 8½–11½ months, records below par values up to 5 years duration, the trough values in the third and fourth years of marriage being 20 per cent. below par. Thereafter it climbs steeply to a peak in the eighth year of marriage no less than 70 per cent. above par. The high value at duration 8½–11½ months is no doubt attributable to family building of couples who postponed their marriage until after the war, a phenomenon discussed more fully on page 113. The peak centred round the eighth year of marriage is undoubtedly due to the making good of first children postponed by war-brides and, relative to their intense bearing of first children, abnormally high for so long durations, the products of later war and post-war marriage cohorts are put in the shade and record the below par values to which attention has already been drawn.

Consequent on the rapid fluctuations in marriage intensity from 1938 to 1950, the numbers of married women at risk of bearing a first child at each duration will have been changing from year to year and, even with aggregated periods as shown in the bottom 3 lines of Table LXIX, some of the variation in the distribution of first maternities is liable to be occasioned by these changes

in the numbers of married women at risk. A more enlightening analysis, and one freed from this effect, is provided by determining the proportion of each marriage cohort who have borne a first child at successive durations of marriage, and such an analysis is shown in Table LXX.

Table LXX.—First Maternities per 1,000 Married Women of Successive Marriage Cohorts (of women marrying at ages under 45, not pregnant at date of marriage).

Marriage Cohort	Duration of Marriage									
	8½–11½ Mths.	1– Yr.	2– Yrs.	3– Yrs.	4– Yrs.	5– Yrs.	6– Yrs.	7– Yrs.	8– Yrs.	9– Yrs.
(a) Occurring Within the Marriage Duration Specified										
1937/38	118	247	120	65	63	49	36	22	24	17
1938/39	108	232	112	93	69	48	31	35	23	11
1939/40	92	210	140	96	66	42	56	36	16	9
1940/41	89	226	136	90	55	73	53	24	12	8
1941/42	88	237	135	76	89	72	30	17	11	
1942/43	98	269	121	101	91	40	24	14		
1943/44	121	259	146	107	51	29	17			
1944/45	126	288	159	75	43	25				
1945/46	135	335	129	69	40					
1946/47	179	295	124	65						
1947/48	154	279	117							
1948/49	129	259								
1949/50	128									
(b) Accumulated Total to the End of the Marriage Duration Specified										
1937/38	118	365	485	550	613	662	698	720	744	761
1938/39	108	340	452	545	614	662	693	728	751	762
1939/40	92	302	442	538	604	646	702	738	754	763
1940/41	89	315	451	541	596	669	722	746	758	766
1941/42	88	325	460	536	625	697	727	744	755	
1942/43	98	367	488	589	680	720	744	758		
1943/44	121	380	526	633	684	713	730			
1944/45	126	414	573	648	691	716				
1945/46	135	470	629	698	738					
1946/47	179	474	598	663						
1947/48	154	433	550							
1948/49	129	388								
1949/50	128									

In the upper half of the table are shown the proportions of women in each marriage cohort bearing a first child at each year of marriage up to the tenth. In the lower half these proportions have been accumulated from the left, and thus show the proportion of women in each cohort who have borne a first child by the end of the duration identified. Thus 11·8 per cent. of the 1937/38 cohort of married women had borne a first child by the end of the first year of marriage, 36·5 per cent. by the end of the second year, 61·3 per cent. by the end of the fifth year and 76·1 per cent. by the end of the tenth year.

The building of a complete family is a long process covering several or perhaps many years. A complete or partial interference in this process for say six years will set back family building to an extent which cannot be made good for some

years, if ever. Thus in Appendix II, Table 5, in which the average number of maternities per woman is shown, the impact of the war was seen to plough deep furrows which are filling but slowly. The alternative measure of the proportion of married women who have borne a first child, employed in Table LXX, is one in which freedom from the war's influence (in so far as this is possible) is achieved more quickly. Although the impact of the war on the 1937/38 cohort will have been less with regard to proportion of women who had borne a first child (the criterion of Table LXX) than to average number of maternities per woman (the criterion of Table LVIII), nevertheless the 1942/43 cohort achieved parity with the 1937/38 cohort after only two years in Table LXX, compared with four years in the comparable (lower) section of Table LVIII. After 8 years of marriage, 75.8 per cent. of this cohort had borne a first child, a proportion as high or higher than that after 9 years of marriage of any earlier cohort for which records are available. A recession is shown by the next two cohorts, but that of 1945/46 which, it has been suggested, contained a proportion of postponed marriages, recorded a proportion of no less than 73.8 per cent. who had borne a first child after 5 years of marriage. This high achievement is hardly consistent with any hypothesis other than that the structure of this cohort is abnormal and little significance therefore attaches to the subsequent declining achievement of later cohorts.

It is too early yet to draw any conclusions on the final state at which this index of fertility will stabilise, but the proportion of 38.8 per cent. after two years of the 1948/49 cohort and 12.8 per cent. after one year of the 1949/50 cohort, compares favourably with 36.5 per cent. after two years and 11.8 per cent. after one year of the 1937/38 cohort.

Birth Occurrences and Registration Time Lag

The statutory period allowed for registration of either a live birth or a still birth is 42 days and as a consequence there has always been an appreciable time lag between the occurrence of a birth and its subsequent incorporation in the registered birth records of the country.

Prior to the war the average time lag was about a month and the registration records were thus out of phase with the actual occurrences to that extent. Where the number of births at the beginning and the end of a period were similar, the constant phase difference would not materially affect the numbers involved and for most calendar years prior to the war, taken as a whole, the numbers registered, which was the form in which the records were then kept, could be regarded as being not materially different from the numbers occurring in the period.

The administrative association of food rationing with birth registration from the beginning of the war provided a strong incentive to prompt registration, and it is of interest to study the variations which the average registration time lag has suffered. Statistics to permit such a study are provided by a sample analysis of live birth registrations distributed over a variety of urban and rural areas, the same areas being used for all these analyses. The sample is not large so that great reliance should not be put on the precise accuracy of the results obtained from it.

The following statement shows the average time-lag in days between birth and registration at the beginning of successive calendar quarters from 1939 to 1950 with comparable records for the First World War period so far as the latter are available.

It will be noted from the records for 1914-1921 that the most outstanding reduction in time lag occurred not during but after the war. This was not so after the Second World War, when the bulk of the fall had occurred by the end of 1941; nevertheless the figures after the war do show a continuing decline.

First World War								
1914	1915	1916	1917	1918	1919	1920	1921	
36.0	33.3	30.8	31.1	30.5	21.2	24.3	31.6	

Second World War												
	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
1st Qr. ..	32.6	27.8	22.4	14.4	11.9	13.3	13.2	12.0	9.3	8.0	8.2	8.7
2nd Qr. ..	31.7	27.5	19.3	13.1	11.2	10.7	12.1	9.0	8.2	8.0	7.5	8.3
3rd Qr. ..	31.3	22.1	16.8	13.2	10.3	12.0	11.1	9.0	8.4	7.0	7.5	9.2
4th Qr. ..	27.6	20.3	13.9	11.6	11.3	12.1	10.7	8.7	7.3	7.1	7.8	9.0

Whereas, however, a recovery was already evident by 1920, and 1921 reflected almost pre-war normality, there is no sign of recovery to the pre-war level in the figures for the years after the Second World War. This may well be associated, not only with more stringent food rationing when American Lend-Lease ended—a condition which cannot be considered as permanent—but also with the commencement of The Family Allowances Act, 1945, on 6th August, 1946.

The difference between the numbers of registrations and occurrences in a period is due, not only to differences in the number of births at the beginning and end of a period but also to changing time lag, and their combined effect may now be measured by the ratio of occurrences to registration, since the former have been tabulated since 1938 in Table YY of Part II.

Ratio of Occurrences to Registrations (Live Births)

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
.992	.972	.986	.996	1.002	1.009	.992	1.001	.993	.998	.999	1.008

Seasonal Incidence of Births

The seasonal variation in birth incidence is a phenomenon which has been recognised for some long time, the greatest change in its study in this country during recent years being occasioned by the introduction of monthly statistics by occurrence from 1st July, 1938. Thus there are considerable data already available on the subject; and the extreme abnormality of the period 1946-1950—a period during which birth incidence rose rapidly, levelled off to a maximum, and commenced a steepening decline and finally levelled off again—implied the imposition of such rapid change on the normal seasonal trend as to render accurate identification of the trend itself a hazardous task; and the student would be well advised to seek for his data in other years than these and may note that commentary on the subject was included in the 1938/1939 Text pages 184-5 and 1940-1945 Text, Vol. II, Civil, pages 106-7.

Although a detailed analysis identifying monthly incidence is not warranted for the reasons given above, the cruder distribution by quarters is shown in Table LXXI for legitimate births distinguishing live and still, and for illegitimate births.

The distribution of legitimate live births may be seen in Table LXXI to have been influenced substantially in 1946 by the steep rise in birth incidence occurring during that year, the distribution being concentrated abnormally at the end of the year. Conversely in 1947 and 1948 a concentration at the beginning of the year is seen, these being years when the incidence was, in general, falling steeply. In 1949 and 1950 the rate of decline was less steep, and the distributions for this period therefore represent more nearly the current seasonal distribution, but there was some decline in birth incidence during these years, and the experience of later years must be awaited for data reasonably free from distortion. The distribution of legitimate stillbirths may be seen to have suffered comparable distortion to that of legitimate livebirths.

Table LXXI.—Ratio of Quarterly Births to Average Quarterly Births taken as 100, 1939 and 1946 to 1950, England and Wales.

Period	Year					
	1939	1946	1947	1948	1949	1950
Legitimate Live Births						
1st Quarter	99	86	109	105	102	104
2nd "	106	99	106	103	105	104
3rd "	101	105	97	99	100	98
4th "	94	110	88	93	93	94
Year	400	400	400	400	400	400
Legitimate Still Births						
1st Quarter	104	91	115	109	104	104
2nd "	104	99	105	102	105	104
3rd "	98	101	93	96	97	97
4th "	94	109	87	93	94	95
Year	400	400	400	400	400	400
Illegitimate Births						
1st Quarter	105	107	110	108	105	106
2nd "	107	110	108	108	106	107
3rd "	100	95	98	96	99	96
4th "	88	88	84	88	90	91
Year	400	400	400	400	400	400

The distribution of illegitimate births for the years 1946 to 1950 was more stable than that of legitimate births; in particular there is not the marked difference between the distributions for 1946 and 1947 that there was for legitimate births. The explanation is that, whereas the peak for legitimate birth incidence was reached in 1947, i.e., during the period under review, for illegitimate births it was reached in 1945, and the whole of the period 1946 to 1950 was one of decline, though admittedly the rate of decline slackened as the period advanced—the number in 1946 was 15 per cent. less than in 1945, in 1951 it was 7 per cent. less than in 1950. Thus the stability in the distributions must not be misunderstood as indicating the absence of distortion.

Birth Rates in Different Parts of the Country

The birth rates of individual administrative areas are given in Table 17* and E. They are summarised, with certain modifications, in Table LXXII, which shows, for each geographical region and density aggregate, live birth rates (separately for all births and for illegitimate births) and the ratio of the local crude rate to the national rate, for the averages of the periods 1936–1939, 1940–1945 and 1946–1950 and for the individual years 1946 to 1950.

* Table 12 in 1950.

Table LXXII.—Birth Rates by Geographical Regions and Density Aggregates, 1936–1950.

(Rates from 1940 onwards corrected approximately to give live birth occurrences per 1,000 Total Population. All the ratios were calculated before rounding off the rates.)

All Live Births										
Area	Average			1946	1947	1948	1949	1950	Areal Comparability Factor	Adjusted Birth Rate 1950
	1936–39*	1940–45	1946–50							
Birth Rate per 1,000 Total Population										
ENGLAND and WALES	14.9	15.6	18.0	19.2	20.5	17.8	16.7	15.8	1.00	15.8
Geographical Regions										
South East	14.2	15.1	17.4	19.2	20.0	17.0	15.8	14.9	.97	14.4
Greater London	14.1	15.2	17.3	19.4	20.2	16.9	15.5	14.6	.93	13.6
Remainder of S.E.	14.4	15.0	17.5	18.9	19.8	17.2	16.2	15.3	1.03	15.7
North	15.4	15.7	18.5	19.4	21.1	18.4	17.2	16.5	1.01	16.7
North I	16.7	16.4	19.4	20.4	21.6	19.4	18.3	17.6	1.02	17.9
North II	16.5	16.1	19.6	20.5	22.1	19.3	18.4	17.6	1.04	18.3
North III	15.0	15.3	18.1	19.1	20.8	18.1	16.7	16.0	1.01	16.1
North IV	15.0	15.5	18.2	19.0	21.0	18.1	16.9	16.2	1.00	16.2
Midland	15.9	16.5	18.5	19.4	20.8	18.4	17.4	16.3	1.00	16.3
Midland I	16.2	16.8	18.6	19.5	20.8	18.6	17.6	16.4	1.02	16.4
Midland II	15.2	16.0	18.2	19.3	20.7	18.1	17.0	16.0	1.02	16.4
East	14.7	15.8	18.3	19.5	20.7	18.1	17.1	16.5	1.06	17.4
South West	13.5	14.3	17.0	17.9	19.1	16.9	16.1	15.2	1.06	16.1
Wales	15.1	15.4	17.9	18.3	19.9	18.2	17.0	16.3	1.03	16.8
Wales I	15.3	15.8	18.2	18.8	20.2	18.5	17.2	16.5	1.02	16.8
Wales II	14.6	14.3	17.1	17.1	18.9	17.3	16.4	15.9	1.07	17.0
Density Aggregates outside Greater London										
County Boroughs	15.5	16.2	19.0	20.3	21.8	18.9	17.6	16.7	.99	16.5
Urban Districts	14.9	15.4	17.7	18.7	20.1	17.6	16.5	15.6	1.02	15.9
Rural Districts	14.9	15.1	17.6	18.0	19.3	17.5	16.8	16.2	1.06	17.2
Ratio to England and Wales Rate										
ENGLAND and WALES	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Geographical Regions										
South East	.95	.97	.97	1.00	.98	.95	.95	.94		.91
Greater London	.95	.98	.96	1.01	.99	.95	.92	.92		.86
Remainder of S.E.	.96	.97	.97	.99	.97	.96	.97	.97		.99
North	1.03	1.01	1.03	1.01	1.03	1.03	1.03	1.04		1.05
North I	1.12	1.06	1.08	1.06	1.05	1.09	1.10	1.11		1.13
North II	1.10	1.03	1.09	1.07	1.08	1.08	1.10	1.11		1.16
North III	1.00	.98	1.01	.99	1.01	1.02	1.00	1.01		1.02
North IV	1.00	1.00	1.01	.99	1.02	1.02	1.01	1.03		1.03
Midland	1.06	1.06	1.03	1.01	1.01	1.03	1.04	1.03		1.03
Midland I	1.09	1.08	1.03	1.01	1.02	1.04	1.05	1.04		1.04
Midland II	1.02	1.03	1.01	1.01	1.01	1.02	1.02	1.01		1.03
East	.98	1.02	1.02	1.01	1.01	1.01	1.02	1.04		1.10
South West	.90	.92	.95	.93	.93	.95	.93	.96		1.01
Wales	1.01	.99	1.00	.95	.97	1.02	1.02	1.03		1.06
Wales I	1.03	1.02	1.01	.98	.99	1.04	1.03	1.04		1.06
Wales II	.98	.92	.95	.89	.93	.97	.98	1.00		1.08
Density Aggregates outside Greater London										
County Boroughs	1.04	1.04	1.06	1.06	1.06	1.06	1.05	1.05		1.04
Urban Districts	1.00	.99	.98	.97	.98	.99	.99	.98		1.00
Rural Districts	1.00	.97	.98	.94	.94	.98	1.01	1.02		1.08

* Rates based on births registered in the year and home population. Rates on the same basis as those for later years would be about 1 per cent. lower.

Table LXXII.—(continued)

Illegitimate Live Births

Area	Average			1946	1947	1948	1949	1950
	1936-39*	1940-45	1946-50					
Birth Rate per 1,000 Total Population								
ENGLAND and WALES	0.62	1.01	0.99	1.26	1.08	0.96	0.84	0.80
Geographical Regions:—								
South East	0.65	1.06	1.00	1.29	1.09	0.96	0.84	0.80
Greater London	0.64	0.97	0.95	1.18	1.05	0.90	0.82	0.79
Remainder of S.E.	0.66	1.16	1.05	1.42	1.15	1.02	0.87	0.81
North	0.63	0.95	0.98	1.21	1.08	0.95	0.85	0.81
North I	0.61	0.88	0.85	1.07	0.93	0.85	0.74	0.68
North II	0.86	1.20	1.18	1.54	1.30	1.11	1.00	0.94
North III	0.61	0.91	0.99	1.21	1.09	0.98	0.87	0.82
North IV	0.59	0.94	0.98	1.20	1.09	0.94	0.85	0.83
Midland	0.57	0.96	0.99	1.25	1.08	0.97	0.86	0.80
Midland I	0.55	0.93	0.99	1.24	1.07	0.97	0.86	0.80
Midland II	0.59	1.03	1.00	1.28	1.11	0.97	0.87	0.80
East	0.72	1.32	1.18	1.65	1.29	1.11	0.93	0.94
South West	0.58	1.14	1.01	1.37	1.08	1.00	0.84	0.78
Wales	0.58	0.85	0.80	1.02	0.86	0.78	0.67	0.66
Wales I	0.50	0.75	0.69	0.88	0.73	0.66	0.58	0.60
Wales II	0.79	1.10	1.07	1.37	1.19	1.08	0.87	0.83
Density Aggregates outside Greater London:—								
County Boroughs	0.67	1.10	1.14	1.42	1.27	1.09	0.99	0.95
Urban Districts	0.56	0.94	0.89	1.18	0.96	0.87	0.74	0.69
Rural Districts	0.62	1.00	0.95	1.23	1.01	0.94	0.80	0.76

Ratio to England and Wales Rate

ENGLAND and WALES	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Geographical Regions:—								
South East	1.04	1.05	1.01	1.02	1.01	1.00	1.00	1.00
Greater London	1.03	.97	.96	.94	.97	.95	.98	.98
Remainder of S.E.	1.05	1.16	1.07	1.13	1.06	1.07	1.03	1.02
North	1.01	.94	1.00	.96	1.00	.99	1.01	1.02
North I	.97	.87	.86	.84	.86	.89	.88	.85
North II	1.38	1.19	1.19	1.22	1.20	1.16	1.19	1.17
North III	.99	.90	1.01	.96	1.01	1.03	1.03	1.03
North IV	.95	.93	.99	.95	1.00	.98	1.01	1.03
Midland	.91	.96	1.00	.99	1.00	1.02	1.02	1.00
Midland I	.89	.92	1.00	.98	.99	1.02	1.02	1.00
Midland II	.94	1.03	1.02	1.02	1.02	1.02	1.03	.99
East	1.16	1.31	1.20	1.31	1.19	1.16	1.10	1.18
South West	.94	1.13	1.03	1.08	1.00	1.05	1.00	.98
Wales	.93	.84	.81	.81	.79	.81	.79	.83
Wales I	.81	.74	.70	.70	.67	.69	.69	.75
Wales II	1.27	1.09	1.08	1.09	1.10	1.13	1.04	1.04
Density Aggregates outside Greater London:—								
County Boroughs	1.08	1.10	1.16	1.12	1.18	1.14	1.17	1.19
Urban Districts	.90	.94	.90	.93	.89	.91	.88	.86
Rural Districts	1.00	.99	.96	.98	.93	.98	.95	.95

* See footnote on page 129.

The various distortions to which the rates were subject during the war and immediate post-war years were discussed in detail in the Text Volume for 1940-1945 (pages 109-112). The most important of them, that due to the unavoidable use of the civilian instead of the total population for local birth rates, has been largely eliminated in Table LXXII by multiplying the rates from

1940 onwards by correcting factors, calculated for England and Wales as a whole, designed to put all the rates approximately on a comparable basis of births occurring during the calendar year per 1,000 total population.* For the year 1950 Tables 12 and E give rates, based on home populations, for standard regions and a new type of density aggregate. These are not comparable with the figures for the other years shown in Table LXXII, and rates for this year have therefore been calculated on a similar basis to those for 1940-1949 and are shown instead. Comparable rates for 1936-1939 would be about 1 per cent. lower than those shown in the table.

Areal Comparability Factors

Another well known difficulty in any comparison of crude rates is that they take no account of the varying sex-age composition of the population of the different areas. In the case of death rates an approximate correction to allow for this has been made for some years by the use of areal comparability factors†. Corresponding factors for use with births were introduced in Tables 17 and E for 1949. Pending the full results of the 1951 Census they were provisionally calculated from the local sex-age estimates derived from the count of the National Register‡ by the following abridged method: The proportion of the estimated number of women aged 18-44 at 31st December, 1947 to the total civilian population was calculated for England and Wales and for each local area. The ratio of the national proportion to each local proportion is the areal comparability factor (A.C.F.).§ The crude birth rate for any area may be multiplied by the A.C.F. to give an adjusted birth rate; the ratio of the latter to the England and Wales rate is also shown in the above-mentioned tables. The last two columns of Table LXXII, for all live births, give the birth A.C.F.'s for geographical regions and density aggregates, the adjusted birth rates for 1950 and their ratios to the national rate.

It will be seen, for example, that the relatively low birth rate in the South West is due to the relatively small number of women aged 18-44 in that region; a rate calculated on them rather than on the whole population would be about 1 per cent. above the national average instead of 4 per cent. below it.

In interpreting the adjusted rates the nature of the correction imparted by the A.C.F. has to be kept in mind, i.e. the fact that it simply allows for the varying proportion of women of child-bearing age in the aggregate local population, but not for any other factors which may have some bearing on whatever problem is being considered. For example, the high proportion of such women in Greater London gives it the lowest A.C.F. in the table (0.93), with the result that the ratio of the adjusted birth rate for 1950 to the national rate (0.86) is even lower than the very low value (0.92) of the crude rate ratio. But one reason why London has such a low birth rate in spite of its high proportion of women at the fertile ages is the fact that relatively few of them are married. Local population estimates by marital condition were not available in 1947, but it may be inferred from the 1951 Census record that if a further adjustment were made for the proportion of married to all women within the age group 18-44, the adjusted ratio would be reduced only about half as much compared with the crude. For the County of London the contrast is greater still. The A.C.F. correction used here is, in fact, designed only to eliminate differences due to peculiarities in the sex-age structure of a local population as a whole; it is not applicable to legitimate or illegitimate birth rates taken separately.

* Cf. pages 15-16 above.

† See references on page 16 above.

‡ See pages 20-21 above.

§ From 1950 onwards the A.C.F.'s are based on home instead of civilian populations, except in Table LXXII above.

If the pre-war figures are compared with those of 1950 the changes between the two periods are not very different according to whether crude or adjusted rates are used for both dates, except perhaps in Wales I, Wales entire and the aggregate of rural districts, where the ratios of the crude rates for all live births to the national rate all show increases, whereas the ratios of adjusted rates would show decreases; the corresponding ratios for illegitimate births all show decreases which would be greater still if adjusted rates were used. The differences due to the fact that the 1936-1939 rates are based on home populations and those for 1950 approximately on total populations are also small. The columns of Table LXXII giving crude rates and their ratios may therefore be regarded as a fairly reliable guide to the changes which have occurred between the pre-war period and 1950, while the last columns show to what extent the level of these rates is due to a sex-age structure of the population which differs from the national average.

Birth Rates after the War

All the overall birth rates increased sharply in 1946, resuming the rise interrupted in 1945, and advanced further in 1947 to reach the post-war peak as births postponed from the war years were being made up. In that year the rate for England and Wales, at 20.5, was 31 per cent. above the 1940-1945 mean of 15.6, and 38 per cent. above the 1936-1939 mean of 14.9. Since then there has been a general decline to more normal levels which are, however, still above pre-war. Illegitimate birth rates, on the other hand, which had risen steadily from 1940 to 1945 and reached a peak in the latter year, for England and Wales as a whole, of 1.49 or nearly $2\frac{1}{2}$ times the pre-war average, began to fall rapidly in 1946 and were still falling, though much more slowly, in 1950, when the national rate at 0.80 was 29 per cent. above the mean for 1936-39.

Although all areas shared in these movements, there were variations in the extent of the changes, and hence in the relative positions of the different regions and density aggregates. These can be seen from the bottom half of Table LXXII, where the rates are expressed as ratios to the England and Wales rate, and from Table LXXIII, where they are ranked in order of size*.

Overall Birth Rates

The comparison shows that some abnormal movements such as characterised the war period still persisted in 1946. By the next year, however, the pattern was becoming more stable, and by 1948 the pre-war relationships had been more or less restored. In the next two years there were a few further changes, mostly in the East and Midlands (in the case of the latter these were changes in the ranks rather than in the ratios). In 1950 North I and II again had the highest rates among the regions, after having lost the top places temporarily during the war. Greater London and the South West had the lowest rates as before, but the South West has now overtaken Greater London, in spite of an unfavourable sex-age structure. The East, after some fluctuations, has resumed its wartime rise, and now holds the fourth place, compared with the eighth before the war. The relative positions of the density aggregates are back to the pre-war order County Boroughs, Rural Districts, Urban Districts, Greater London; as has been said already the wartime

* Some of the rankings for 1940-45 are subject to distortion (*cf.* Text Volume for 1940-45, *loc. cit.*) and should be used with caution. Thus it seems likely that, for overall birth rates, the relative positions of Greater London on the one hand and of the Remainder of the South East and the Rural Districts on the other should be reversed. For illegitimate birth rates the same is true of North III and IV, and possibly also of Greater London and the Rural Districts (in the latter case for 1946 as well). Similarly a large part of the changes in the ratios of overall birth rates for Greater London and the other density aggregates to the national rate between 1936-39 and 1940-45 is probably due to distortion.

Table LXXIII.—Ranking Comparison of Birth Rates before, during and after the War. Geographical Regions and Density Aggregates.

Area	All Live Births									Illegitimate Births								
	Average			1946	1947	1948	1949	1950	1950 ad- justed	Average			1946	1947	1948	1949	1950	
	1936- 39	1940- 45	1946- 50							1936- 39	1940- 45	1946- 50						
Geographical Regions																		
Greater London ..	11	9	10	5	9	12	12	12	12	5	7	10	10	10	10	10	9	
Remainder of South East	10	10	9	9	10	10	10	10	11	4	3	4	3	4	4	5	6	
North I	1	2	2	2	2	1	2	2	2	7	11	11	11	11	11	11	11	
North II	2	3	1	1	1	2	1	1	1	1	2	2	2	1	1	1	2	
North III	7	8	8	7	5	7	8	8	9	6	10	7	8	6	6	4	5	
North IV	6	7	6	8	3	6	7	6	8	8	8	9	9	7	9	8	4	
Midland I	3	1	3	3	4	3	3	5	6	11	9	8	7	9	7	7	7	
Midland II	5	4	7	6	6	5	6	7	7	9	6	6	6	5	8	6	8	
East	8	6	4	4	7	8	5	4	3	3	1	1	1	2	2	2	1	
South West	12	12	12	11	11	11	11	11	10	10	4	5	5	8	5	9	10	
Wales I	4	5	5	10	8	4	4	3	5	12	12	12	12	12	12	12	12	
Wales II	9	11	11	12	12	9	9	9	4	2	5	3	4	3	3	3	3	
Density Aggregates																		
Greater London ..	4	3	4	2	2	4	4	4	4	2	3	2	3	2	3	2	2	
County Boroughs ..	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	
Urban Districts ..	3	2	2	3	3	2	3	3	3	4	4	4	4	4	4	4	4	
Rural Districts ..	2	4	3	4	4	3	2	2	1	3	2	3	2	3	2	3	3	

disturbance of this order was more apparent than real. If the adjusted rates are compared, however, the Rural Districts rise to first place; among the regions a corresponding rise in the ratios is observable in the predominantly rural ones such as Wales II, the East and South West, and the adjusted rate for Wales II is actually the fourth highest instead of the ninth as is the crude rate.

Another respect in which normality is being restored is in the size of the differences between the rates in various parts of the country. These were temporarily reduced during the war, but have widened again since.

Illegitimate Birth Rates

These also have returned to something like the pre-war pattern. Exceptions are Greater London and North I, which have dropped from fifth and seventh to ninth and eleventh place respectively, and East and Midland I, which have risen from third and eleventh to first and seventh place respectively. In both cases this represents a maintenance or further increase of wartime changes. North II still occupies one of the first two places, and Wales I has had the lowest rates throughout. The order among density aggregates is County Boroughs, Greater London, Rural Districts, Urban Districts, as before the war.

In contrast to the overall rates the tendency among illegitimate rates has been towards greater uniformity *since* the war.

International Comparison of the Course of Birth Rates

Birth rates for a number of countries over a series of years are given in Table Q. In order to make comparison as valid as the available data allowed, comment in the Text Volume for 1940-1945 was extended up to 1948, and the war and immediate post-war period reviewed as a whole. For more detailed discussion reference should therefore be made to pp. 112-114 of that volume.

The outstanding feature emerging from the comparison is the broad similarity between the course of birth rates in this country and in other countries of a similar social structure and stage of demographic development, irrespective of whether they took part in the war or not. It is true that the neutrals mostly experienced the peak in rates which characterised the end of the war as early as 1945 (as in Switzerland) or even 1944 (Sweden), while in the belligerent and occupied countries it was not usually reached until 1946 or 1947. In Germany, where conditions in the years immediately after the end of hostilities were probably too abnormal to allow births postponed from the war years to be made up as quickly as elsewhere, the peak was not reached until 1949. Even then it was less marked than in other countries, so that, in contrast to Britain, the war seems to have caused a considerable loss of births there. The decline from the peak has continued throughout the world, though there are signs that it may be coming to an end in many parts. As has been shown earlier in this chapter a much more detailed analysis than that of crude birth rates is needed to show to what extent the high numbers of births in recent years are due to changes in the long-term trend of fertility in addition to the making up of postponed births.

Sex Ratio at Birth

A detailed discussion of the trend in the proportion of male live births to female was included in the 1940-1945 Text, Vol. II, Civil, pages 114-116. It was shown that the outstanding phenomenon since the beginning of the twentieth century has been the rise during the boom following the First World War and the fall as this passed. It was also shown that a rise occurred during the Second World War to a maximum of 1,065 live male births per 1,000 female in 1944, followed by a slight fall to 1,061 in the following year. The ratio recorded for 1946 and 1950 was 1,060 and for 1947, 1948 and 1949 was 1,061. The corresponding figures for the last two years of the First World War and the

succeeding five years of peace were 1,044, 1,048, 1,060, 1,052, 1,051, 1,049, 1,044. (Table C of Part II).

A simple partial explanation may be found for the underlying tendency for the masculinity at birth to increase in the present century. It will be shown later that the proportion of males to females amongst stillbirths exceeds that amongst live births. Thus, as still birth rates decline, as they have in the present century, so the proportion of males amongst live births will increase. This does not of course explain the rise and subsequent fall in the ratio after the First World War and it may be that, whatever the cause, it will operate again to bring about some falling away from the current high ratio. On the other hand the present high standards of ante-natal care, etc., by holding down the stillbirth rate, would be expected to keep the male proportions at birth high and a substantial decline to the former proportions is not to be expected.

Ratios showing the sex incidence at birth with distinction of maternal age for England and Wales as a whole are included in Table GG of Part II and for the separate Regions in Table HH, in the alternative form of female per 1,000 total births. Table LXXIV is extracted from these records.

Table LXXIV.—Proportion of Female per 1,000 Total Births, 1938 to 1950, England and Wales.

Year	All Births		Illegitimate Births	
	Live	Still	Live	Still*
1938 (second half only)	487	463	495	498
1939	488	461	491	460
1940	486	461	487	488
1941	487	460	487	458
1942	485	470	483	481
1943	484	461	480	460
1944	484	461	479	462
1945	485	464	484	445
1946	485	461	487	448
1947	485	459	487	446
1948	485	460	487	448
1949	485	461	483	443
1950	485	460	488	450

The consistently lower proportion of females amongst still births, both in all experience and in illegitimate, illustrates the greater prevalence of still births amongst males. Generally there is no marked overall difference between legitimate and illegitimate experience but it will be noted that for the years from 1945 there were outstandingly low proportions of females amongst illegitimate still births. In spite of the poverty of the data on which these ratios are based and their consequent high variability, the persistence of this change for six years renders it of some significance.

The excess of males over females amongst live births declines with maternal age. This is partly attributable to the higher still birth rates experienced by the children of older mothers (1940/45 Civil Text, page 129). This effect may be removed by considering the ratio of males to females amongst live and still births taken together. Table LXXV shows the ratio by maternal age for live births alone, and for live and still births combined for the periods 1938-1945 and 1946-1950.

* Note.—The proportion for the second half of 1938 is based on 610 Illegitimate Still Births, the corresponding figure for the remaining years varying from 1,056 in 1950 to 2,063 in 1945: the standard errors for these years are thus 20, 15 and 11 respectively.

Table LXXV.—Male per 1,000 Female Legitimate Births by Maternal Age distinguishing Live Births, 1938–1945 and 1946–1950, England and Wales.

Maternal Age	Live Births only		Live and Still Births	
	1938–45	1946–50	1938–45	1946–50
Under 20 ..	1,068 ± 5	1,079 ± 6	1,064 ± 5	1,079 ± 6
20– ..	1,066 ± 2	1,062 ± 2	1,066 ± 2	1,063 ± 2
25– ..	1,060 ± 2	1,060 ± 2	1,063 ± 2	1,062 ± 2
30– ..	1,058 ± 2	1,062 ± 2	1,063 ± 2	1,065 ± 2
35– ..	1,051 ± 2	1,056 ± 3	1,055 ± 2	1,060 ± 3
40– ..	1,042 ± 4	1,050 ± 5	1,051 ± 4	1,058 ± 5
45 and Over	1,030 ± 16	1,060 ± 21	1,042 ± 16	1,067 ± 20
Not Stated ..	1,053 ± 14*	1,107 ± 20*	1,058 ± 14*	1,114 ± 19*
All Ages ..	1,059 ± 1	1,061 ± 1	1,062 ± 1	1,063 ± 1

It may be seen from Table LXXV that for ages between 20 and 45 the ratio of male births per 1,000 female in 1938–1945 varied from 1,042 to 1,066 when still births were excluded, but that the range was reduced to 1,051 to 1,066 when they were included. For 1946–1950 the inclusion of still births similarly closes the range from 1,050–1,062 to 1,058–1,063.

The fundamental biological ratio is that of males to females at conception, and the ratio amongst live births differs from this, not only on account of the still births excluded, but also on account of abortions. Data are not available to permit a recalculation of the ratio after abortions have been restored, in the same way as it was recalculated for Table LXXV after still births had been restored. The ratios of Table LXXV depend, therefore, not only on the fundamental biological ratio of male conceptions to female, but also on the extent and differentials of subsequent abortion. It is plausible to expect abortion rates for males to exceed those of females and for these rates to be yielding to the greater ante-natal care now being taken, in a similar manner to still birth rates. It would follow that the ratio of males to females in live and still births combined would be increasing if no change were occurring to the ratio at conception. From Table LXXV it may be seen that in general a rise is in fact shown. The sharp fall in the ratio of males to females at birth in 1919–1920, however, must not be forgotten, since so steep a fall seems to imply the possibility of a change of sex ratio at conception.

Multiple Births

Detailed discussion on the various features of multiple births was included in Part II of 1938, pages 117–124 and 134 and in the Civil Text for 1940–1945, pages 116–125. A difficulty arises in the study of multiple births from the paucity of data since the number of such births is but a small proportion of the whole, and ratios and rates based on these small numbers are too uncertain to show up the fine distinctions involved. When the Civil Text for 1940–1945 was prepared, seven and a half years of the detailed data collected under the Population (Statistics) Act, 1938, was available, and this was the first time that so much of such data had been available in this country. It was therefore found possible to draw much finer distinctions than ever before and the commentary on multiple births included in that text contained as detailed an analysis as the data permitted. It is a feature of this kind of data that its discriminating

* The binomial formula for calculating standard errors may not be valid for these heterogeneous groups.

power increases only as the square root of the amount of data involved. The addition of the data covering the multiple births involved in the 4 million births of 1946–1950 to those involved in the 5 million births of 1938–1945 would thus increase their discriminating power by only 34 per cent., and this would be far from sufficient to bring any new features to light. The full analysis of the 1940–1945 Civil Text will not therefore be repeated here, and reference should be made to that volume for a detailed analysis.

During 1946–1950 there were 4,000,806 births (live and still) from 3,950,343 maternities, the excess of 50,463 being the additional children born in multiple births. Tables CC and DD of Part II for the successive years give details of the 50,003 maternities with multiple births and show that 49,551 produced twins, 444 triplets and 8 quadruplets, the total children so born being 94,810 live and 5,656 still born children.

The frequencies of multiple maternities and births in the two periods 1939–1945 and 1946–1950 are summarised as follow:—

	All Multiple		Twins		Triplets	
	1938–1945	1946–1950	1938–1945	1946–1950	1938–1945	1946–1950
Multiple Maternities* per 1,000 Total Maternities	12.01	12.66	11.91	12.54	0.100	0.112
Multiple Births per 1,000 :						
Total Births	23.84	25.11	23.54	24.77	0.295	0.333
Live born children	23.00	24.28	22.72	23.96	0.273	0.312
Still born children	48.75	58.83	47.74	57.60	0.945	1.196

The probabilities of a multiple event occurring will be the reciprocals of the rates shown above so that taking mothers of all ages together the chance of a multiple maternity was 1 in 83 in 1938–1945 and 1 in 79 in 1946–1950. Likewise 2 out of every 84 children born in 1938–1945 were twins or triplets and 2 out of every 80 in 1946–1950, the proportion being about twice as great amongst still born children as amongst live born.

The frequencies of maternities with multiple births in England and Wales at various ages of the mothers in 1938–1945 and 1946–1950, with distinction of legitimacy, were as follows:—

Maternal Age	Under 20	20–24	25–29	30–34	35–39	40–44	45 and over	Not Stated	All Stated Ages
		Legitimate Multiple Maternities per 1,000 Total Legitimate Maternities							
1938–1945	6.38	8.54	11.30	14.47	16.83	13.14	6.97	10.90	12.06
1946–1950	6.61	9.00	12.60	15.20	17.55	13.32	6.38	8.93	12.69
	Illegitimate Multiple Maternities per 1,000 Total Illegitimate Maternities								
1938–1945	5.40	8.49	12.70	17.31	18.52	13.40	9.13	10.19	11.35
1946–1950	5.51	8.92	14.11	16.25	20.68	13.45	10.03	9.92	12.33

The influence of maternal age on the frequency of multiple maternities was discussed at length in the previous Text Volume on pages 117 *et seq.* and it was shown that the legitimate rates rose continuously up to age group 35–39 and

* In this and all other tables in the multiple section, a maternity is treated as multiple whether or not the children involved are live or still born.

thereafter fell abruptly and steeply. The rates in 1946-1950 follow a very similar course.

It will be noticed that in general the rates for the period 1946-1950 exceed those for 1938-1945, though only by small amounts. Since these rates are so critical to maternal age, it is necessary to consider whether the small rise in the rates from 1938-1945 to 1946-1950 may be attributed to changes of the average ages of mothers within each age group identified. In Table AA of Part II mother's age is identified in single years of age and, using this data and assuming that mothers aged 25 last birthday for instance were on average aged $25\frac{1}{2}$ exactly and similarly for other ages, average ages have been calculated for each identified age group for 1938-1945 and 1946-1950. The changes found were negligible. In the legitimate section, to the first decimal place the average ages in years were unchanged for 4 age groups, increased by 0.1 years for each of two groups and decreased by 0.1 for one group. In the illegitimate section the similar changes were:—0 for 4 groups, increase of 0.1 for 1 group, decrease of 0.1 for 1 group, decrease of 0.2 for 1 group (45 and over). It is thus seen that this rise is not due to a change in age structure. Presumably it is attributable to a decline in abortion rates in a similar manner to the rise in sex ratio at birth referred to on pages 134-135.

Twin births are of two types, monozygotic if they arise from the splitting of a fertilised ovum and dizygotic if from the fertilisation of two ova. The fact that monozygotic or "identical" twins must be of the same sex, and thus that all unlike-sex pairs are dizygotic may, under certain assumptions, be employed to calculate the numbers of monozygotic and dizygotic twins. A method of doing this was described in the 1938 Part II on page 121 and has been used in preparing Tables LXXVI and LXXVII showing monozygotic and dizygotic twin maternity rates.

Table LXXVI.—Monozygotic and Dizygotic Twin Maternities per 1,000 All Maternities by Legitimacy and Maternal Age, 1938-45 and 1946-50, England and Wales.

Maternal Age	Monozygotic Rate				Dizygotic Rate			
	Legitimate		Illegitimate		Legitimate		Illegitimate	
	1938-45	1946-50	1938-45	1946-50	1938-45	1946-50	1938-45	1946-50
Under 20	3.05	3.46	3.32	3.51	3.30	3.11	2.04	2.00
20-	3.23	3.47	3.48	2.82	5.26	5.46	4.91	6.10
25-	3.31	3.52	2.53	3.32	7.91	8.97	10.10	10.61
30-	3.51	3.92	2.89	4.49	10.82	11.12	14.29	11.67
35-	3.86	3.72	2.44	3.32	12.79	13.65	15.97	17.00
40-	3.55	3.58	3.17	6.21	9.47	9.63	10.02	7.24
45 and over	4.29	3.19	3.91	3.34	2.61	3.19	5.22	6.69

The rates for 1946-1950 may be seen from Table LXXVI to demonstrate the same general properties as those for 1938-1945, already discussed in the 1940-1945 Civil Text. The monozygotic rates barely alter with maternal age, if anything slightly increasing with increasing age, whilst the dizygotic rates increase rapidly to age group 35-39 and then fall steeply. The illegitimate rates demonstrate the same general pattern, but suffer some irregularity from the paucity of the data.

Table LXXVII.—Legitimate Monozygotic Twin Maternities per 1,000 Single Maternities by Sex and Maternal Age, 1938-45 and 1946-50, England and Wales.

Maternal Age	Male		Female	
	1938-45	1946-50	1938-45	1946-50
Under 20	2.87 ± 0.27	3.20 ± 0.30	3.28 ± 0.28	3.79 ± 0.33
20-	3.15 ± 0.11	3.42 ± 0.12	3.36 ± 0.12	3.58 ± 0.13
25-	3.20 ± 0.12	3.39 ± 0.13	3.48 ± 0.12	3.74 ± 0.13
30-	3.40 ± 0.15	3.88 ± 0.18	3.72 ± 0.15	4.06 ± 0.18
35-	3.72 ± 0.21	3.41 ± 0.24	4.12 ± 0.21	4.16 ± 0.25
40-	3.46 ± 0.33	3.21 ± 0.39	3.74 ± 0.33	4.05 ± 0.41
45 and over	4.43 ± 0.89	2.52 ± 0.99	4.21 ± 0.88	3.74 ± 1.14

In Table LXXVII, legitimate monozygotic twin rates are shown by sex. The standard errors of these rates are somewhat large from the method of their calculation, and these standard errors are shown in the table. The rates for each sex separately show the same features as those for the two sexes together in Table LXXVI namely very little change with maternal age, and if anything a slight increase in the rate with increasing age. In addition the rate for females is slightly higher than that for males.

Stillbirths

The registration of stillbirths in England and Wales began on 1st July, 1927, when the Births and Deaths Registration Act, 1926, came into operation. The Statistical Reviews, Part II, show numbers of stillbirths in England and Wales as a whole annually by sex and legitimacy (Table B), and quarterly in total (Table D), from 1927. Table E1 gives annual totals of stillbirths for the main regions, density aggregates, metropolitan and county boroughs and administrative counties, and starting in 1949, Table E gives the same information for all county districts.

Under the Population (Statistics) Act, 1938, additional information has been collected at the registration of births, including stillbirths, and detailed tabulations of stillbirths by legitimacy, mother's age, and order of birth appear in the Fertility Analyses of the Annual Reviews, Part II.

No provision has yet been made for obtaining a record of the causes of stillbirth in England and Wales, but information on this subject has been published for Scotland in the Annual Reports of the Registrar General for Scotland since 1939. Information on mortality at periods in the first year of life is, however, to be found for areas in England and Wales in the Annual Reviews, Part I. Reference should be made to the Medical Texts for 1946-7, 1948-9 and 1950 for the main discussion of the incidence of stillbirths in relation to the levels of neo-natal and post natal mortality rates.

Table LXXVIII below carries to 1950 the record of annual stillbirth rates and death rates for periods in the first four weeks of life discussed in the 1940-45 Civil Text.

This table shows the continuing decline in the stillbirth rates. Four phases may be distinguished: rapid fall, by comparison with the immediately preceding experience, between 1940 and 1944; little change between 1944 and 1946; reduction in the rate by more than 10 per cent. between 1946 and 1947; and comparatively little change since 1947. The decline between 1946 and 1947 was not confined to any particular part of the period.

Legitimate stillbirth rates have declined slightly more steeply than illegitimate rates over the war and post-war period taken as a whole, thus increasing the disparity between them. The rates for female births have declined slightly more than those for male births, especially among illegitimate maternities.

Table LXXVIII.—Annual Stillbirths, Legitimate and Illegitimate Stillbirth Rates and Deaths of Infants in the First Four Weeks of life per 1,000 Total (Live and Still) Births, 1939-1950.

Year	Number of live births	Number of stillbirths	Rates per 1,000 (Live and Still) Births								
			Stillbirths				Deaths under one week	Deaths in 2nd 3rd & 4th weeks	Deaths under four weeks	Stillbirths and deaths under one week	
			Total	Legitimate		Illegitimate					
				Male (5)	Female (6)	Male (7)					Female (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1939	614,479	24,320	38.1	39	36	50	45	20.5	6.8	27.2	58.5
1940	590,120	22,779	37.2	39	35	46	49	20.6	8.0	28.6	57.7
1941	579,091	20,876	34.8	36	32	48	43	19.9	8.0	27.9	54.7
1942	651,503	22,383	33.2	34	32	41	41	18.8	7.4	26.2	52.1
1943	684,334	21,262	30.1	31	28	39	36	17.7	6.7	24.4	47.9
1944	751,478	21,306	27.6	28	26	35	33	16.9	6.6	23.6	44.5
1945	679,937	19,333	27.6	28	26	34	29	17.6	6.6	24.2	45.2
1946	820,719	22,915	27.2	28	25	36	31	17.1	6.4	23.5	44.3
1947	881,026	21,795	24.1	25	23	33	28	16.2	6.1	22.3	40.3
1948	775,306	18,399	23.2	24	22	34	29	15.3	4.0	19.3	38.5
1949	730,518	16,947	22.7	23	21	32	27	15.3	3.6	18.9	38.0
1950	697,097	16,084	22.6	23	21	31	27	14.9	3.2	18.1	37.4
Percentage decrease 1939-1950			40.7	41.0	41.7	38.0	40.0	27.3	52.9	33.5	36.1

The fall in the mortality of newborn children in relation to total births shown in column (11) of the table, which has also been continuous throughout the period, has been smaller than that in stillbirth rates. The slower rate of decrease is seen, however, to have been confined to mortality in the first week of life which has shown a 27 per cent. decline, that for deaths in the following three weeks having declined by 53 per cent., a heavier rate of decline than for stillbirths. It must be borne in mind that differences of interpretation of the definitions of live and stillbirths may introduce a secular trend in the record in respect of deaths occurring within a few minutes of birth, and may thus introduce an element of uncertainty in the record of change in the stillbirth rate and mortality rates of newborn children considered separately. There is no evidence to show that variations in this respect are of any practical importance. There is no question, however, that substantial improvement has taken place in both, and that the decline of 36 per cent. in the rate for stillbirths and deaths in the first week of life taken together, column (12), represents a considerable achievement.

Regional Variations.—Table LXXIX below compares the period 1946-50 with that for 1938-45, for the principal regional divisions of the country.

Wales, which had the highest stillbirth rates in 1938-45, has shown the greatest improvement, in both legitimate and illegitimate sections of the experience. Among legitimate births, Greater London, whose rate was lowest in 1938-45, has shown least improvement. In all the area divisions shown except Greater London, the improvement has been greater for legitimate than for illegitimate births. As in the earlier period, the figures for 1946-50 show little difference between the three density aggregates.

Table LXXX below shows annual stillbirth rates between 1939 and 1950 in all geographical regions. It demonstrates that the pattern of change has been similar in all regions, viz., steady decline at an annual average rate of 5 or 6 per cent. between 1939 and 1944; a slower rate of decline after 1944 falling to zero or becoming negative in 1949-50, apart from declines of some 10 per cent. between 1946 and 1947 in all except the Midland Regions.

Table LXXIX.—Legitimate and Illegitimate Stillbirth Rates in Principal Geographical Regions. Mean annual rates 1938-45 and 1946-50.

	Stillbirths per 1,000 Total Births				1946-50 Rate as Percentage of 1938-45 Rate	
	1938-45		1946-50		Legitimate	Illegitimate
	Legitimate	Illegitimate	Legitimate	Illegitimate		
England and Wales	33	40	24	31	73	78
Greater London	27	37	21	27	78	73
Remainder of South East	28	34	21	28	75	82
North	36	45	26	35	72	78
Midland	32	38	24	31	75	82
East	31	36	23	28	74	78
South West	32	35	23	30	72	86
Wales	41	52	28	37	68	71
Density Summary of all Areas Outside Greater London:						
County Boroughs	34	41	25	32	74	78
Urban Districts	34	40	25	32	74	80
Rural Districts	32	39	23	31	72	79

Table LXXX.—Annual Stillbirths per 1,000 Total Births for Geographical Regions and Density Aggregates, 1939-1950.

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1950 as per cent of 1939
England and Wales	38	37	35	33	30	28	28	27	24	23	23	23	61
Greater London	31	29	30	29	26	24	24	24	21	20	20	20	65
Remainder of S.E.	33	31	29	28	27	25	25	25	21	20	20	20	61
North I	40	40	36	37	32	30	31	31	25	25	24	26	65
North II	39	36	39	35	30	29	30	29	27	25	25	25	64
North III	42	39	38	36	32	30	30	29	26	24	23	23	55
North IV	44	41	40	38	34	31	30	31	26	27	25	24	55
Midland I	38	36	34	33	30	26	27	26	25	23	23	23	61
Midland II	38	36	33	33	31	26	28	25	24	24	22	23	61
East	36	34	34	32	29	26	28	27	24	23	23	21	58
South West	37	36	32	32	30	27	26	26	23	22	22	23	62
Wales I	49	47	44	39	36	34	35	33	28	26	28	27	55
Wales II	47	47	39	41	35	33	32	33	29	28	28	27	57
Density summary of all areas outside Greater London:													
County Boroughs	40	38	36	35	31	29	29	29	25	24	24	23	58
Urban Districts	40	38	36	34	32	28	29	28	25	24	23	24	60
Rural Districts	37	37	34	32	30	27	28	26	24	23	22	21	57

Stillbirths by Age of Mother for Single and Multiple Maternities.—Table LXXXI compares stillbirth rates in single and multiple maternities classified by age of mother and legitimacy. It covers the whole period from 1938 when the record by age of mother became available, incorporating the data relating to 1938-45 which was given in similar form in the 1940-45 Civil Text, with the object of providing a distribution based on larger numbers and therefore showing rates less subject to random variation.

The general features shown by this table are the lower rates for legitimate as compared with illegitimate births; the considerably higher risk of stillbirth in respect of multiple as compared with single maternities; higher rates in respect of male as compared with female births; rates increasing with age of

Table LXXXI.—Mean Annual Stillbirth Rates per Thousand Births (Live and Still), Distinguishing Sex, Single and Multiple Maternities, Legitimacy and Mother's Age. England and Wales, 1938-50.

(Rates based on less than 100 Stillbirths are in italics; those based on less than 250 total births are marked *. The sign .. indicates that the rate is omitted because the experience was of less than 20 total births.)

	Single				Multiple			
	Legitimate		Illegitimate		Legitimate		Illegitimate	
	M	F	M	F	M	F	M	F
Under 20	21.3	22.1	31.7	31.3	90.2	65.3	85.2	69.9
20-	21.0	20.0	31.3	29.1	69.3	56.4	72.6	58.5
25-	24.6	22.5	34.2	29.2	63.8	53.1	65.3	56.0
30-	31.2	28.0	39.9	36.8	65.3	53.1	68.8	55.1
35-	40.8	36.7	52.5	45.7	70.4	60.8	79.4	60.1
40-	58.2	50.9	62.2	59.3	79.5	66.1	64.8*	78.6*
45 and over	83.4	76.1	90.9	57.4	129.9*	85.2*	..	..
All Ages	28.8	26.4	36.6	33.3	67.6	56.0	71.4	58.7

mother except for the youngest ages. The relative differences between legitimate and illegitimate rates were greatest for the youngest age-group, declining with increasing age, and were greater in respect of single than multiple maternities. On the other hand, the differences between male and female rates in the case of single maternities were least for young mothers and increased with age. In respect of single maternities, the rates were least in the age group 20-24. For multiple maternities the figures show the lowest rates in the age-group 25-29, in contrast to the figures given in the 1940-45 Civil Text which are lowest at age 30-34. The numbers are, however, too small for the differences between the rates for age 25-29 and for 30-34 among births from multiple maternities to be significant either in Table LXXXI above or in the corresponding table in the 1940-45 report.

The scantiness of the record does not permit of comparison between the two periods 1938-45 and 1946-50 in the form of Table LXXIX, except in the case of single legitimate maternities which may be compared as follows:—

Stillbirth Rates in Single Legitimate Maternities

	Age of Mother						
	15-24	25-29	30-34	35-39	40-44	45 and over	All Ages
1938-45 experience							
Male ..	23.3	27.7	34.1	44.5	62.1	87.2	32.6
Female ..	23.1	25.3	30.7	40.1	54.7	78.8	29.9
1946-50 experience							
Male ..	17.6	20.0	25.9	34.5	50.5	74.1	23.8
Female ..	16.9	18.4	23.2	31.0	43.7	68.9	21.7
Percentage decrease † between 1938-45 and 1946-50							
Male ..	24 ± 1	28 ± 1	24 ± 1	22 ± 1	19 ± 2	15 ± 6	27 ± 0.5
Female ..	27 ± 1	27 ± 1	24 ± 1	23 ± 1	20 ± 2	13 ± 6	27 ± 0.5

† The coefficients of variation of these differences are not negligible and their standard errors have therefore been shown.

Thus children of both sexes and mothers in all age-groups have contributed to the overall reduction of 27 per cent. in the stillbirth rate among single legitimate maternities. The relative decline has been greatest for the age-group 25-29, lessening thereafter with increasing age, and being less for age-group 15-24 than for 25-29. Decline has been on the same scale for male as for female births.

Stillbirth Rates by Age of Mother and Birth Order. Effect of Changes in Relative Numbers of Births by Age of Mother and Birth Order.—

The period 1939-1950 has seen some appreciable changes in the proportions of births to mothers of different ages and with different numbers of previous children. These changes are associated in part with the postponement of some marriages and births during the war and the measures of "making good" which occurred afterwards. They are also associated with changes of a more general character in the age at marriage and the proportions of married persons of different ages in the population. The more general features of these changes are discussed elsewhere in this report, but their possible effect on the stillbirth rates, which differ widely according to the mother's age and the order of the birth, cannot be disregarded in an appraisal of the course of the stillbirth rates in the war and post-war period. Table LXXXII provides an analysis of stillbirth rates by age of mother and birth order for each year from 1939 to 1951, the 1951 record being included to carry as far as possible consideration as to whether the retardation of the rate of decrease of the crude stillbirth rate is due to any differential trends emerging as between different age-parity sections of the total experience.

Table LXXXII.—Annual Legitimate Stillbirth Rates per 1,000 Births (Live and Still) in Principal Groups by Age of Mother and Birth Order, 1939-1951.

(Births from Single maternities only)

Age or Age-parity Group	Stillbirth Rate per 1,000 Live and Still Births													Total Number of Stillbirths		
	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1951 as per cent. of 1939	1939	1951
Total ..	37	35	33	32	29	26	26	26	23	22	22	21	22	60	22,064*	14,004*
15-19	26	26	25	26	21	20	18	21	19	16	17	18	18	69	619	440
20-24	26	25	24	24	21	19	19	20	17	16	16	16	17	64	3,494	2,978
1st	30	28	26	26	23	22	22	22	19	18	18	18	20	67	2,525	2,127
2nd	18	17	17	18	15	12	13	14	10	11	12	11	12	65	632	609
3rd & later	24	24	21	21	19	18	17	19	15	14	15	13	13	53	337	242
25-29	30	29	28	27	25	21	21	21	19	18	18	18	18	61	5,957	3,870
1st	38	36	34	33	32	28	27	28	25	23	24	23	24	62	3,476	1,730
2nd	21	21	21	19	16	15	14	14	12	13	13	14	14	68	1,204	1,102
3rd & later	27	25	23	25	21	18	20	19	18	17	16	18	18	66	1,277	1,038
30-34	39	36	34	32	30	27	26	26	24	24	23	23	22	57	5,509	2,951
1st	55	54	51	46	42	42	40	39	36	37	35	34	32	59	2,254	901
2nd	28	25	24	23	22	18	19	18	18	17	17	16	18	62	1,190	805
3rd & later	35	33	30	29	27	25	25	23	22	22	22	21	21	60	2,065	1,245
35-39	50	48	46	42	38	35	36	35	32	31	31	32	33	65	3,846	2,389
40 and over	70	67	65	60	55	50	53	52	47	45	49	46	49	70	1,800	1,153

* Including a small number of unstated age or parity.

The total numbers of stillbirths in 1939 and 1951 which appear in the two right hand columns of the table, provide some indication of the relative importance as contributors to stillbirths of the age-parity groups shown. In the preceding column, 1951 rates are expressed as percentages of 1939 rates.

In the first place, this table may be considered as supplementing Table LXXVIII in its demonstration that stillbirth rates are nearly twice as high for

first births as for second births, and that the composite rate for all other parities is intermediate between these two. A more detailed presentation by parity shows in fact that the rate for second births is lower than for any higher parity births.

Turning to consideration of changes in the annual rates during the period, it is clear that the main causes operating are independent of age of mother and parity of birth for, with minor variations, relative changes from year to year are similar in all the age-parity groups shown.

Variation from the general pattern of change is greater at ages under 30 than for the older age groups. The greatest fluctuations in the rates occur in the 20-24 age-group at parities over one, and though these rates are based on comparatively small numbers, the fluctuations cannot be explained in terms of random variation. In point of time there is more variation immediately after the war than at any other time during the period. There may be some causal connection between the substantial increase in marriage rates in 1944-46 from their low wartime level, the large rise in birth rates during 1946 and 1947, and these variations in stillbirth rates. It seems reasonable also to think that the younger married women, many of whose husbands were more directly concerned with active war service than those of older women, were more subject to the varying stresses of the period, and that these stresses may have affected the risks of stillbirth.

Table LXXXIII below provides a convenient summary of the changes in the stillbirth rates shown in Table LXXVIII, by providing a set of rates standardised for the varying numbers of births occurring each year in the separate age-parity groups of Table LXXXII. The headings of the columns in this table are sufficient to explain the method of comparison. Stillbirth rates of the four quarters

**Table LXXXIII.—Annual Stillbirth Rates, 1939-51.
Comparison Between Crude Rates and Rates Standardised for
Age of Mother and Birth-order.**

Year	Crude stillbirth rate		Standardised stillbirth rate (1939 age-parity rates taken as standard)	
	Rate per 1,000 total births	Ratio of rate in col. (2) to corresponding rate for 1939 taken as 1,000	Rate per 1,000 total births	Ratio of rate in col. (4) to corresponding rate for 1939 taken as 1,000
(1)	(2)	(3)	(4)	(5)
1939*	37.77	1,000	37.77	1,000
1940*	36.09	956	36.15	957
1941	34.80	921	34.52	914
1942	33.21	879	32.78	868
1943	30.13	798	29.52	782
1944	27.57	730	27.05	716
1945	27.65	732	26.94	713
1946	27.16	719	26.72	707
1947	24.14	639	24.24	642
1948	23.18	614	23.78	630
1949	22.67	600	23.69	627
1950	22.55	597	23.62	625
1951	23.05	610	24.21	641

* Rates for these years based on birth registrations; for later years birth occurrences have been used.

of 1939 showed no appreciable departure from the pre-war level, and provided a reasonable standard against which to compare the experience of subsequent years.

Comparison between the ratios in columns (3) and (5) of this table provide an alternative demonstration that neither the downward trend in the crude rate, nor the retardation of its decline since 1947, can be accounted for in terms of any change in the proportions of births in the different age-parity groups. In fact, from virtual equality in 1947, the standardised ratios in column (5) are slightly higher than the unstandardised ratios of column (3), showing that the distributions of births by age and parity were changing in favour of the crude stillbirth rates after 1947, which would have otherwise been higher. The suggestion provided by this table that the rates may be starting to rise again is not, however, to be countenanced on this evidence. The provisional crude rate for 1952 indicates a return to the 1950 level and changes as small as these may well occur from year to year.

Fertility and Infertility recorded at Death Registration

Since July, 1938, at the registration of deaths of women who were or had at any time been married, information has been obtained under the Population (Statistics) Act, 1938, as to whether the deceased had had children by any husband. Enquiry is not made about the number of such children, nor whether they were live or stillborn. In about 7 per cent. of cases, no statement of fertility has been obtained, a proportion of these relating to deaths certified by coroners in respect of which the question is not asked; on the ground that the exclusion of these cases is unlikely to affect the validity of the distributions derived from them they are ignored in the discussion below and excluded from the tabulations, following the practice of previous years.

Infertility of Women Dying from all Causes.—Table LXXXIV below carries up to 1950 the distributions showing, annually by age-groups, the proportions of married women and of widowed and divorced women dying infertile, designating as infertile those women who had not had at least one live or stillborn child, the remainder being designated as fertile.

The rates for deceased women of all ages have remained almost unchanged throughout the 1946-50 period, both for married and for widowed and divorced women. For married women this period contrasts with the wartime period during which the rate rose from 171 in 1939 to 181 in 1942 before falling to 174 in 1945. It is not altogether surprising that the rates should have shown an unusual degree of variability during and immediately after the war, in view of the abnormal conditions of a period which saw considerable variations both in birth rates and marriage rates. These variations are discussed elsewhere in this report.

The fact that the infertility rate for deceased married women has been slightly higher since 1946 than before the war, cannot be explained in terms of differences in the relative numbers dying at different ages and durations of marriage, as may be demonstrated by calculating the rates which would have resulted had the deaths been distributed by age as in 1939. Applying the 1949 and 1950 age-infertility rates to the 1939 distribution of deaths of married women for example, gives infertility rates of 180 and 182 respectively, rates even higher than the actual rates for these years. Standardisation by duration of marriage as well as age increases the differences still further. Although the pre-war rate is based on the very limited experience of parts of 1938 and 1939 the higher level recorded now probably represents a real change. Since the biggest differences are, however, at the higher ages, they may be largely a reflex of the higher birth-rates prevailing at earlier periods when these women were of child-bearing age, and it is not to be inferred from this evidence that

Table LXXXIV.—Infertility of Deceased Married Women and of Deceased Widows and Divorced Women. Proportion. Infertile per 1,000 Stated, 1946-50. England and Wales.

(Proportions based on less than 50 deaths (fertile plus infertile) have been omitted, and proportions based on between 50 and 250 deaths are shown in italics).

Age at Death	1946	1947	1948	1949	1950
A.—Deceased Married Women					
All ages	176	176	176	174	175
Under 25	493	481	455	483	441
25-34	295	290	284	263	275
35-44	205	207	213	206	207
45-54	196	196	202	199	207
55-64	165	161	166	169	172
65-74	144	151	149	151	148
75 and over	155	156	147	151	156
B.—Deceased Widows and Divorced Women					
All ages	131	130	129	129	131
Under 25					
25-34	298	249	278	328	288
35-44	192	226	232	186	177
45-54	176	170	189	204	204
55-64	148	149	147	152	151
65-74	136	135	136	134	139
75 and over	124	124	120	122	123

improvement in the mortality conditions to which married women are exposed has been greater among fertile than among infertile women.

The general pattern of the age-rates for deceased married women and for deceased widowed and divorced women for each year remains very similar to that shown each year since 1938 when this record first became available, the comparative instability at the younger ages being statistically insignificant.

The following aggregation of the annual figures for 1940-45 and for 1946-50 provides a more reliable picture of the general pattern of the age-rates and shows the relatively small net differences which remain when some of the annual fluctuations are removed.

Age at Death	Infertility Rates per 1,000 Deceased Women					
	Married Women			Widowed and Divorced Women		
	1940-45	1946-50	Difference	1940-45	1946-50	Difference
Under 25	472	473	+ 1	—	—	—
25-34	296	282	- 14	261	286	+ 25
35-44	206	207	+ 1	203	203	—
45-54	180	200	+ 20	170	188	+ 18
55-64	161	167	+ 6	146	149	+ 3
65-74	145	149	+ 4	132	136	+ 4
75 and over	155	153	- 2	123	123	—
All ages	176	175	- 1	130	130	—

Both among married women and among widowed and divorced women infertility is, as would be expected, highest at ages under 25, and thereafter declines progressively, at first rapidly and then more slowly, as age advances. At ages beyond the child bearing period the declining infertility rates reflect the declining birthrates prevailing at earlier periods when these women were of child bearing age. The higher rate for married women dying at ages over 75 by comparison with the rate for ages 65-74, which was noted in the previous report for the 1940-45 period, may be noted also for the 1946-50 period.

The infertility rates for married women were generally higher than those for widowed and divorced women dying at the same age, in both periods, an unexpected relationship which was discussed in some detail in the Statistical Review, Part II, for 1938. The exceptions to this rule shown for ages 25-34 in the 1946-50 period are not of statistical significance.

Infertility of Deceased Married Women by Cause of Death.—Table VV of Part II of the Statistical Review of each year analyses by selected causes of death the fertile and infertile married women dying each year, and thus provides information relevant to the investigation of possible relationships between fertility and disease. The corresponding material covering the period 1940-45 was presented in Table LXVIII of the 1940-45 Civil Text, where it was shown that many of the apparent differentials between causes were statistically insignificant owing to the small numbers of cases recorded. Changes in the classification of deaths by cause made after 1949 render it impracticable to aggregate the 1950 experience with that of preceding years, and the experience of the four years 1946-49 is not numerically large enough to provide much evidence of differences between this period and the period 1940-45 for individual causes of death. Since the primary interest of this material is in the general pattern of differentials between age-groups and causes, and not in changes over time, information similar to that given in Table LXVIII of the 1940-45 report, but covering the whole period 1940-49 has been presented here, thus bringing some of the non-significant differentials of the smaller experience to the level of statistical significance. Such a presentation is given in Table LXXXV below. It provides, for each principal cause of death and for all causes, an equivalent average infertility rate for all ages of women up to 75, in addition to the rates for each age-group separately which were shown in the previous report. The equivalent average rates have been constructed on the same principle as the equivalent average death rate*, being the weighted average of the rate for ages under 25 given a weight of one and the rates for the five denary age-groups between 25 and 74, each given a weight of two. It is to be borne in mind that such a weighted average is more meaningful in the case of causes of death which have the same kind of association with fertility or infertility in each age-group, than for causes which show appreciable differences at different ages. Women who have died from tuberculosis, for example, show a positive association with infertility at young ages and a positive association with fertility at ages between 45 and 65, and the equivalent average rate, which is the same as that for all causes, masks these opposing experiences.

The selected causes of death are listed in Table LXXXV in descending order of the equivalent average infertility rate, those causes which show the greatest positive associations with infertility throughout the age-range thus coming near the top, and those which show the greatest positive associations with fertility at the bottom. The table shows the numbers dying, for each age-group and cause, in addition to the infertility rate, thus giving some indication of the numbers affected by the different diseases at different ages, as well as providing the

* This is described on page 12 of the 1940-45 Medical Text.

Table LXXXV.—Mean Annual Infertility Rates per 1,000 Stated, Distinguishing Certain Causes of Death.
Deceased Married Women, 1940-49.

(Rates omitted where deaths numbered less than 20)

1938 Inter- national List No.	Selected Causes of Death	Age of Woman at Death														Equiv- alent average infert- ility rate
		Under 25		25-34		35-44		45-54		55-64		65-74		75 and over		
		Num- ber dying	Infer- tility rate	Num- ber dying	Infer- tility rate	Num- ber dying	Infer- tility rate	Num- ber dying	Infer- tility rate	Num- ber dying	Infer- tility rate	Num- ber dying	Infer- tility rate	Num- ber dying	Infer- tility rate	
	All Causes	11,042	474	44,234	292	67,255	207	114,893	187	181,818	163	224,129	147	122,595	154	224
49 (pt.)	Cancer of ovaries and Fallopian tubes ..	35	600	373	*402	1,517	*310	3,406	*287	3,345	*245	1,809	*228	370	*197	322
30	Syphilitic diseases (including G.P.I.) ..	16	—	110	264	392	*332	891	*319	923	*241	612	*190	143	161	296
65	Diseases of the adrenal glands	6	—	86	372	200	220	195	215	111	*279	50	140	8	—	253
92	Chronic affections of the valves and Endocardium	588	*532	3,442	*351	6,014	*236	8,186	183	9,255	*177	8,950	*161	3,379	*168	250
130-132	Nephritis	294	*643	1,597	*396	3,019	212	4,650	†163	6,533	†145	7,050	140	2,839	150	250
61	Diabetes Mellitus	100	*620	402	*396	573	234	1,241	†161	3,400	†105	4,543	†96	1,274	†119	237
49 (rem.)	Cancer of genital organs other than uterus, ovaries and Fallopian tubes	1	—	25	440	118	229	294	228	533	*216	575	*183	223	157	236
63b	Exophthalmic goitre	25	440	186	306	441	215	961	198	1,214	*185	759	169	†114	193	235
83	Intra-cranial lesions of vascular origin ..	58	586	516	277	2,440	214	11,641	†177	26,941	†157	39,727	144	20,685	152	229
13-22	Tuberculosis	5,391	*507	15,523	*319	10,253	209	5,830	†168	3,736	†148	1,635	136	259	197	224
122	Hernia, intestinal obstruction	46	478	247	304	572	205	1,171	169	1,939	149	2,230	148	991	140	221
84	Mental disorders and deficiency	13	—	102	314	202	223	303	208	314	156	150	180	34	118	218
45-47	Cancer of other organs (i.e., other than those specified in this table	224	478	2,262	†251	7,259	200	17,627	188	30,026	163	30,821	149	11,112	†144	216
52-55	Diseases of the Myocardium	66	485	574	274	1,907	197	6,633	†176	19,590	†152	42,463	†142	35,417	156	215
133-136	Diseases of Urinary Organs (except nephritis)	59	475	299	311	559	188	811	†144	1,033	150	1,004	140	412	121	213
73	Anæmias	57	421	267	255	481	198	826	189	1,564	160	2,066	151	822	151	212
50	Cancer of the Breast	11	—	782	†205	5,131	198	10,189	*218	11,000	*205	7,261	*184	2,097	*190	208
139	Diseases of genital organs (other than venereal and those included in 140-150)	53	566	294	330	556	212	597	†122	376	†74	200	†85	43	116	201
48	Cancer of uterus	30	433	600	†203	2,913	†163	7,342	†165	7,757	165	4,534	142	1,057	162	192
94	Diseases of the coronary arteries, angina pectoris	5	—	87	310	643	229	3,103	189	9,768	161	14,549	146	5,505	153	188
126, 127	Biliary calculi and diseases of the gall blad- der and ducts	11	—	106	†142	392	†163	871	†119	1,582	†125	1,651	†108	706	†116	153
140-150	Diseases of pregnancy, childbirth and the puerperal state	1,514	†284	5,175	†195	3,347	†114	154	†52	14	—	5	—	—	—	141

* Rate significantly higher than the rate for all causes for the same age-group (difference more than twice its standard error).
† Rate significantly lower than the rate for all causes for the same age-group (difference more than twice its standard error).

evidence needed to judge the confidence to be placed in the various infertility rates constructed (as distinct from the confidence to be placed in a difference between a rate for an individual cause of death and that for all causes for the same age-group).

This table provides some confirmation for, and no disproof of, the more tentative findings of the corresponding analysis already referred to covering the years 1940-45.

The following notes call attention to some of the salient features of this evidence.

Diseases showing only significant positive associations with infertility

- Cancer of ovaries and Fallopian tubes
- Syphilis (including G.P.I.)
- Diseases of the adrenal glands
- Chronic endocarditis and valvular disease
- Cancer of genital organs (other than uterus, ovaries and Fallopian tubes)
- Exophthalmic goitre

Of these, cancer of the ovaries and Fallopian tubes, syphilis and chronic endocarditis have strong positive associations with infertility throughout the bulk of the age range, their equivalent average infertility rates being 44, 32 and 12 per cent. respectively above the corresponding rate for all causes. The remaining diseases in this group only show significant association at certain ages above the child-bearing age, but the infertility rates throughout most of the age-range are higher than the corresponding rates for all causes and it may be that it is only the paucity of the data which prevents the differences from showing the association to be significant also at other ages.

Diseases showing only significant positive associations with fertility

- Diseases of pregnancy, childbirth and the puerperium
- Diseases of the gall-bladder and bile ducts
- Cancer of the uterus
- Diseases of the genital organs (list number 139)
- Diseases of the kidney and urinary organs (except nephritis)
- Diseases of the myocardium
- Cancer of other organs (list numbers 45-47, 52-55)
- Intra-cranial lesions of vascular origin

Of these, diseases of pregnancy, etc., and diseases of the gall-bladder and bile ducts show the strongest positive associations with fertility operating in all parts of the age-range. The equivalent average infertility rates for these two causes were 37 and 32 per cent. respectively below the rate for all causes. In the case of cancer of the uterus the association is confined in the main to the child-bearing period; for diseases of genital organs other than venereal, and not classified with diseases of pregnancy, association is marked at ages above the child-bearing age, but there is no evidence of such association at earlier ages; a much less strongly marked though significant association is evident for diseases of the myocardium at ages over 45, the equivalent average rate being little different from that for all causes; in the case of diseases of the kidney and urinary organs (other than nephritis) association can only be seen in the age-group 45-54; for intra-cranial lesions of vascular origin significant association is confined to this and the following age-group; for cancer of organs not elsewhere specified in this classification, positive association with fertility is appreciable in the 25-34 and the 75 and over age-groups, but not for intermediate groups in spite of the high degree of reliability of the rates for these age-groups.

Diseases showing significant positive association with infertility in some age-groups and negative in others

Nephritis
Diabetes mellitus
Tuberculosis
Cancer of the breast

Of these, nephritis, diabetes mellitus and tuberculosis show appreciable positive association with infertility at ages under 35 at which it is reasonable to suppose the diseases play a part in preventing child-bearing, and positive associations with fertility at ages over 45. In regard to the rates for ages over 45, previous child-bearing may increase the risk of developing these diseases, or it may have an adverse effect on the prognosis for women who are suffering from them. The positive associations with infertility at the younger ages are less strong in the case of tuberculosis, but at the older ages the positive associations with fertility are more marked in the case of diabetes than for either nephritis or tuberculosis. Cancer of the breast (which includes all varieties of cancer affecting the breast) appears to be positively associated with child-bearing at ages 25-34, but at ages over 45, women who have had no children die relatively more frequently from it than fertile women.

Diseases showing no significant associations with infertility or fertility

Hernia, intestinal obstruction
Mental disorders and deficiency
Anaemias
Diseases of the coronary arteries, angina pectoris

Among the figures for these diseases there are no combinations of consecutive age-groups with infertility rates significantly different from the related all causes rates, and the larger experience does not confirm the tentative suggestion which the 1940-45 experience indicated, of a possible positive association with fertility among women dying of mental disorders at ages under 35.

Comparison between Infertility of Live and Deceased Married Women.

—The distributions discussed above, relating as they do to women who have died, will not necessarily reflect accurately the pattern of infertility rates in the live population. Differentials between women who die from different diseases have been noted, and there is every reason to suppose that there are also differentials between the totality of women who die from all causes, and the women who remain alive at the same ages. Such differentials will in part reflect real causal connections between disease and fertility; the contraction of certain diseases by infertile women may lessen the probability of their subsequently having a child; on the other hand, the physiological stresses of child-bearing may in certain circumstances lead to new disease or may provoke a condition which is "healed" or has been quiescent for many years, to flare up again. Since, however, many deaths are preceded by illnesses extending over appreciable periods, women who, quite irrespective of their fertility condition, contract fatal diseases during the child-bearing period will, on average, have been exposed to risk of child-bearing for a shorter duration than women of the same age who remain alive. On this account the infertility rates relating to them will be higher than for women who are alive. It is to be expected that the net effect of these differences will be greatest for married women at the child-bearing ages, and it may well be negligible for older women and for widowed and divorced women.

Information concerning infertility amongst living married women under age 50 is now available from the One per cent. Sample of the 1951 Census and some indications of the extent of the differences between the infertility rates

of living and dead married women may be obtained by comparing the census proportions with the corresponding degree of infertility recorded in respect of the married women who died in 1949 and 1950. The following figures are available :

Age at Census or at death	Infertility amongst living married women (from Census 1% sample data)		Infertility amongst deceased married women (1949 and 1950 deaths)	
	Number recorded as having had no live-born child (hundreds)	Per 1,000 married women	Number recorded as having had no live- or still-born child	Per 1,000 deceased married women
Under 20	352	594	44	543
20-24	3,216	471	577	459
25-29	3,148	259	963	312
30-34	2,035	163	755	227
35-39	1,943	143	998	204
40-44	2,297	173	1,317	208
45-49	2,477	206	1,969	209

If the census data had taken account of stillbirths as well as live births, the census figures in this statement would have been slightly lower.

The figures do not suggest significant differences at ages under 25 and over 45, but at ages between 25 and 45 they suggest that infertility is materially lower amongst the living, particularly so between the ages of 30 and 40.

GREAT BRITAIN AND IRELAND

Table A.1 (A before 1948) shows the census populations, by sex, of the several countries of Great Britain and Ireland for each census year since 1821, and mid-year estimates for each of the last forty years. Population estimates, marriages, births, deaths and infant deaths for the current year and the corresponding rates are shown in Table W. The figures for 1946-1950, and earlier years in the case of populations and rates, are summarised in Table LXXXVI. They have been revised since the publication of the relevant Parts II of the Statistical Review in order to improve comparability.

Population.—The population of all three United Kingdom countries continued its upward trend throughout the period from the outbreak of war to 1950. In that year their estimated total populations (i.e., including Armed Forces at home and abroad) had risen above the corresponding 1939 figures by 2.5 per cent. in England and Wales, 2.3 per cent. in Scotland and 4.1 per cent. in Northern Ireland. The rise was accentuated in 1946-1948 by the large number of births which occurred in those years. Fluctuations around the trend are associated with the events of the war, and particularly with evacuation and similar migration movements between England and Wales on the one hand and the remaining countries on the other. Thus the temporary drop in the population of England and Wales early in the war was accompanied by exceptional rises in the other countries, and the reverse occurred in 1944-1947*. In the Irish Republic the sudden rise in population which took place on the outbreak of war, when net migration became inwards instead of outwards, was quickly reversed after 1941. Changes in the migration balance of that country were also the predominant influence in the gradual rise in its population between 1944 and 1948 and the subsequent decline, though the former was helped by the increased number of births in those years. In 1950 the estimated population was 1.2 per cent. above the 1939 level.

Marriage Rates.—Marriage rates were relatively high in all four countries in the years from 1945 onwards. This was particularly true in England and Wales and in Scotland, where rates had dropped very much in preceding years, and less marked in the Irish Republic, where they had risen as early as 1942. A gradual reduction has followed and by now nearly all the rates are close to the pre-war levels; only in the Irish Republic are they still noticeably higher.

Birth Rates.—Birth rates were particularly high in all four countries in 1946-1948, when births postponed from the war years were being made up. The peak was reached in 1947, and was least marked in the Irish Republic which was alone in having no drop in 1945. The subsequent fall in rates was flattening out everywhere by or soon after 1950, and has left them at levels slightly above pre-war, except in Scotland, where they are back to the pre-war level.

* The figures are also affected by the increased overseas migration after 1945, and in the case of England and Wales, by the removal of estimate inflation in the revision of 1946 and its gradual re-appearance between 1947 and 1949. See pages 6-7 above.

Table LXXXVI.—Great Britain and Ireland. Vital Statistics. 1931-1938 and 1939 to 1950*.

		Great Britain and Ireland	England and Wales	Scotland	Northern Ireland	Irish Republic†	
Estimated Mid-Year Population (in thousands)							
1939	Home Population	Males	24,465	19,920	2,412	630	1,503
		Females	26,231	21,540	2,595	665	1,431
		Persons	50,696	41,460	5,007	1,295	2,934
1939	Total Population	Males	24,694	20,102	2,457	632	1,503
		Females	26,231	21,540	2,595	665	1,431
		Persons	50,925	41,642	5,052	1,297	2,934
1940	Total Population	Males	24,819	20,216	2,454	634	1,515
		Females	26,365	21,646	2,611	665	1,443
		Persons	51,184	41,862	5,065	1,299	2,958
1941	Total Population	Males	24,799	20,141	2,492	633	1,533
		Females	26,410	21,607	2,668	675	1,460
		Persons	51,209	41,748	5,160	1,308	2,993
1942	Total Population	Males	24,835	20,180	2,508	648	1,499
		Females	26,528	21,717	2,666	681	1,464
		Persons	51,363	41,897	5,174	1,329	2,963
1943	Total Population	Males	25,064	20,397	2,521	656	1,490
		Females	26,671	21,862	2,668	685	1,456
		Persons	51,735	42,259	5,189	1,341	2,946
1944	Total Population	Males	25,159	20,473	2,534	665	1,487
		Females	26,801	21,976	2,676	692	1,457
		Persons	51,960	42,449	5,210	1,357	2,944
1945	Total Population	Males	25,213	20,549	2,508	666	1,490
		Females	26,921	22,087	2,679	693	1,462
		Persons	52,134	42,636	5,187	1,359	2,952
1946	Total Population	Males	25,278	20,611	2,509	662	1,496
		Females	26,896	22,089	2,658	688	1,461
		Persons	52,174	42,700	5,167	1,350	2,957
1947	Total Population	Males	25,502	20,822	2,514	661	1,505
		Females	27,043	22,228	2,656	689	1,469
		Persons	52,545	43,050	5,171	1,350	2,974
1948	Total Population	Males	25,804	21,091	2,534	667	1,512
		Females	27,246	22,411	2,667	695	1,473
		Persons	53,050	43,502	5,201	1,362	2,985
1949	Total Population	Males	25,963	21,239	2,539	672	1,513
		Females	27,381	22,546	2,668	699	1,468
		Persons	53,344	43,785	5,207	1,371	2,981
1950	Total Population	Males	26,085	21,357	2,544	674	1,510
		Females	27,500	22,663	2,675	703	1,459
		Persons	53,585	44,020	5,219	1,377	2,969
1950	Home Population	Males	25,849	21,169	2,503	667	1,510
		Females	27,493	22,661	2,671	702	1,459
		Persons	53,342	43,830	5,174	1,369	2,969

* The figures have been revised since the publication of the relevant Parts II of the Statistical Review so as to improve comparability.

† The population estimates for the Irish Republic relate to the home population throughout.

Table LXXXVI.—Great Britain and Ireland. Vital Statistics.
1931-38 and 1939 to 1950. (continued)

	Great Britain and Ireland	England and Wales	Scotland	Northern Ireland	Irish Republic
Marriages					
1946	458,717	385,606	45,785	9,801	17,525
1947	471,428	401,210	44,411	9,517	16,290
1948	466,084	396,891	43,718	9,360	16,115
1949	442,265	375,041	41,709	9,216	16,299
1950	424,225	358,490	40,478	9,084	16,173
Persons married per 1,000 living					
1931-38	15.9	16.7	14.7	12.9	9.6
1939	20.1	21.2	18.5	14.2	10.4
1940	21.5	22.5	21.1	15.1	10.3
1941	18.1	18.6	18.5	18.3	10.0
1942	17.4	17.7	18.3	17.6	11.8
1943	14.0	14.0	14.7	15.1	11.8
1944	14.1	14.3	14.2	14.0	11.4
1945	18.2	18.7	18.8	15.4	11.7
1946	17.6	18.0	17.7	14.5	11.8
1947	18.0	18.6	17.2	14.1	11.0
1948	17.6	18.2	16.8	13.7	10.8
1949	16.6	17.1	16.0	13.4	10.9
1950	15.8	16.3	15.5	13.2	10.9

Live Births‡

	Great Britain and Ireland	England and Wales	Scotland	Northern Ireland	Irish Republic
1946	1,023,188	820,719	104,413	30,134	67,922
1947	1,094,405	881,026	113,147	31,254	68,978
1948	971,112	775,306	100,344	29,532	65,930
1949	919,252	730,518	95,674	29,106	63,954
1950	881,682	697,097	92,528	28,794	63,263
Per 1,000 living					
1931-38	15.7	15.0	18.0	20.0	19.4
1939	15.4	14.8	17.4	19.5	19.1
1940	14.8	14.1	17.1	19.5	19.1
1941	14.7	13.9	17.4	20.6	19.0
1942	16.3	15.6	17.5	22.3	22.3
1943	16.9	16.2	18.2	23.5	21.9
1944	18.2	17.7	18.4	22.8	22.2
1945	16.5	15.9	16.8	21.3	22.6
1946	19.6	19.2	20.2	22.3	22.9
1947	20.8	20.5	21.9	23.2	23.2
1948	18.3	17.8	19.3	21.7	22.0
1949	17.2	16.7	18.4	21.2	21.5
1950	16.5	15.8	17.7	20.9	21.3

‡ England and Wales : occurrences ; Remainder : registrations.

Table LXXXVI.—Great Britain and Ireland. Vital Statistics.
1931-38 and 1939 to 1950. (continued)

	Great Britain and Ireland	England and Wales	Scotland	Northern Ireland	Irish Republic
Deaths§					
1946	614,858	492,090	64,605	16,706	41,457
1947	644,820	517,615	66,200	16,944	44,061
1948	582,359	469,898	60,979	15,125	36,357
1949	627,974	510,736	63,488	15,652	38,098
1950	627,971	510,301	63,996	15,839	37,835
Per 1,000 living					
1931-38	12.4	12.0	13.3	14.4	14.2
1939	12.3	12.1	12.9	13.5	14.2
1940	14.4	14.4	14.9	14.6	14.2
1941	13.8	13.5	14.7	15.2	14.6
1942	12.5	12.3	13.3	13.3	14.1
1943	13.2	13.0	14.0	13.4	14.8
1944	13.0	12.7	13.6	12.8	15.3
1945	12.8	12.6	13.2	12.3	14.5
1946	12.3	12.0	13.1	12.5	14.0
1947	12.3	12.0	12.9	12.6	14.8
1948	11.0	10.8	11.8	11.2	12.1
1949	11.8	11.7	12.3	11.4	12.7
1950	11.7	11.6	12.4	11.6	12.7

Deaths of Infants under 1 year||

	Great Britain and Ireland	England and Wales	Scotland	Northern Ireland	Irish Republic
1946	45,178	33,541	5,621	1,626	4,390
1947	49,503	36,849	6,309	1,658	4,687
1948	35,912	26,766	4,486	1,347	3,313
1949	32,452	23,882	3,961	1,317	3,292
1950	28,418	20,817	3,569	1,166	2,866
Per 1,000 live births					
1931-38	63	60	80	78	69
1939	54	51	69	70	66
1940	61	57	78	86	66
1941	64	60	83	77	74
1942	54	51	69	76	69
1943	54	49	65	78	83
1944	50	45	65	67	79
1945	50	46	56	68	71
1946	44	43	54	54	65
1947	45	41	56	53	68
1948	37	34	45	46	50
1948	35	32	41	45	51
1950	32	30	39	40	45

§Deaths include those of non-civilians registered in the country. Death rates, except for the Irish Republic, are based on civilian deaths and populations as follows : for England and Wales, from 3rd September 1939 to 1946 ; for Scotland from 1940 to 1946 ; for Northern Ireland from 1941 to 1946. From 1947 to 1949 inclusive, the death rates for England and Wales and for Northern Ireland are based on total deaths and populations, and those for Scotland on total deaths and populations excluding armed forces overseas in 1939. The 1950 death rates are based on total deaths and home populations. Corresponding civilian death rates for England and Wales were 0.3 higher in 1947, 0.2 in 1948 and 0.1 in 1949.

|| England and Wales : deaths per 1,000 related live births ; remainder : deaths per 1,000 live births registered in the year.

Death Rates.—All the death rates resumed their downward trend after the disturbance of the early war years (in the Irish Republic, after 1944). It was interrupted in 1947, owing to the severe winter of that year*, while in 1948 mortality was exceptionally light. In 1950 the crude death rate was 3 per cent. below the average of 1931–1938 in England and Wales, 7 per cent. below it in Scotland, 19 per cent. in Northern Ireland and 11 per cent. in the Irish Republic.

Infant Mortality Rates.—The downward trend in infant death rates has also continued, and by 1950 had carried them to about half the pre-war levels in the three United Kingdom countries and to about two-thirds of the pre-war rates in the Irish Republic. The ranking of the countries in order of size of their average rates for 1931–1938—Scotland, Northern Ireland, Irish Republic, England and Wales—has now changed to Irish Republic, Northern Ireland, Scotland, England and Wales.

Year	England and Wales	Scotland	Northern Ireland	Irish Republic
1931	11.8	11.8	11.8	11.8
1932	11.8	11.8	11.8	11.8
1933	11.8	11.8	11.8	11.8
1934	11.8	11.8	11.8	11.8
1935	11.8	11.8	11.8	11.8
1936	11.8	11.8	11.8	11.8
1937	11.8	11.8	11.8	11.8
1938	11.8	11.8	11.8	11.8
1939	11.8	11.8	11.8	11.8
1940	11.8	11.8	11.8	11.8
1941	11.8	11.8	11.8	11.8
1942	11.8	11.8	11.8	11.8
1943	11.8	11.8	11.8	11.8
1944	11.8	11.8	11.8	11.8
1945	11.8	11.8	11.8	11.8
1946	11.8	11.8	11.8	11.8
1947	11.8	11.8	11.8	11.8
1948	11.8	11.8	11.8	11.8
1949	11.8	11.8	11.8	11.8
1950	11.8	11.8	11.8	11.8

Year	England and Wales	Scotland	Northern Ireland	Irish Republic
1931	11.8	11.8	11.8	11.8
1932	11.8	11.8	11.8	11.8
1933	11.8	11.8	11.8	11.8
1934	11.8	11.8	11.8	11.8
1935	11.8	11.8	11.8	11.8
1936	11.8	11.8	11.8	11.8
1937	11.8	11.8	11.8	11.8
1938	11.8	11.8	11.8	11.8
1939	11.8	11.8	11.8	11.8
1940	11.8	11.8	11.8	11.8
1941	11.8	11.8	11.8	11.8
1942	11.8	11.8	11.8	11.8
1943	11.8	11.8	11.8	11.8
1944	11.8	11.8	11.8	11.8
1945	11.8	11.8	11.8	11.8
1946	11.8	11.8	11.8	11.8
1947	11.8	11.8	11.8	11.8
1948	11.8	11.8	11.8	11.8
1949	11.8	11.8	11.8	11.8
1950	11.8	11.8	11.8	11.8

* The slight rise in 1947 is masked in the table by the changeover from civilian to total death rates.

THE REGISTRATION SERVICE

Local organisation

Until the Local Government Act, 1929, transferred the functions of the Boards of Guardians to the County Councils and County Borough Councils (in London to the Metropolitan Boroughs and the Common Council of the City of London), registration areas were, in the main, co-terminous with Poor Law Unions. The Act made it possible to make larger districts and sub-districts and also to arrange them so that, in cases where full-time officers were not required, the duties of those officers could be combined with other duties of local officials if it was convenient to do so. Under section 24 of the Act it was the duty of each Council to prepare and submit, for approval by the Minister of Health, a scheme to include provisions for such matters as the division of the County or County Borough into registration districts and sub-districts, the number of officers required, the location of offices, the fixing of salaries and allowances of registration officers and the powers relating to local organisation to be conferred on the Clerk or Town Clerk. Under section 131 of the Act, Councils were enabled to alter or revoke any scheme made under section 24 by an amending scheme.

By the end of 1945 only 10 schemes under section 24 remained to be submitted to the Minister. During the period 1946 to 1950, inclusive, 9 of these schemes came into operation. In the same period 189 amending schemes were made, of which 48 included provisions altering the boundaries of registration districts and sub-districts. Between the 1st January, 1946, and the 31st December, 1950, the number of registration districts and sub-districts changed as follows:—

	Districts	Sub-districts
As on 1.1.46	534	1,340
As on 31.12.50	526	1,226

In 1947 the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services made certain recommendations for salary scales to be established on a national basis for registration officers throughout England and Wales. The adoption of the recommendations of the National Joint Council had the general effect of bringing the salaries in question into line with the scales contained in the Scheme of Conditions of Service for local government officers which the National Joint Council had approved in 1946.

Occupations of Part-time Registration Officers

During the period 1946–1950 there were considerable changes in the composition of the registration service. When the service began in 1837 it contained a high proportion of part-time officers. Despite the growth and movement of the population, it is still found that rural areas often cannot be adequately served in any other way. The changes which took place between 1946 and 1950 were caused mainly by the taking over by the National Assistance Board of many former relieving officers consequent upon the transfer of local public assistance functions from the local authorities. To understand how much re-arrangement in the registration service was necessary on this account reference must be made to the composition of the registration service, and particularly the kind of occupations combined with tenure of part-time registration offices.

The First Annual Report of the Registrar General in 1839 described the arrangements made for the appointment, by Boards of Guardians, of "men respected for regularity of conduct, intelligent, sedulous and accurate" to act as registrars of births and deaths. The Report also contained on page 4 the following table, showing "in some degree the other occupations of this large body of public officers":—

Registrars, being Officers of a Poor Law Union				Registrars, <i>not</i> being Officers of a Poor Law Union				Total
Medical Officers	Relieving Officers	Other Officers	Total	In the Medical Profession	In other Professions	In Trade	Not included in the 3 preceding columns	
416	500	105	1,021	111	262	437	362	2,193

It will be seen that of the 2,193 registrars initially appointed nearly one-half were officers of Poor Law Unions. Of these, 500 were relieving officers. A further 527 were either medical officers or members of the medical profession in private practice. The same Report also recorded the appointment of 618 superintendent registrars, of whom 500 were Clerks of Boards of Guardians who, unless disqualified, had a right to the office.

The Report for 1861 contained, on page *xliii*, the following comment, prompted apparently by a Bill then before Parliament relating to registration in Ireland:— "The remuneration which the district officers receive is probably in almost all cases only subsidiary to other means of livelihood; and that measure of success which has attended the operation of the [English] Act is in no small degree to be attributed to the freedom it permits in the selection of these officers. The result would have been materially different if the choice had been narrowed to the medical, legal or any other profession. The greatest diversity of occupation is found amongst the registrars; some are solicitors, some surgeons, some chemists; others are relieving officers, clerks, schoolmasters, farmers, dissenting ministers, parish clerks, undertakers, land agents, surveyors, auctioneers, grocers, tailors, etc., etc."

In 1885, however, express provision was made in the statutory rules governing qualifications for office as registrar that no person should be appointed who was engaged in any business or occupation which may be considered by the Registrar General to be incompatible with the office of registrar of births and deaths or with the proper discharge of its duties"; and in 1927 the rule was revised again to exclude registered medical practitioners specifically, along with midwives, undertakers, industrial assurance agents and others who, if they were registrars might be concerned with the same birth or death in two capacities.

In 1930 with the operation of the Local Government Act, 1929, began the gradual transformation of the registration service from a fee-paid to a salaried service but the subsequent decrease in the number of fee-paid registration officers did not of itself affect the largely part-time character of the service.

By 1946 some two-thirds of the officers in the service were salaried. Of these, rather more than 300 were engaged whole-time, as against nearly 1,200 part-time, of whom almost 900 were less than half-time. About a third of the part-time salaried officers were relieving officers, and another third held some other office under a national or local authority.

Thus the changes in 1948 in public assistance arrangements affected the registration service considerably. Something like a quarter of all the registration officers in county areas were affected, but there was much variation between counties. Nine counties had no registration officers who were also relieving

officers and eleven others had only one, two or three apiece. Elsewhere it was otherwise: Essex, for instance, had 20 out of 56. The difficulties were greater in thinly populated rural areas, where suitably qualified officers were not easy to find. In the event a variety of solutions was adopted. In some cases vacant sub-districts in rural areas were taken over by neighbouring registrars, in others clerks of rural district councils, local solicitors and their clerks, accountants, etc., added the part-time post of registrar to their other duties, while in many cases the former relieving officer himself re-appeared in the new guise of welfare officer or authorised officer. By the end of 1950 some 150 registration officers were also either welfare or authorised officers in the service of local authorities.

Table LXXXVII which, it should be noted, deals with the number of posts as distinct from the number of officers, gives some particulars of the composition and distribution of the registration service at the end of 1950.

Table LXXXVII

Superintendent Registrars (Posts)

	County Boroughs	Counties	Metropolitan Boroughs
Salaried Officers { whole-time .. part-time ..	49	59	23
	33	320	6
Total Salaried Officers ..	82	379	29
Fee Earning Officers	2	34	—
Total Superintendent Registrars	84	413	29

Registrars of Births and Deaths (Posts)

	County Boroughs	Counties	Metropolitan Boroughs	All Posts
Salaried Officers { whole-time .. part-time ..	208	258	56	
	12	648	9	
Total Salaried Officers ..	220	906	65	
Fee Earning Officers	5	25	5	
Total Registrars of Births and Deaths	225	931	70	
Total of Superintendent Registrars and Registrars of Births and Deaths	309	1,344	99	1,752

This represents a reduction in numbers since 1839 of over a thousand posts, which is, no doubt, due in large measure to the revolution in communications, although the changes which took place in 1948 added a further impulse to the process. The following table shows that the part-time staff are still drawn from many walks of life.

Table LXXXVIII
Occupations of Part-time Registration Officers (December, 1950).

(1)	Clerks of District Councils (2)	Other Local Officers (3)	Solicitors (4)	Solicitors' Clerks (5)	Accountants (6)	Welfare Officers (7)	Others (8)
Superintendent Registrars	125	69*	69	16	1	20	20
Registrars of Births & Deaths	22	103†	5	38	9	113	71

Legislation

During the years 1946 to 1950 several enactments took effect touching the law on registration and marriage.

The short birth certificate.—The most important of those enactments concerned birth certificates. The full birth certificate contains many particulars which are often not required for the immediate purpose for which a birth certificate is produced in ordinary life. By the Births and Deaths Registration Act, 1947, provision was made for the issue of an abbreviated form of birth certificate at a fee of sixpence, as against the then two shillings and seven-pence for the full certificate. It was first issued on December 15th, 1947, and immediately began to catch up rapidly in popularity with the full form. The rate of issue was still increasing at the end of 1950.

Adoption.—Two further Acts were passed which affected the registration of adoptions in the Adopted Children Register maintained by the Registrar General. The Adoption of Children Act, 1949, provided for the child's adoptive surname and country of birth to be shown in the Register. It enabled the Court to determine where necessary a child's date of birth and provided for the date so fixed to be entered in the Register. It provided also, for the fact of adoption of a child either in England or Scotland to be recorded in the margin of the birth entry.

The second of the two Acts relating to adoption, the Adoption Act, 1950, consolidated all previous enactments.

Marriages.—The Marriage Act, 1949, was the first measure to be passed under the Consolidation of Enactments (Procedure) Act, 1949. This began the process of consolidation of the existing statutes relating to the registration of births, deaths and marriages and allied matters. In the course of consolidating into one Act, the provisions relating to marriages previously scattered over some forty different enactments from the year 1540 onwards, the opportunity was taken to make certain corrections and minor improvements in the law relating to marriage. Simpler forms were prescribed in the Marriage (Prescription of Forms) Regulations, 1949, which were made under the Act.

Foreign Marriages.—Orders-in-Council made under the Foreign Marriage Act, 1947, affected the records to be kept in the General Register Office. Marriages solemnized under Section 2 of the Act and not required to be registered in Army or Air Force Books are now registered at the General Register Office on receipt of a duly attested certificate of the marriage. This procedure may extend also to marriages which were solemnized before 1st February, 1948, under Section 22 of the Foreign Marriage Act, 1892.

* Includes Clerks to Assessment Committees and to Justices; Coroners; and Electoral Registration Officers.

† Includes Sub-Postmasters; Rating Officers; and Collectors.

The Orders-in-Council provided also for the certificates of certain marriages to be deposited at the General Register Office. Such certificates relate to marriages where either of the parties is a British subject belonging to the United Kingdom, where the marriage was solemnized according to the local law of certain foreign countries but not attended by a British Consul, and where the consular officer representing H.M. Government for the district authenticates the certificate. This provision operated from the 1st February, 1948.

Certificates for National Insurance and Insurance Purposes.—Two new certificates were introduced as a result of the National Insurance Act, 1946, and the Industrial Assurance and Friendly Societies Act, 1948.

Among other things the National Insurance Act, 1946, provided for the payment of death grant and widow's benefit upon the decease of certain classes of insured persons. Arrangements were made for registrars to certify, free of charge, that they had registered or received notice of the death, the certificate serving as part of the necessary evidence for the payment of the grant or benefit. In addition, registrars were called upon to issue to informants for death registrations leaflets explaining the grant and benefit.

A special death certificate was introduced for the purposes of the first schedule to the Industrial Assurance and Friendly Societies Act, in connection with the payment of monies on insurance policies up to a maximum of £20 to a child or grandchild on the death of a parent or grandparent. The fee for this certificate was fixed at one shilling.

Civil Aviation Act, 1946.—Regulations made in 1948 under Section 43 of this Act provide for the Minister of Civil Aviation to be informed of any birth or death occurring in a British aircraft, and of any death outside the United Kingdom of a traveller in the aircraft who is killed on the journey in consequence of an accident. Records of these events are kept in the Ministry of Civil Aviation and a certified copy of each entry is sent to the Registrar General by whom they are preserved in the Air Register Book of Births and Deaths.

The enactments relating to Civil Aviation were consolidated in the Civil Aviation Act, 1949.

Finance Act, 1949.—This Act included provisions for the abolition of the stamp duty of a penny on birth, marriage and death certificates and the duty of ten shillings on marriage licences.

Registration of Births, Deaths and Marriages in England and Wales

Progress of Registration

Between 1946 and 1950, the number of names added each year to the alphabetical indexes of births, deaths and marriages recorded in the registers of England and Wales since 1st July, 1837 were as follows:—

1946	2,083,196	1949	1,991,990
1947	2,206,855	1950	1,919,041
1948	2,038,986		

The total at the end of 1950 embracing a period of 113½ years was 195,859,756.

Searches and Certificates

The records in the custody of the Registrar General include, in addition to the certified copies of entries of births, deaths and marriages since 1837 referred to under Progress and Registration, certain non-parochial records of events which occurred both inside and outside England and Wales mostly prior to 1837. Certificates may be obtained on payment of the fees.

A list of all these records is available on application. Table LXXXIX shows the extent to which the records in the General Register Office have been used since 1866.

Table LXXXIX.—Searches undertaken, certificates issued and fees received at the General Register Office, 1866–1950.

Years*	Total Searches	Searches for Govt. Depts.	Searches paid for by the public	Certificates issued	Amount Received
1866	12,135	—	12,135	10,017	£ 1,860 s. 15 d.
1875	26,356	—	26,356	20,282	3,879 15 6
1885	36,450	—	36,450	27,682	5,317 13 6
1895	53,289	—	53,289	35,727	7,200 12 6
1905	65,142	—	65,142	50,310	9,611 9 0
1915	202,939	118,788	84,151	69,746	13,007 10 0
1925†	488,781	339,790	148,991	115,378	25,610 2 6
1935	591,056	443,783	147,273	119,351	26,221 9 6
1945	569,266	380,730	188,536	187,077	39,474 14 3
1946	826,380	544,843	281,537	271,208	56,676 8 9
1947	1,180,519	873,868	306,651	299,525	61,900 15 6
1948†	943,705	658,251	285,454	350,626	56,954 15 9
1949	793,386	527,814	265,572	310,723	52,728 3 6
1950	732,511	486,386	246,125	285,487	51,215 17 8

In addition to searches made by or on behalf of members of the public, searches were undertaken on behalf of Government Departments for purposes which in the years 1946 to 1950 included the following:—

- Verification of births, deaths and marriages in connection with claims for (i) contributory pensions under the Widows', Orphans', and Old Age Contributory Pensions Acts, 1936 and 1941, and other benefits then administered by the Ministry of Health, and (ii) benefits under the National Insurance Acts, 1946 to 1949.
- Verification of births, deaths and marriages in connection with claims under the Family Allowances Act, 1945.
- Verification of the ages of claimants (including blind persons) for non-contributory pensions.
- Verification of births, deaths and marriages in support of claims for war pensions administered by the Ministry of Pensions.
- Verification of the ages of certain classes of men in connection with service in the Navy, Army and Air Force.
- Verification to assist dependants of men in the armed forces to produce evidence of marriage and of the births of children in support of claims to service pensions, separation allowances, etc.

The numbers of such searches are shown in the Table XC.

Table XC.—Searches undertaken by the General Register Office on behalf of Government Departments, 1946–1950.

	1946	1947	1948	1949	1950
Contributory Pensions and National Insurance Benefits	301,937	415,294	411,897	264,344	300,050
Family Allowances ..	78,987	362,846	170,204	182,308	127,013
Non-contributory Pensions..	58,321	46,863	38,250	23,917	22,430
Ministry of Pensions ..	94,350	39,010	27,028	25,456	20,593
Navy, Army and Air Force..	11,248	9,855	8,872	10,932	7,612
Others ..	—	—	2,000	20,857	8,688
Total ..	544,843	873,868	658,251	527,814	486,386

* These periods relate to 52 weeks except those marked † which relate to 53 weeks.

Table XCI.—Certificates issued from the General Register Office, 1946–1950.

Year	Birth Certificates			Adoption Certificates			Adoptions Registered
	Standard	Short	Total	Standard	Short	Total	
1946	195,163	—	195,163	22,000	—	22,000	21,280
1947	211,000	1,060	212,060	18,600	1,150	19,750	18,269
1948	176,631	62,662	239,293	13,112	32,331	45,443	18,550
1949	158,510	59,167	217,677	13,464	20,370	33,834	17,331
1950	143,135	55,307	198,442	10,102	15,824	25,926	12,748

Offences against the Registration Acts

Two persons were prosecuted in 1948 at the instance of the Registrar General and convicted for failing to register a birth, and one person in 1947 for failure to comply with a requisition to give information for the registration of a death.

Proceedings were taken under the Perjury Act, 1911, by the Director of Public Prosecutions or by the police in a number of cases where false information had been given for the registration of births and marriages.

Year	Births		Marriages	
	Cases	Persons Convicted	Cases	Persons Convicted
1946	11	8	1	1
1947	13	12	1	—
1948	13	13	1	1
1949	4	3	—	—
1950	—	—	1	1

Proceedings were also taken under the Perjury Act, 1911, in some cases where false information was given for the purpose of procuring marriage:—

Year	Number of Cases	Number of Persons Convicted
1946	16	26
1947	23	21
1948	15	17
1949	9	8
1950	8	8

Proceedings were taken against one person in 1946 and one in 1949, for falsification of particulars on certificates. They were convicted and bound over.

Re-registration of Births under the Legitimacy Act, 1926

Under the Legitimacy Act, 1926, a child born illegitimate is, subject to certain conditions, legitimated by the subsequent marriage of the parents. The Act provides for the re-registration of the birth of such a child on the authority of the Registrar General.

The numbers of authorities for such re-registration issued during each quarter from 1927 to 1950 are shown in Table T3 of Part II of the Statistical

Review for 1950 and the numbers in each quarter from 1945 to 1950 are reproduced below with earlier years for comparison :—

Year	March	June	September	December	Totals
1927	1,265	1,256	1,381	1,593	5,495
1930	996	1,001	1,006	986	3,989
1935	774	790	701	691	2,956
1940	1,184	1,302	1,146	722	4,354
1945	741	908	931	1,161	3,741
1946	941	1,053	858	811	3,663
1947	868	832	971	959	3,630
1948	588	812	619	887	2,906
1949	854	815	693	666	3,028
1950	647	811	715	611	2,784

The Adoption Acts

The Adoption Acts provide for the adoption of children by Order of Court, and for the registration of such adoptions in an Adopted Children Register maintained by the Registrar General.

Table T2 of Part II of the Statistical Review for 1950 shows an analysis of the Adoption Orders made by the several classes of Courts and the Quarterly distribution of the total figures from 1927 to 1950. Table XCII gives this analysis for the years 1946 to 1950 and certain earlier years.

Table XCII.—Adoption of Children under the Adoption of Children Acts, 1926–1950. England and Wales.

Year	Number of Adoption Orders dealt with				Corresponding Number of Children, i.e., Entries made in the Adopted Children Register in each Quarter				
	Total	High Court	County Court	Court of Summary Jurisdiction	Year's Total	March	June	September	December
1927	2,943	133	184	2,626	2,967	329	990	774	874
1930	4,511	74	317	4,120	4,517	1,084	1,196	983	1,254
1935	4,844	64	342	4,438	4,852	1,174	1,261	1,073	1,344
1940	7,775	59	645	7,071	7,776	1,641	2,341	2,225	1,569
1945	16,319	52	2,622	13,645	16,357	3,514	3,715	4,453	4,675
1946	21,272	166	3,815	17,291	21,280	5,173	5,479	4,779	5,849
1947	18,255	183	3,663	14,409	18,269	3,930	4,248	4,948	5,143
1948	18,540	170	3,962	14,408	18,550	4,099	5,197	4,754	4,500
1949	17,323	203	4,338	12,782	17,331	4,543	4,344	4,052	4,392
1950	12,742	155	3,448	9,139	12,748	2,787	2,856	3,495	3,610

Registration of Births, Deaths and Marriages Abroad

Registers of births and deaths of British subjects abroad are maintained by British Consular Officers and certain other British authorities under the Registration of Births and Deaths (Consular Officers) Regulations, made by the Secretary of State for Foreign Affairs. The Regulations provide for the deposit of certified copies of these consular records in the General Register Office.

Under the Foreign Marriage Act, 1892, marriages to which one party at least is a British subject may be solemnized by a British Consular Officer or celebrated

according to local law in his presence. The Act requires these Officers to maintain registers of such marriages and to deposit in the General Register Office a certified copy of each entry in their registers.

The number of such certified copies of birth, death and marriage entries received in each of the years 1946 to 1950 is shown below :—

Year	Births	Deaths	Marriages
1946	2,910	897	794
1947	3,681	1,000	891
1948	4,730	1,037	793
1949	4,526	985	648
1950	4,322	895	547

The Registration of Births, Deaths, and Marriages (Army) Act, 1879, provided for the registration of births, deaths and marriages which occur out of the United Kingdom among officers and soldiers of H.M. land forces and their families. These facilities were extended to the Royal Air Force by the Air Force (Application of Enactments) (No. 2) Order, 1918, made under the Air Force (Constitution) Act, 1917.

By regulations made in pursuance of these enactments, certified copies of entries in the Army and Air Force Books 112, 113 and 114, which constitute respectively the registers of births, marriages and deaths, are sent to the Registrar General on the 1st January and 1st July each year.

The numbers of certified copies of birth, death and marriage entries received in each of the years 1946 to 1950 are shown below :—

Year	Births	Deaths	Marriages
1946	1,224	398	9,486
1947	3,165	177	8,210
1948	3,439	272	5,535
1949	3,619	570	2,638
1950	4,277	651	1,972

Returns of war deaths abroad in H.M. Forces during the period 3rd July, 1939—30th June, 1948 have been received as follows :—

Navy	.. .. .	Officers	6,622
		Ratings	52,559
Army	.. .. .	Officers	12,005
		Other ranks	136,144
Air Force	.. .. .	All ranks	60,708
Indian Services	.. .. .	British Officers and Warrant Officers	1,459

Registrations effected and certificates received in pursuance of the Foreign Marriage Orders-in-Council, 1947 and 1949 (referred to under "Legislation"), up to the end of 1950 were as follows :—

Registration of marriages solemnized before 1st February, 1948	167
Registration of marriages solemnized on or after 1st February, 1948	154
Authenticated certificates of marriages	360

As a result of the cessation of British jurisdiction in India, arrangements were made in 1950 by the Commonwealth Relations Office for the registration, on a non-statutory basis, by the United Kingdom Deputy High Commissioners

in India and Pakistan, of births and deaths of British subjects, for the rendering to the Registrar General of certified copies of the entries made, and for the issue of certificates. During 1950, 833 births and 28 deaths were registered.

Marine Register Book

In accordance with the Merchant Shipping Act, 1894, masters of every British ship, and of foreign ships plying to and from British ports, are required to transmit returns of all births and deaths, occurring on board their ships, to the Registrar General of Shipping and Seamen, who sends to the Registrar General certified copies of those records appropriate to be kept at the General Register Office. Similar returns of births and deaths are received at the General Register Office from Captains of H.M. ships, under Section 37(6) of the Births and Deaths Registration Act, 1874, and Articles 869 and 1709 of King's Regulations and Admiralty Instructions. The returns received from these two sources constitute the "Marine Register Book". Between 1946 and 1950 the following numbers of entries were made in it :—

Year of Registration	Births	Deaths
1946	96	1,507
1947	103	921
1948	149	875
1949	118	1,037
1950	271	1,155

Air Register Book of Births and Deaths

Records of events registered in accordance with the Civil Aviation Acts (referred to under "Legislation") began to arrive at the General Register Office in 1949. Up to the end of 1950 the numbers received were as follows :—

Year Registered	Air Deaths	Missing Persons
1949	25	25
1950	12	—

NATIONAL REGISTRATION

The arrangements for the establishment of the National Register, and its operation during the six war years, 1939 to 1945, were dealt with in some detail in the Statistical Review for the years 1940-1945. The five years now under review cover a transitional period in which the Register, while continuing to be required for many of its previous purposes, was able to drop certain of its wartime features and was put to some new uses arising out of changing circumstances.

The National Register continued to assist the Ministry of Labour and National Service in securing the registration of men under the National Service Acts. The use of the machinery of the Central National Registration Office during these five years resulted in nearly 40,000 men who had initially failed to register being traced and required to fulfil their obligations.

With the continuance of food rationing, the National Register and the rationing systems remained closely linked. The experience of the previous years of contact with the public through joint National Registration/Food Offices had shown the success of the joint operation of these offices, and this arrangement was continued.

The National Register continued until June, 1948, to provide the basis of the Electoral Register, the October 1948 Register being the last to be so compiled. Subsequently, for the purpose of correcting the electors lists, Electoral Registration Officers, on request, were notified of deaths of British subjects 21 years of age and over resident in their areas. The Central Index of Service Voters (men and women in H.M. Forces) and the Central Index of War Workers (civilians working outside the United Kingdom on behalf of a Government Department) were maintained at the Central National Registration Office at Southport until the end of 1948, when they were superseded by a new Central Index of Service Voters which was set up on the coming into force of the Representation of the People Act, 1948, and included, in addition to men and women in H.M. Forces, the wives of members of H.M. Forces residing with their husbands outside the United Kingdom, and Crown Servants employed outside the United Kingdom and their wives when resident with them. During the years 1946, 1947 and 1948, 170,000 of the old type declarations from the Services were received. During 1949/50 360,000 declarations of Service Voters under the new Act were received. In the five years, 1946-1950, 4,500,000 notifications of release or discharge from H.M. Forces were handled, the great majority of which, of course, related to men and women released under demobilisation.

New Uses

Early in 1947 arrangements were made for applications by the public for British Passports and Travel Identity Cards to be received at local offices of the Ministry of Labour and National Service upon production of the applicant's National Registration identity card. The production of the identity card made it unnecessary for the application to be attested by the signature of a referee.

The cards in the local maintenance registers were counted and classified as at 31st December, 1947, to provide the basic figures for "Estimates of the Sex and Age Distribution of the Civilian Population in Regions and Administrative

Areas of England and Wales at 31st December, 1947," published as a separate volume in 1949.

The National Register was able to assist in finding persons to whom benefits of some kind were due from various Government Departments and who could not otherwise be traced; examples of such benefits are the gratuities payable to personnel of the Civil Defence and National Fire Services and increased pensions to certain Old Age and Widow pensioners. Aid was given to local authorities in tracing the owners of unclaimed household chattels removed from war damaged property. The Associations concerned with the welfare of members of the Services and their families obtained assistance from the National Register in their efforts to re-unite families separated by the war. Similar help was given, through the Foreign Office or otherwise, to British subjects living abroad, who owing to the war had lost trace of their relatives in this country.

The Social Survey Division of the Central Office of Information continued to use the National Register for selecting persons for interview for purposes of the Survey of Sickness.

The Utility Furniture Office of the Board of Trade found the inspection of the identity card with its unique number of considerable help when dealing with applications for Household Buying Permits.

The National Health Service, established in July, 1948, adopted the comprehensive National Registration numbering system for its general medical, dental and supplementary ophthalmic services, as a ready and simple means of checking inflation of doctors' lists and detecting fraudulent use of the services.

Deaths, enlistments and embarkations were notified to local Executive Councils from the commencement of the Service.

Reference was made in the previous Review to the verification of dates of birth for Family Allowances and Post War Credits. By the end of 1950 over 1,150,000 Family Allowance applications had been verified in this way.

Procedural Changes

In continuance of the relaxations which were found possible in 1945, further procedural changes were made for the convenience of the public. A simpler method for obtaining the replacement of a lost identity card was introduced, which enabled the loser in many cases to get a fresh card immediately on application to his local office.

In December, 1946, the issue of special identity cards to the Police and to National Fire Service and Civil Defence personnel was discontinued, although such cards already held remained valid. There were no other changes in the types of identity cards issued, although there ceased to be much occasion for the issue of the photograph-bearing green identity card.

With the revocation in 1945 of Defence Regulation 20 it was again possible for British subjects to use a new name without the formality of publication in the London Gazette. In consequence, arrangements were made whereby persons who had assumed a new name and intended to continue to use it could, on signing a formal declaration to that effect, obtain a fresh identity card in the new name.

Statistics

During the five years 1946-1950 nearly 9½ million new registrations were made in the National Register, nearly 4 million by birth, and the remainder by entry to the country or release from the Services, bringing the total of new registrations made after the initial establishment of the Register to 16½ million. The marked increase in new registrations during these five

years is, of course, accounted for by the large scale release of men and women from the Services (over 4 million) and the post-war relaxation of restrictions upon entry to the country.

Well over 5 million entries in the Register were closed during the five years, nearly 2½ million by death, 1½ million by embarkation for abroad, and the remainder on entry into the Services. Over 12½ million "exits" had thus been recorded since the commencement of National Registration.

Movement of the population

Recorded removals from one administrative area to another in the five years were over 20 million, and the total since September, 1939, reached 56 million by the end of 1950. Records kept during the two years 1949 and 1950 showed that the number of removals *within* administrative areas during that time was almost six million.

Enforcement

The following table shows the numbers of persons convicted of offences under the National Registration Act. The decline in 1945 from the previous year's peak figures continued progressively in each of the following years.

Table XCIII.—Persons convicted of offences under the National Registration Act, 1939.

	1944	1945	1946	1947	1948	1949	1950
Making false statements for National Registration purposes	189	120	50	87	121	81	15
Using an identity card for purposes of impersonation	483	462	213	179	143	111	53
Allowing another person to use one's identity card	82	63	34	17	19	20	13
Forgery of an identity card	126	103	97	71	79	77	22
Defacement or destruction of an identity card	166	93	35	32	23	20	20
Failure to produce identity card to Police	1,573	706	211	269	252	186	122
Failure to notify change of address	527	474	261	173	80	30	24
Other offences against National Registration Regulations	1,527	532	722	562	150	92	93
Total	4,673	2,553	1,623	1,390	867	617	362

PARLIAMENTARY AND LOCAL GOVERNMENT ELECTORS

Since the period covered by the last commentary on Parliamentary and Local Government electors, contained in the Text Volume of the Statistical Review for 1938-39, there has been much legislation relating to electoral matters, affecting the statistics of electoral registers. Much of this legislation was a consequence of (a) the war-time suspension of local government and general elections and of electoral register revision; (b) the need to resume the registers under the special conditions expected at the latter end of, and after, the war; and (c) the desire to remedy the mal-distribution of parliamentary seats which had developed since the previous re-distribution of 1917 and 1918. Certain changes were also made in the parliamentary and local government franchise and the University and two-member constituencies were abolished.

In 1942 responsibility for the study of the problems mentioned at (a) to (c) above was entrusted to a Committee on Electoral Machinery under the Chairmanship of Sir Sylvanus Vivian, then Registrar General. In their report* this committee drew attention to the possibility of substantial population movements when those who had been evacuated were returning after the armistice, and to the disfranchisement which this would entail under the system then existing. Those moving during the qualifying period would neither be able to vote in their home constituencies nor in those to which they had been evacuated. The committee drew attention to the desirability of a system of continuous qualification, under which on removal an elector would be enabled to retain his old vote until qualified to vote in his new constituency. On the other hand the general labour shortage in the war and immediately post-war years would militate against the adoption of any system for preparing electoral registers which was expensive in manpower.

The other problem to which the committee addressed themselves was the achievement of more equal representation by the appropriate redistribution of seats. Their main recommendations were that permanent boundary commissions with rules for their functioning should be established, and that, as the full re-distribution desired could not be completed with the resources, and within the time available before the first post-war General Election, a partial short-term re-distribution was desirable to deal with those constituencies where the departure from a standard representation (electorate per member) had become excessive and beyond agreed limits of tolerance.

Electoral Registers

The Local Elections and Register of Electors (Temporary Provision) Act, 1939, suspended revision of the electoral registers, but in the later years of the war several measures were passed to revive the electoral registers, the legislation clearly indicating that the methods of compilation and general procedure were to be of a temporary nature pending a return to the procedure laid down in the Representation of the People Act, 1918. The first set of these measures, the Parliamentary Electors (War Time Registration) Acts of 1943 and 1944, laid down the procedure to be adopted and set up the machinery to perform the necessary preliminary work. A novel feature was introduced, in that qualification was, under certain circumstances, registration in the National Register

* Report of the Committee on Electoral Machinery. Cmd. 6408. December 1942.

and the greater part of the material for producing and maintaining the Electoral Register was forthcoming as a product of the procedure necessarily required to maintain the National Register*. This avoided the pitfalls to which the Committee on Electoral Machinery had drawn attention, no residence qualification being required under the 1944 Act (passed before the 1943 Act came into effective operation) and manpower being secured by the association of the system with the National Register.

The instruction to produce the first electoral register for the whole country to be compiled by means of the new machinery, the May 1945 Register, was contained in the Representation of the People Act, 1945, which also prescribed subsequent revision in the form of an annual register coming into force on the 15th of October each year. Such revisions were made in the years 1945 to 1948 inclusive and the numbers of electors in the registers so produced are recorded in Tables U and V in Part II of the Statistical Reviews for these years.

The form of Tables U and V for 1945, 1948 and later years differ from that of 1939 and earlier years and some explanation may be given of the changes. First, no distinction was made of sex because the changed method of preparation could not readily provide such a division, in which there was in any case no longer any electoral significance. After the granting of women's franchise by the Act of 1918 there was some interest in the relative numbers of each sex who were qualified to vote. In 1918, the numbers of males per 1,000 females were 1,481 in Parliamentary and 1,010 in local elections; and in 1928, the numbers were 1,299 in parliamentary and 1,004 in local elections. The position was further changed by the passing of the Representation of the People (Equal Franchise) Act, 1928, which had the effect of lowering the male to female ratios in 1929, to 897 in parliamentary and 901 in local elections, the predominance of the females arising from their greater longevity. These proportions have changed but little since; in 1939, the figure was 892 in both parliamentary and local elections, the slight fall in the proportion being due in the main to the relatively greater improvement in female mortality. Such interest as there still may be can be met from other statistics, since in most areas there is now no significant difference between the ratio of male to female electors and the ratio of males to females in the general population of age 21 and over.

Secondly, in the tables of 1939 and earlier, distinction was made between persons themselves possessing business premises qualifications and those entitled only on account of their spouse's qualification. These latter grounds for qualification were removed by the Act of 1945, and a single figure has therefore been included in the recent tables of persons on the business premises register.

Thirdly, provision was made in the Acts of 1943 and 1944, as amended by the Act of 1945, for a service register, which also included seamen and war workers abroad.

In November, 1945, a committee on Electoral Registration was appointed under the chairmanship of Mr. G. H. Oliver, M.P., Parliamentary Under-Secretary of State, Home Office, to consider and advise what, if any, changes should be made in the machinery of electoral registration to bring it to peace time requirements. In the light of the Committee's recommendations (Report of the Committee on Electoral Registration, Cmd. 7004, December, 1946) the Representation of the People Act, 1948, provided for the preparation and publication of local registers in the Spring and Autumn of each year based as before the war on the use of a canvass. The registers were to distinguish between (a) those who were parliamentary and local government electors by virtue of

* A fuller description of this aspect is in the Statistical Review for 1940-1945, Civil Text, page 148.

residence on the qualifying dates and (b) local government electors who on the qualifying dates had a known residence qualification by occupying as owner or tenant any rateable land or premises of not less than £10 rateable value per occupier. Provision was made for the following categories of persons to be placed on the register by virtue of a service qualification: (i) Members of the Forces; (ii) United Kingdom Crown servants overseas and (iii) the wives of (i) and (ii) if overseas with them. The 1948 Act also abolished the University constituencies and registers and the business premises qualification. This and earlier legislation was consolidated by the Representation of the People Act, 1949. In the same year the Electoral Registers Act provided that the registers should be prepared and published once a year instead of twice a year. The qualifying date was to be 20th November in England and Wales and the registers were to be published not later than 15th March of the following year; a provision affecting the numbers on the register was that a person not of full age on the qualifying date but of full age on the following 15th June was to be included on the register though there would be no entitlement to vote in any election before 2nd October of the latter year: the aim being to give these persons the same voting rights as they would have had if the Autumn registers had been continued.

An innovation in Tables U and V has been the insertion of information concerning elections held on the current annual register: in Table U merely a statement of the votes cast at parliamentary by-elections; but in Table V more detailed information on local elections, namely the number of councillors returned unopposed; and in contested elections:—the number of councillors returned; the electorate in contested electoral divisions, wards or parishes; the numbers of ballot papers in ballot boxes; the aggregate number of votes polled by all candidates (in 1945 only); and the percentage of electorate voting.

Total Electorate

The particulars recorded in Tables U and V have been taken from statements furnished to the Registrar General by the Registration Officers of the several areas and clerks of local authorities, or in the case of a University forming the whole or part of a university constituency prior to 1949, by the Chancellor, Registrar or the officer dealing with parliamentary registration.

Registration officers were instructed that the return of Parliamentary Electors should be the net total of individual Parliamentary Electors in each constituency, all duplicate entries being omitted from the count. In the case of Local Government Electors the number of names on the register was to be given so long as this was relevant, that is up to and including 1939, the instructions further directed that the names of "out voters" (that is, persons whose names appear twice in the register, by reason of a claim under Rule 24 of the First Schedule to the 1918 Act) should be counted once only in respect of that qualification.

Table U refers to Parliamentary and Table V to Local Government electors and elections. From these tables has been extracted the summary in Table XCIV showing the total electorate at various dates, selected to demonstrate the changing franchise. Comparison of the registers of 1928 and 1929 shows the effect of the commencement of the Act of 1928, which was the first to give to women the same franchise as to men, and comparison of the registers of 1939 and 1945 indicates the effect of the Act of 1945, which increased the local government electorate by the addition of those qualified for the parliamentary electorate but previously not entitled to vote at local government elections.

Table XCIV.—Parliamentary and Local Government Electors.
England and Wales, 1918 to 1950.

Register	Parliamentary Register (including University Constituencies to 1948)			Local Government Register
	Total	Business Premises Qualifications (Included in Total)	Persons on Absent Voters List (Included in Total)	
1918 (Autumn)	17,222,983	159,013	3,362,028	13,930,130
1928 (Autumn)	19,866,649	205,793	154,432	17,179,487
1929 (Spring)	25,095,793	371,594	174,731	18,620,395
1939 (Autumn)	28,348,555	354,831	168,480	21,685,772
(Qualifying date in brackets)	Total	Business Premises Register (Included in Total)	Service Register (Included in Total)	Local Government Register
1945 (30th June)	29,368,684	55,164	2,749,531	29,216,823
1946 (30th June)	30,736,362	51,645	1,015,259	30,591,738
1947 (30th June)	31,270,504	54,162	478,085	31,105,904
1948 (30th June)	31,629,861	49,575	284,004	31,455,419
1949 (10th June)	30,173,966	—	127,334	30,258,862
1950 (20th November 1949)	30,206,667	—	164,743	30,306,024

The total Parliamentary Electorate included prior to 1949 plural representation in the case of those persons registered in more than one constituency by reason of their possessing the necessary residence or business qualification or being entitled to be registered in respect of a University constituency. The percentages which this total electorate represented of the estimated total population in 1938 and 1939 and from 1945 to 1950 were:

1938	1939	1945	1946	1947	1948	1949	1950
68.4	68.4	68.9	72.0	72.6	72.7	68.9	68.6

The changes made in Parliamentary Franchise between 1939 and 1945–1948 did not affect sufficiently large numbers of persons to exert a significant influence on the percentages, but the lower proportion of minors in the age structure of the post-war population compared with that of the pre-war population was such that a rise of some 1–2 per cent. in the electoral proportion was to be expected on this account alone. The low proportion in 1945 is probably to be attributed in part to a degree of incompleteness in the service register of that year. The fall in the proportion in 1949 was due to the elimination of business premises and university qualifications.

In contrast there was a considerable increase in the Local Government franchise in the post-war as compared with the pre-war period. Reference should be made to the Acts concerned, in particular to those of 1928, 1943, 1944 and 1945, for a precise appraisal of the changes made, but in brief the *parliamentary* qualification had previously been based on *residence* and the *local* qualification on *occupation* of property; the Act of 1945 changed the basis of *local* qualification to *residence or occupation*. The substantial influence of this change is seen from the rise in the proportion of the total population included in the local electorate from 51.8 per cent. and 52.3 per cent. in 1938 and 1939 respectively to 71.6 per cent. in 1946 and 68.8 in 1950, the latter proportions being virtually the same as those for Parliamentary electors.

Parliamentary Electorate per member

The 1939 Parliamentary electoral register was compiled for 509 geographical constituencies of which 498 were represented by 1 member each, 11 were

represented by 2 members each, the balance of the 528 members for England and Wales being elected for university constituencies, 3 with 2 members each and the remaining 2 with 1 member each. The need for a re-distribution of seats in some English constituencies, on the grounds of unequal representation, may be seen from Table XCV.

Table XCV.—Parliamentary Boroughs and County Constituencies with least and most Electors per member in 1939.

Constituency	Electorate per member in the constituency	
	With the lowest such value	With the highest such value
England		
Constituencies with 1 member ..	24,157	208,609
Constituencies with 2 members ..	19,011	61,655
Wales		
Constituencies with 1 member ..	27,984	82,512

As mentioned on page 170 the 1942 Committee on Electoral Machinery made recommendations on the machinery which should be established for redistribution of seats. In 1944 a Speaker's Conference on Electoral Reform and Redistribution of Seats advised, among other things, on the principles by which the proposed boundary commissions should be guided and effect was given to the Conference's recommendations in the House of Commons (Redistribution of Seats) Act, 1944. This Act set up permanent boundary commissions with the primary function of performing the longer term and major task of a full distribution, but the Commissioners for England were required first to carry out a temporary re-distribution in the constituencies with the most severe under-representation. The twenty single-member constituencies, named in the Act, with electorates in 1939 exceeding 100,000 were to be divided, seventeen of these with electorates under 150,000 were each to be divided into two new single-member constituencies, one with between 150,000 and 200,000 electors into three and the remaining two with between 200,000 and 250,000 electors into four.

The improvement effected by this temporary measure may be judged in two ways. The largest single-member constituency in England before the re-distribution had an electorate of 208,609; the constituency which became the largest after the re-distribution had only 97,603. Alternatively it may be seen in Table XCVI that the average size of the constituencies concerned in the re-distribution was reduced from 126,480 to the more normal average size of 56,213.

The division of these 20 single-member constituencies into 45 similar constituencies raised, by 25, the number of geographical constituencies and the number of members they returned, which had been 509 and 520 respectively in 1939. Thus the new division of England and Wales, employed in Table U for the years 1945-1947, consisted of 534 geographical constituencies, of which 11 were represented by 2 members each, and 5 university constituencies, 3 of which were represented by 2 members each; making in all, 539 constituencies and 553 members.

The House of Commons (Re-distribution of Seats) Act, 1949 which consolidated the Act of 1944 and the further Act of 1947, provided for permanent Boundary Commissions (one for each of England, Wales, Scotland and N. Ireland) whose duty it was to keep parliamentary representation under constant

Table XCVI.—Average size of Constituencies per member before and after Temporary Re-distribution under the House of Commons (Re-distribution of Seats) Act, 1944.

Parliamentary Boroughs and Counties*	Total Electorate (1939)	Total Number of Members	Average Electorate per Member
The Twenty divided constituencies	Before division	20	126,480
	After division	45	56,213
Other English constituencies:—			
With 1 member	23,036,352	443	52,001
With 2 members	1,000,213	22	45,464
Welsh constituencies	1,652,712	35	47,220

review and to make recommendations to the Secretary of State from time to time as to any re-distribution of seats which might seem to be desirable.

At the dissolution of Parliament prior to the General Election of February, 1950, the University constituencies and two-member constituencies ceased to exist, with the result that there were 542 constituencies with one member each. By the end of 1950, the average electorate per member in England and Wales was 55,732; the highest was 78,865 and the lowest 27,870.

Local Government Electorate per councillor

At the end of 1950 the numbers of electors per councillor in different areas were:—

	England	Wales and Monmouthshire
County Boroughs ..	7,745	8,394
Municipal Boroughs and Urban districts ..	3,448	2,268
Rural districts	3,341	14,239

* The twenty constituencies which were divided were all in England.

APPENDIX I

Table 1.—Estimated Total, Civilian and Home Populations by Sex and Age. England and Wales, 31st December, 1946 to 1950.

(Thousands)

Age Group	1946		1947		1948		1949			1950		
	Total	Civilian*	Total	Civilian*	Total	Civilian	Total	Civilian	Home	Total	Civilian	Home
MALES												
0-	1,734		1,845		1,897		1,896			1,913		
5-	1,431		1,458		1,484		1,549			1,590		
10-	1,398		1,407		1,428		1,437			1,436		
15-	1,480	1,180	1,467	1,103	1,441	1,117	1,429	1,146	1,343	1,412	1,145	1,355
20-	1,581	883	1,559	1,166	1,571	1,388	1,555	1,394	1,505	1,546	1,350	1,468
25-	1,609	1,483	1,660	1,534	1,754	1,671	1,754	1,679	1,731	1,667	1,592	1,638
30-	1,664	1,595	1,600	1,533	1,524	1,478	1,491	1,449	1,478	1,557	1,508	1,539
35-	1,718	1,668	1,717	1,663	1,715	1,676	1,711	1,676	1,701	1,688	1,652	1,676
40-	1,620	1,583	1,643	1,613	1,669	1,650	1,687	1,669	1,682	1,695	1,676	1,689
45-	1,390	1,364	1,459	1,437	1,481	1,470	1,513	1,503	1,510	1,549	1,541	1,547
50-	1,182	1,173	1,197	1,190	1,232	1,231	1,274	1,273	1,274	1,314	1,311	1,313
55-	1,074	1,070	1,079	1,074	1,081	1,080	1,086	1,085	1,086	1,089	1,089	1,089
60-	931	929	936	933	942	942	948	948	948	956	956	956
65-	779	779	783	782	784	784	785	785	785	784	784	784
70-		581		586		594		596			599	
75-		337		349		362		371			378	
80-		151		154		163		169			174	
85 and over		60		61		65		69			71	
All Ages	20,720	19,399	20,960	19,888	21,187	20,480	21,320	20,694	21,130	21,418	20,765	21,215

FEMALES												
0-	1,650		1,754		1,802		1,805			1,823		
5-	1,383		1,404		1,425		1,485			1,521		
10-	1,354		1,360		1,380		1,390			1,387		
15-	1,450	1,440	1,434	1,421	1,411	1,402	1,400	1,393	1,400	1,386	1,381	1,386
20-	1,591	1,549	1,527	1,509	1,530	1,517	1,518	1,508	1,516	1,508	1,499	1,506
25-	1,630	1,619	1,684	1,680	1,744	1,740	1,746	1,743	1,745	1,649	1,647	1,648
30-	1,696	1,694	1,613	1,611	1,535	1,533	1,497	1,496	1,497	1,566	1,565	1,566
35-	1,748	1,747	1,737	1,736	1,732	1,731	1,725	1,724	1,725	1,704	1,703	1,704
40-	1,663	1,663	1,678	1,678	1,692	1,691	1,706	1,705	1,706	1,713	1,712	1,713
45-		1,554		1,572		1,587		1,601			1,616	
50-		1,410		1,419		1,440		1,467			1,492	
55-		1,281		1,294		1,305		1,318			1,331	
60-		1,157		1,166		1,172		1,183			1,193	
65-		989		1,004		1,015		1,025			1,034	
70-		753		772		791		805			821	
75-		480		497		516		529			542	
80-		252		259		271		279			283	
85 and over		126		132		141		147			150	
All Ages	22,167	22,101	22,306	22,268	22,489	22,459	22,626	22,603	22,623	22,719	22,700	22,716

PERSONS												
All Ages	42,887	41,500	43,266	42,156	43,676	42,939	43,946	43,297	43,753	44,137	43,465	43,931

* Excluding merchant seamen at home and overseas.

APPENDIX I

Table 2.—Estimated Home Population by Sex and Age. England and Wales, Geographical Regions and Density Aggregates, 30th June, 1939.

(Thousands)

Area	All Ages	0-	5-	15-	25-	35-	45-	55-	65 and over
ENGLAND AND WALES	19,920	1,458	2,958	3,299	3,402	2,878	2,371	1,962	1,592
	21,540	1,403	2,909	3,303	3,525	3,194	2,784	2,294	2,128
Geographical Regions :									
South East	6,904	488	981	1,154	1,224	1,005	821	675	556
	7,699	466	954	1,177	1,300	1,155	1,008	834	805
Greater London	4,093	292	598	705	725	601	491	392	289
	4,635	279	585	757	801	704	604	481	424
Remainder of South East	2,811	196	383	449	499	404	330	283	267
	3,064	187	369	420	499	451	404	353	381
North	6,287	479	987	1,022	1,023	906	764	633	473
	6,863	463	983	1,065	1,098	1,016	892	736	610
North I	1,060	88	196	174	154	143	124	104	77
	1,148	85	194	190	176	163	140	112	88
North II	633	51	101	106	102	85	72	62	54
	668	49	100	103	105	93	82	71	65
North III	1,678	123	248	276	279	251	206	171	124
	1,792	119	245	279	291	273	234	191	160
North IV	2,916	217	442	466	488	427	362	296	218
	3,255	210	444	493	526	487	436	362	297
Midland	3,577	267	525	613	639	522	408	332	271
	3,706	258	519	586	618	549	461	371	344
Midland I	2,370	179	348	411	430	342	267	216	177
	2,443	173	345	389	407	357	301	242	229
Midland II	1,207	88	177	202	209	180	141	116	94
	1,263	85	174	197	211	192	160	129	115
East	918	65	134	153	151	126	105	93	91
	941	63	129	139	148	132	119	100	111
South West	1,005	68	139	154	170	144	123	105	102
	1,095	66	137	145	168	160	146	127	146
Wales	1,229	91	192	203	195	175	150	124	99
	1,236	87	187	191	193	182	158	126	112
Wales I	898	67	141	151	142	129	112	89	67
	884	64	140	142	140	130	113	85	70
Wales II	331	24	51	52	53	46	38	35	32
	352	23	47	49	53	52	45	41	42
Density Aggregates Outside Greater London :									
County Boroughs	6,097	469	963	1,017	1,003	862	731	598	454
	6,736	454	960	1,072	1,067	981	869	712	621
Other Urban Districts	6,068	433	875	981	1,044	894	730	607	504
	6,572	417	863	990	1,079	983	851	712	677
Rural Districts	3,662	264	522	596	630	521	419	365	345
	3,597	253	501	484	578	526	460	389	406

APPENDIX I

Table 3.—Estimated Home Population by Sex and Age. England and Wales, Geographical Regions and Density Aggregates 30th June, 1949.

(Thousands)

Area	All Ages	0-	5-	15-	25-	35-	45-	55-	65-	75 and over
ENGLAND AND WALES	21,050	1,898	2,952	2,858	3,223	3,377	2,747	2,027	1,376	592
	22,545	1,803	2,844	2,923	3,258	3,428	3,051	2,490	1,816	932
Geographical Regions :										
South East	7,142	636	960	949	1,113	1,191	932	690	463	208
	7,876	605	924	1,001	1,159	1,235	1,066	879	648	359
Greater London	3,963	355	509	481	657	701	537	385	240	98
	4,428	337	494	573	686	723	614	483	339	179
Remainder of South East	3,179	281	451	468	456	490	395	305	223	110
	3,448	268	430	428	473	512	452	396	309	180
North	6,543	600	947	865	989	1,036	870	641	429	166
	7,039	569	916	921	1,000	1,060	971	788	565	249
North I	1,116	104	167	161	169	168	142	105	72	28
	1,147	98	162	167	165	167	151	120	81	36
North II	680	62	103	106	101	101	83	62	43	19
	696	59	98	95	97	100	90	74	56	27
North III	1,730	158	244	218	265	279	236	172	114	44
	1,850	150	236	235	264	282	260	207	150	66
North IV	3,017	276	433	380	454	488	409	302	200	75
	3,346	262	420	424	474	511	470	387	278	120
Midland	3,939	368	567	528	629	639	508	358	240	102
	4,093	349	546	542	611	619	543	425	304	154
Midland I	2,615	245	381	353	424	425	332	234	156	65
	2,714	233	367	360	413	409	354	277	199	102
Midland II	1,324	123	186	175	205	214	176	124	84	37
	1,379	116	179	182	198	210	189	148	105	52
East	1,006	89	139	154	147	150	122	96	73	36
	1,010	84	133	134	140	145	128	111	85	50
South West	1,147	95	155	186	158	168	145	114	84	42
	1,213	91	147	149	160	176	164	144	112	70
Wales	1,273	110	184	176	187	193	170	128	87	38
	1,314	105	178	176	188	193	179	143	102	50
Wales I	916	81	133	125	136	140	123	93	60	25
	935	77	129	129	137	138	127	99	68	31
Wales II	357	29	51	51	51	53	47	35	27	13
	379	28	49	47	51	55	52	44	34	19
Density Aggregates outside Greater London :										
County Boroughs	6,257	592	904	807	981	992	823	604	397	157
	6,872	562	880	913	1,000	1,020	931	761	547	258
Urban Districts	6,637	600	960	874	981	1,051	876	646	452	197
	7,167	571	922	908	1,009	1,081	973	800	595	308
Rural Districts	4,193	351	579	696	604	633	511	392	287	140
	4,078	333	548	529	563	604	533	446	335	187

APPENDIX I

Table 4.—Projected Total Population of England and Wales, 1957 to 1992.

Projection Base and Assumptions: Base: December 1952 Estimate of Total Population of England and Wales (i.e. including British Armed Forces overseas but excluding Allied Forces in this country). Mortality: Death Rates declining over the next 40 years to between 30 and 40 per cent. of the 1946-50 rates at ages under 35, with a diminishing scale of decline at higher ages leading to death rates between 70 and 80 per cent. of the 1946-50 rates at ages over 75. Natality: Annual births diminishing to 600,000 in 1961, and by a further 1,000 each year thereafter, yielding replacement rates (E.R.R.) of about 95 per cent. of a full standard in 1961 and about 94 per cent. in 1991. (M/F ratio 1.06.) Migration: Nil.

Projections involving children yet unborn are shown above the dotted line.

(Figures in thousands)

Base Estimate 31st Dec., 1952		Age	Projections to 31st December											
Males	Females		1957		1962		1967		1972		1982		1992	
1,758	1,674	0-	1,622	1,540	1,538	1,457	1,505	1,426	1,494	1,415	1,471	1,393	1,448	1,371
1,812	1,732	5-	1,750	1,668	1,617	1,536	1,533	1,453	1,501	1,423	1,479	1,401	1,457	1,380
1,453	1,396	10-	1,807	1,729	1,748	1,666	1,615	1,534	1,531	1,452	1,488	1,410	1,466	1,389
1,400	1,390	15-	1,448	1,391	1,804	1,727	1,744	1,663	1,611	1,531	1,496	1,420	1,476	1,398
1,464	1,464	20-	1,392	1,384	1,442	1,388	1,796	1,720	1,737	1,658	1,523	1,446	1,482	1,405
1,562	1,564	25-	1,454	1,455	1,385	1,377	1,435	1,381	1,788	1,713	1,599	1,521	1,487	1,412
1,644	1,663	30-	1,551	1,554	1,446	1,447	1,377	1,370	1,427	1,375	1,721	1,645	1,512	1,436
1,540	1,586	35-	1,630	1,650	1,540	1,544	1,436	1,439	1,369	1,362	1,770	1,697	1,586	1,510
1,670	1,701	40-	1,521	1,570	1,612	1,636	1,524	1,531	1,422	1,428	1,407	1,359	1,701	1,629
1,610	1,651	45-	1,636	1,676	1,493	1,550	1,585	1,617	1,500	1,514	1,338	1,340	1,736	1,673
1,385	1,520	50-	1,554	1,614	1,586	1,643	1,450	1,521	1,542	1,588	1,368	1,391	1,361	1,328
1,126	1,361	55-	1,306	1,470	1,474	1,566	1,508	1,597	1,383	1,481	1,402	1,454	1,262	1,294
958	1,222	60-	1,023	1,289	1,197	1,399	1,358	1,494	1,395	1,527	1,376	1,488	1,238	1,314
784	1,055	65-	826	1,116	893	1,186	1,051	1,292	1,200	1,386	1,149	1,326	1,189	1,319
591	861	70-	623	905	667	968	727	1,035	864	1,134	1,037	1,261	1,052	1,252
380	586	75-	411	661	443	706	480	761	529	821	740	985	737	969
183	296	80-	218	381	243	440	266	476	293	519	399	632	504	730
68	145	85 and over	99	197	128	265	149	323	169	365	217	452	322	576
21,388	22,867	All Ages	21,871	23,250	22,256	23,501	22,539	23,633	22,755	23,692	22,980	23,621	23,016	23,385
Ages above the dotted line			1,622	1,540	3,155	2,993	4,653	4,413	6,137	5,821	9,056	8,591	11,914	11,301
Ages below the dotted line			20,249	21,710	19,101	20,508	17,886	19,220	16,618	17,871	13,924	15,030	11,102	12,084

Summary

Number	Per 1,000		Number	Per 1,000	Number	Per 1,000	Number	Per 1,000	Number	Per 1,000	Number	Per 1,000	Number	Per 1,000
44,255	1,000	TOTAL	45,121	1,000	45,757	1,000	46,172	1,000	46,447	1,000	46,601	1,000	46,401	1,000
9,825	222	M & F under 15	10,116	224	9,562	209	9,066	196	8,816	190	8,642	185	8,511	183
9,280	210	M 15-44	8,996	199	9,229	202	9,312	202	9,354	201	9,516	204	9,244	199
9,368	212	F 15-44	9,004	200	9,119	199	9,104	197	9,067	195	9,088	195	8,790	189
5,079	115	M 45-64	5,519	122	5,750	126	5,901	128	5,820	125	5,484	118	5,597	121
4,532	102	F 45-59	4,760	106	4,759	104	4,735	103	4,583	99	4,185	90	4,295	93
2,006	45	M 65 & over	2,177	48	2,374	52	2,673	58	3,055	66	3,542	76	3,804	82
4,165	94	F 60 & over	4,549	101	4,964	108	5,381	116	5,752	124	6,144	132	6,160	133

APPENDIX II

Table 1.—Population in thousands at ages 15-50, 1946-1950.

Note:—Male records prior to 1946 and Female records 1938-1945 were published on pages 161-163 of the Statistical Review, Text, Vol. II, Civil, 1940-1945. Female records prior to 1938 were published on pages 232 et seq. of the Text for 1938-1939.

(a) All Marital Conditions

(b) Married

(a) All Marital Conditions							Aggregates		(b) Married										Aggregates	
15-20	20-25	25-30	30-35	35-40	40-45	45-50	15-50	20-40	Year	15-20	20-25	25-30	30-35	35-40	40-45	45-50	15-50	20-40		
MALES							MALES													
1,514	1,607	1,599	1,677	1,719	1,608	1,362	11,086	6,602	1946	13	318	972	1,324	1,464	1,383	1,177	6,651	4,078		
1,471	1,567	1,633	1,631	1,715	1,629	1,425	11,071	6,546	1947	9	306	1,009	1,310	1,460	1,405	1,231	6,730	4,085		
1,458	1,574	1,721	1,559	1,715	1,658	1,464	11,149	6,569	1948	8	319	1,075	1,251	1,455	1,430	1,268	6,806	4,100		
1,436	1,558	1,781	1,477	1,712	1,680	1,498	11,142	6,528	1949	9	328	1,124	1,185	1,455	1,451	1,301	6,853	4,092		
1,419	1,545	1,697	1,530	1,704	1,692	1,531	11,118	6,476	1950	8	333	1,068	1,222	1,452	1,464	1,334	6,881	4,075		
FEMALES							FEMALES													
1,480	1,637	1,617	1,718	1,752	1,654	1,545	11,403	6,724	1946	52	713	1,126	1,375	1,397	1,297	1,177	7,137	4,611		
1,439	1,559	1,659	1,660	1,742	1,670	1,562	11,291	6,620	1947	48	693	1,185	1,332	1,405	1,311	1,191	7,165	4,615		
1,421	1,535	1,721	1,574	1,734	1,686	1,581	11,252	6,564	1948	54	701	1,256	1,270	1,415	1,333	1,207	7,236	4,642		
1,406	1,518	1,773	1,485	1,728	1,700	1,596	11,206	6,504	1949	57	709	1,305	1,222	1,421	1,351	1,225	7,290	4,657		
1,391	1,510	1,681	1,539	1,721	1,710	1,607	11,159	6,451	1950	56	714	1,280	1,252	1,421	1,370	1,237	7,330	4,667		

(c) Non-Married (Single, Widowed and Divorced)

(d) Proportion Married (1b ÷ 1a)

(c) Non-Married (Single, Widowed and Divorced)							Aggregates		(d) Proportion Married (1b ÷ 1a)										Aggregates	
15-20	20-25	25-30	30-35	35-40	40-45	45-50	15-50	20-40	Year	15-20	20-25	25-30	30-35	35-40	40-45	45-50	15-50	20-40		
MALES							MALES													
1,501	1,289	627	353	255	225	185	4,435	2,524	1946	·0086	·1979	·6079	·7895	·8517	·8601	·8642	·5999	·6177		
1,462	1,261	624	321	255	224	194	4,341	2,461	1947	·0061	·1953	·6179	·8031	·8513	·8625	·8639	·6079	·6240		
1,450	1,255	646	308	260	228	196	4,343	2,469	1948	·0055	·2027	·6246	·8024	·8484	·8625	·8661	·6105	·6241		
1,427	1,230	657	292	257	229	197	4,289	2,436	1949	·0063	·2105	·6311	·8023	·8499	·8637	·8685	·6151	·6268		
1,411	1,212	629	308	252	228	197	4,237	2,401	1950	·0056	·2155	·6293	·7987	·8521	·8652	·8713	·6189	·6292		
FEMALES							FEMALES													
1,428	924	491	343	355	357	368	4,266	2,113	1946	·0351	·4356	·6964	·8003	·7974	·7842	·7618	·6259	·6858		
1,391	866	474	328	337	359	371	4,126	2,005	1947	·0334	·4445	·7143	·8024	·8065	·7850	·7625	·6346	·6971		
1,367	834	465	304	319	353	374	4,016	1,922	1948	·0380	·4567	·7298	·8069	·8160	·7906	·7634	·6431	·7072		
1,349	809	468	263	307	349	371	3,916	1,847	1949	·0405	·4671	·7360	·8229	·8223	·7947	·7675	·6505	·7160		
1,335	796	401	287	300	340	370	3,829	1,784	1950	·0403	·4728	·7615	·8135	·8257	·8012	·7698	·6569	·7235		

APPENDIX II

Table 2.—Annual Marriages at ages under 50, 1946-1950. England and Wales.

Notes.—(i) See note at head of Table 1, page 181.
(ii) Not stated ages rateably distributed.

(a) Number of Marriages (in hundreds)

(b) Marriages per 1,000 Non-married at each age (2 a ÷ 1 c)

15-20	20-25	25-30	30-35	35-40	40-45	45-50	Aggregates		Year	15-20	20-25	25-30	30-35	35-40	40-45	45-50	Aggregates	
							15-50	20-40									15-50	20-40
MALES									MALES									
88.4	1,312.7	1,222.2	525.3	261.1	146.8	92.3	3,648.8	3,321.3	1946	5.9	101.8	194.9	148.8	102.4	65.2	49.9	82.3	131.6
84.1	1,365.4	1,264.5	541.8	286.2	162.2	99.6	3,803.8	3,457.9	1947	5.8	108.3	202.6	168.8	112.2	72.4	51.3	87.6	140.5
79.5	1,429.6	1,232.7	485.6	272.3	154.8	102.1	3,756.6	3,420.2	1948	5.5	113.9	190.8	157.7	104.7	67.9	52.1	86.5	138.5
83.5	1,415.5	1,144.1	419.8	243.9	143.8	97.0	3,547.6	3,223.3	1949	5.9	115.1	174.1	143.8	94.9	62.8	49.2	82.7	132.3
79.6	1,382.1	1,056.9	407.2	227.3	137.3	92.4	3,382.8	3,073.5	1950	5.6	114.0	168.0	132.2	90.2	60.2	46.9	79.8	128.0
FEMALES									FEMALES									
484.6	1,761.9	787.6	333.1	187.7	109.7	75.4	3,740.0	3,070.3	1946	33.9	190.7	160.4	97.1	52.9	30.7	20.5	87.7	145.3
511.8	1,798.4	842.3	351.5	201.0	115.9	76.6	3,897.5	3,193.2	1947	36.8	207.7	177.7	107.2	59.6	32.3	20.6	94.5	159.3
539.3	1,788.9	817.6	312.2	193.3	116.8	79.9	3,848.0	3,112.0	1948	39.5	214.5	175.8	102.7	60.6	33.1	21.4	95.8	161.9
545.8	1,723.5	737.7	263.1	175.1	109.8	78.0	3,633.0	2,899.4	1949	40.5	213.0	157.6	100.0	57.0	31.5	21.0	92.8	157.0
525.3	1,669.2	668.9	256.8	164.7	104.7	74.5	3,464.1	2,759.6	1950	39.3	209.7	166.8	89.5	54.9	30.8	20.1	90.5	154.7

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APPENDIX II

Table 3.—Estimated years of life spent within given age groups in the calendar years 1946–1950.
England and Wales.

(a) Non-married women.

(b) Married women at successive marriage durations.

Notes.— (i) Estimates for years 1938 to 1945 were published on pages 164–167 of the Statistical Review, Text, Vol. II, Civil, 1940–1945.
(ii) Durations shown in years, e.g., 1-, 2-, etc., should be read as strictly meaning 1½m.-1y. 1½m., 1y. 1½m.-2y. 1½m., etc.

(Figures in tens)

Age of Woman	Non-Married	MARRIED, the marriage duration being												
		All Durations	0-8½ months	8½-11½ months	1-year	2-years	3-years	4-years	5-years	6-years	7-years	8-years	9-years	10 years and over
1946														
15-19	142800	5200	2639	687	1448	360	65	1	—	—	—	—	—	—
20-24	92400	71300	13014	4805	16108	12378	10674	7995	4074	1768	414	69	1	—
25-29	49100	112600	5911	2287	8445	8287	10989	16138	18193	18858	10540	6349	3705	2898
30-34	34300	137500	2392	846	3079	3120	4041	6279	9704	15780	14110	14908	15585	47656
35-39	35500	139700	1311	446	1606	1610	1929	2599	3554	5161	5410	6550	8427	101097
40-44	35700	129700	785	274	992	980	1106	1394	1653	1969	1945	2191	2666	113745
45-49	36800	117700	534	188	694	684	765	857	935	1010	967	1006	1127	108933
15-44	389800	596000	26052	9345	31678	26735	28804	34406	37178	43536	32419	30067	30384	265396
15-49	426600	713700	26586	9533	32372	27419	29569	35263	38113	44546	33386	31073	31511	374329
1947														
15-19	139100	4800	2565	576	1248	357	53	1	—	—	—	—	—	—
20-24	86600	69300	12563	4265	16864	13500	9193	6794	4032	1543	474	71	1	—
25-29	47400	118500	6155	2298	10642	10566	10358	13233	17672	17414	15574	7626	3939	3023
30-34	32800	133200	2537	904	3779	3498	3547	4643	7302	11249	17862	15011	14726	48142
35-39	33700	140500	1446	506	2004	1760	1763	2137	2987	4233	6386	6667	8027	102584
40-44	35900	131100	839	294	1199	1060	1057	1214	1538	1854	2274	2276	2625	114870
45-49	37100	119100	555	197	797	734	709	795	922	1023	1118	1079	1140	110031
15-44	375500	597400	26105	8843	35736	30741	25971	28022	33531	36293	42570	31651	29318	268619
15-49	412600	716500	26660	9040	36533	31475	26680	28817	34453	37316	43688	32730	30458	378650
1948														
15-19	136700	5400	2789	650	1515	378	67	1	—	—	—	—	—	—
20-24	83400	70100	12893	4560	16670	14169	10129	6023	3631	1533	412	79	1	—
25-29	46500	125600	6354	2512	10711	12954	12891	12243	14690	17654	15272	11764	5052	3503
30-34	30400	127000	2470	953	3904	4217	3973	4005	5275	8362	12591	19170	14927	47153
35-39	31900	141500	1491	562	2233	2214	1948	1958	2421	3505	5100	7984	8213	103871
40-44	35300	133300	875	327	1306	1303	1153	1159	1339	1701	2119	2682	2732	116604
45-49	37400	120700	584	208	832	850	774	742	841	1006	1124	1255	1214	111270
15-44	364200	602900	26872	9564	36339	35235	30161	25389	27356	32755	35494	41679	30925	271131
15-49	401600	723600	27456	9772	37171	36085	30935	26139	28197	33761	36618	42934	32139	382401
1949														
15-19	134900	5700	2845	677	1630	477	70	1	—	—	—	—	—	—
20-24	80900	70900	12384	4475	17436	14357	10461	6588	3295	1426	409	68	1	—
25-29	46800	130500	5713	2341	11068	12786	15328	14836	13389	14886	15820	11874	7950	4509
30-34	26300	122200	2083	830	3934	4381	4892	4719	4691	6207	9810	14179	19688	46786
35-39	30700	142100	1331	522	2353	2480	2479	2197	2223	2800	4162	6231	9975	105347
40-44	34900	135100	822	313	1374	1430	1421	1261	1264	1464	1889	2420	3211	118231
45-49	37100	122500	572	211	869	890	905	818	799	905	1102	1251	1422	112756
15-44	354500	606500	25178	9158	37795	35911	34651	29602	24862	26783	32090	34772	40825	274873
15-49	391600	729000	25750	9369	38664	36801	35556	30420	25661	27688	33192	36023	42247	387629
1950														
15-19	133500	5600	2770	677	1572	491	90	—	—	—	—	—	—	—
20-24	79600	71400	12064	4383	16982	15041	10826	6685	3611	1,346	391	70	1	—
25-29	40100	128000	5165	2066	9883	12898	14699	16748	15408	13,035	12,985	11,787	7411	5915
30-34	28700	125200	1977	777	3628	4769	5405	6274	6169	6,087	8,044	12,589	16333	53148
35-39	30000	142100	1239	470	2097	2599	2760	2798	2509	2,545	3,250	4,952	7582	109299
40-44	34000	137000	781	294	1289	1508	1583	1566	1380	1,379	1,632	2,138	2820	120630
45-49	37000	123700	547	203	847	917	941	958	867	856	956	1,189	1385	114034
15-44	345900	609300	23996	8667	35451	37306	35363	34071	29077	24392	26302	31536	34147	288992
15-49	382900	733000	24543	8870	36298	38223	36304	35029	29944	25248	27258	32725	35532	403026

APPENDIX II

Table 3.—Supplement

Subdivision of Estimates shown in main table distinguishing separate Quarters of Marriage Durations under 2 years.

(Figures in tens)

Duration (months)				Age	Duration (months)			
0-2½	2½-5½	5½-8½	8½-11½		11½-14½	14½-17½	17½-20½	20½-23½
1946								
880	938	821	687	15-19	550	408	294	196
3695	4591	4728	4805	20-24	4611	4182	3763	3552
1622	2083	2206	2287	25-29	2283	2164	2017	1981
691	845	856	846	30-34	828	784	736	731
387	464	460	446	35-39	432	408	384	382
228	278	279	274	40-44	266	253	238	235
156	189	189	188	45-49	184	177	167	166
7503	9199	9350	9345	15-44	8970	8199	7432	7077
7659	9388	9539	9533	15-49	9154	8376	7599	7243
1947								
903	913	749	576	15-19	428	340	276	204
3723	4439	4401	4265	20-24	4183	4209	4243	4229
1734	2167	2254	2298	25-29	2400	2600	2765	2877
734	895	908	904	30-34	917	943	960	959
420	511	515	506	35-39	508	506	503	487
241	297	301	294	40-44	297	301	303	298
160	196	199	197	45-49	199	200	200	198
7755	9222	9128	8843	15-44	8733	8899	9050	9054
7915	9418	9327	9040	15-49	8932	9099	9250	9252
1948								
978	999	812	650	15-19	550	425	322	218
3779	4581	4533	4560	20-24	4415	4259	4114	3882
1738	2251	2365	2512	25-29	2523	2638	2748	2802
680	877	913	953	30-34	946	973	993	992
417	530	544	562	35-39	555	561	564	553
249	310	316	327	40-44	321	328	332	325
169	208	207	208	45-49	204	208	211	209
7841	9548	9483	9564	15-44	9310	9184	9073	8772
8010	9756	9690	9772	15-49	9514	9392	9284	8981
1949								
982	1011	852	677	15-19	585	457	345	243
3579	4358	4447	4475	20-24	4525	4443	4278	4190
1539	1996	2178	2341	25-29	2498	2709	2841	3020
567	731	785	830	30-34	887	975	1015	1057
370	466	495	522	35-39	546	584	601	622
231	288	303	313	40-44	326	341	347	360
163	201	208	211	45-49	213	217	218	221
7268	8850	9060	9158	15-44	9367	9509	9427	9492
7431	9051	9268	9369	15-49	9580	9726	9645	9713
1950								
950	983	837	677	15-19	557	435	341	239
3482	4233	4349	4383	20-24	4342	4266	4234	4140
1405	1807	1953	2066	25-29	2171	2377	2581	2754
544	691	742	777	30-34	807	867	943	1011
349	434	456	470	35-39	482	508	539	568
221	273	287	294	40-44	299	314	332	344
157	192	198	203	45-49	204	210	216	217
6951	8421	8624	8667	15-44	8658	8767	8970	9056
7108	8613	8822	8870	15-49	8862	8977	9186	9273

APPENDIX

Table 4.—Maternities by Legitimacy, 1946-1950, showing numbers of
 (a) Illegitimate Maternities by Mother's Age } England
 (b) Legitimate Maternities by Mother's Age and Marriage Duration combined } and
 Wales

Notes.— (i) Records for years 1938-1945 were published on pages 168-170 of the Statistical Review, Text, Vol. II, Civil, 1940-1945.
 (ii) "Not stated" cases have been distributed as in Table 7 of this Appendix.
 (iii) The few maternities to women over 45 years of age have been included in the 40-44 age group.
 (iv) Durations shown in years—e.g., 1-, 2-, etc., should be read as strictly meaning 11½m.-1y. 11½m., 1y. 11½m.-2y. 11½m., etc.

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Age of Woman	Illegitimate Maternities	LEGITIMATE MATERNITIES; the Marriage Duration being												
		All Durations	0-8½ months	8½-11½ months	1-year	2-years	3-years	4-years	5-years	6-years	7-years	8-years	9-years	10 years and over
1946														
15-19	7,200	18,074	9,138	3,344	4,493	910	175	14	—	—	—	—	—	—
20-24	18,162	179,462	21,839	24,188	47,920	28,620	23,567	18,327	9,509	4,265	1,021	182	24	—
25-29	14,085	236,696	8,047	12,066	25,597	18,614	21,932	32,476	37,241	38,691	19,450	11,188	6,119	5,275
30-34	8,768	196,578	2,863	3,947	8,239	6,235	7,312	10,871	16,353	26,326	22,285	20,496	19,478	52,173
35-39	5,115	113,338	1,275	1,345	3,080	2,337	2,591	3,262	4,404	6,371	6,487	6,834	8,026	67,326
40-44	1,808	33,475	326	260	711	525	624	649	780	887	813	826	974	26,100
15-44	55,138	777,623	43,488	45,150	90,040	57,241	56,201	65,599	68,287	76,540	50,056	39,526	34,621	150,874
1947														
15-19	5,626	22,544	11,992	3,825	5,360	1,165	193	9	—	—	—	—	—	—
20-24	14,666	215,095	29,892	28,496	61,151	37,317	23,673	18,070	10,646	4,158	1,401	245	46	—
25-29	12,780	270,971	11,815	14,880	36,566	25,821	23,444	30,060	38,457	35,694	29,701	12,572	6,553	5,408
30-34	7,850	189,611	3,862	4,732	11,092	7,310	6,766	8,550	12,613	18,567	26,987	20,866	18,092	50,174
35-39	4,744	111,635	1,664	1,637	4,158	2,641	2,335	2,786	3,650	4,905	7,151	7,018	7,633	66,057
40-44	1,825	34,157	408	305	931	602	532	643	715	834	1,006	941	966	26,274
15-44	47,491	844,013	59,633	53,875	119,258	74,856	56,943	60,118	66,081	64,158	66,246	41,642	33,290	147,913

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1948														
15-19	5,626	25,235	14,190	3,894	5,640	1,329	173	9	—	—	—	—	—	—
20-24	12,986	198,987	30,940	26,646	54,942	37,349	23,274	13,217	7,789	3,480	1,051	260	39	—
25-29	11,204	240,620	11,443	13,577	32,242	30,150	25,382	22,000	25,725	28,356	22,877	16,776	6,846	5,246
30-34	6,587	151,176	3,692	4,199	10,081	8,706	6,752	6,282	7,874	11,179	15,385	21,261	15,035	40,730
35-39	4,313	94,729	1,605	1,596	3,960	3,143	2,441	2,108	2,666	3,432	4,758	6,829	6,580	55,611
40-44	1,686	30,777	434	298	981	711	574	526	496	632	804	926	950	23,445
15-44	42,402	741,524	62,304	50,210	107,846	81,388	58,596	44,142	44,550	47,079	44,875	46,052	29,450	125,032
1949														
15-19	5,380	26,878	15,797	3,346	6,000	1,517	213	5	—	—	—	—	—	—
20-24	10,953	191,643	28,765	21,986	55,589	36,647	24,739	13,393	6,336	3,024	933	183	48	—
25-29	9,899	236,897	9,639	10,562	31,340	29,857	31,314	26,180	21,794	24,187	21,554	14,433	9,879	6,108
30-34	5,668	132,849	3,020	3,069	9,308	8,198	8,514	7,070	6,242	8,547	11,171	13,247	17,900	36,563
35-39	4,049	85,001	1,545	1,315	4,003	3,272	3,179	2,430	2,151	2,807	3,546	4,392	6,883	49,478
40-44	1,605	27,228	419	237	949	743	673	508	426	599	596	618	908	20,552
15-44	37,554	700,496	59,185	40,515	107,189	80,234	68,632	49,586	36,949	39,164	37,800	32,923	35,618	112,701
1950														
15-19	5,455	25,788	15,069	3,269	5,646	1,543	248	13	—	—	—	—	—	—
20-24	10,395	181,829	26,385	20,915	50,111	36,235	24,252	14,122	6,441	2,382	765	184	37	—
25-29	8,844	221,618	8,112	9,378	26,112	27,957	29,569	30,939	24,059	18,348	17,157	14,513	8,548	6,926
30-34	5,686	133,154	2,918	3,156	8,615	8,637	9,107	9,854	8,187	6,906	8,991	12,323	14,519	39,941
35-39	3,960	80,363	1,337	1,237	3,547	3,154	3,217	3,222	2,481	2,031	2,531	3,323	5,068	49,215
40-44	1,476	25,534	367	256	778	702	644	653	455	423	468	561	673	19,554
15-44	35,816	668,286	54,188	38,211	94,809	78,228	67,037	58,803	41,623	30,090	29,912	30,904	28,845	115,636

APPENDIX II

Table 4.—Supplement

Subdivision of Legitimate Maternities shown in main table distinguishing separate Quarters of Marriage Durations under 2 years.

Duration (months)				Age of Woman	Duration (months)			
0-2½	2½-5½	5½-8½	8½-11½		11½-14½	14½-17½	17½-20½	20½-23½
1946								
1,010	3,817	4,311	3,344	15-19	1,925	1,206	796	566
1,780	7,044	13,015	24,188	20-24	17,566	12,271	9,416	8,667
784	2,358	4,905	12,066	25-29	9,016	6,705	5,168	4,708
344	859	1,660	3,947	30-34	2,849	2,181	1,704	1,505
185	407	683	1,345	35-39	1,053	741	688	598
67	120	139	260	40-44	216	177	155	163
4,170	14,605	24,713	45,150	15-44	32,625	23,281	17,927	16,207
1947								
1,287	4,772	5,933	3,825	15-19	2,099	1,449	1,060	752
2,375	9,722	17,795	28,496	20-24	19,970	15,062	13,227	12,892
1,268	3,614	6,933	14,880	25-29	11,246	8,886	8,215	8,219
497	1,231	2,134	4,732	30-34	3,640	2,780	2,418	2,254
240	560	864	1,637	35-39	1,385	1,082	915	776
71	159	178	305	40-44	254	246	228	203
5,738	20,058	33,837	53,875	15-44	38,594	29,505	26,063	25,096
1948								
1,489	5,844	6,857	3,894	15-19	2,272	1,483	1,104	781
2,514	10,719	17,707	26,646	20-24	18,713	13,589	11,862	10,778
1,243	3,692	6,508	13,577	25-29	10,288	7,916	7,082	6,956
528	1,168	1,996	4,199	30-34	3,304	2,429	2,206	2,142
268	487	850	1,596	35-39	1,227	1,007	908	818
83	153	198	298	40-44	298	246	231	206
6,125	22,063	34,116	50,210	15-44	36,102	26,670	23,393	21,681
1949								
1,501	6,723	7,573	3,346	15-19	2,414	1,520	1,242	824
2,285	10,117	16,363	21,986	20-24	19,267	13,553	11,513	11,256
1,032	3,210	5,397	10,562	25-29	9,965	7,318	6,872	7,185
432	985	1,603	3,069	30-34	2,882	2,268	2,065	2,093
265	544	736	1,315	35-39	1,232	1,031	910	830
83	164	172	237	40-44	317	227	205	200
5,598	21,743	31,844	40,515	15-44	36,077	25,917	22,807	22,388
1950								
1,473	6,350	7,246	3,269	15-19	1,999	1,548	1,234	865
1,922	9,638	14,825	20,915	20-24	16,063	12,390	11,200	10,458
796	2,793	4,523	9,378	25-29	7,597	6,220	6,032	6,263
380	958	1,580	3,156	30-34	2,674	2,039	1,923	1,979
207	457	673	1,237	35-39	1,082	870	804	791
81	146	140	256	40-44	226	194	183	175
4,859	20,342	28,987	38,211	15-44	29,641	23,261	21,376	20,531

APPENDIX II

Table 5.—Maternity Rates (per year of exposure—see Table 3),
1946–1950 showing

England
and
Wales

(a) Illegitimate rates by Mother's age
(b) Legitimate rates by Mother's age and Marriage Duration combined.

Notes.—(i) Maternity Rates for years 1938–1945 were published on pages 172–4 of the Statistical Review, Text, Vol. II, Civil, 1940–1945.
(ii) See notes to Tables 3 and 4.

(iii) The table rates per year of exposure are the same as the rates per woman except where the marriage duration is less than a full year, in which case the rate per woman is the table rate multiplied by the fraction of the duration year involved.

Age of Woman	Illegitimate Maternity Rate	LEGITIMATE MATERNITY RATES, the Marriage Duration being												
		All Durations	0–8½ months	8½–11½ months	1–year	2–years	3–years	4–years	5–years	6–years	7–years	8–years	9–years	10 years and over
192														
1946														
15–19	·0050	·348	·346	·487	·310	·253	·271	—	—	—	—	—	—	—
20–24	·0197	·252	·168	·503	·297	·231	·221	·229	·233	·241	·247	·264	—	—
25–29	·0287	·210	·136	·528	·303	·224	·200	·201	·205	·205	·184	·176	·165	·182
30–34	·0256	·143	·120	·467	·268	·200	·181	·173	·169	·167	·158	·138	·125	·109
35–39	·0144	·081	·097	·302	·192	·145	·134	·126	·124	·123	·120	·104	·095	·067
40–44	·0051	·026	·042	·095	·072	·054	·056	·047	·047	·045	·042	·038	·037	·023
15–44	·0141	·131	·165	·479	·283	·213	·194	·189	·182	·175	·154	·132	·115	·057
1947														
15–19	·0040	·469	·468	·663	·430	·325	·368	—	—	—	—	—	—	—
20–24	·0169	·310	·238	·668	·363	·276	·258	·266	·264	·269	·296	·345	—	—
25–29	·0270	·228	·192	·647	·344	·245	·226	·227	·218	·205	·190	·165	·166	·179
30–34	·0239	·142	·152	·523	·294	·209	·191	·184	·173	·165	·151	·139	·123	·104
35–39	·0141	·079	·115	·324	·207	·150	·132	·130	·122	·116	·112	·105	·095	·064
40–44	·0051	·026	·049	·104	·078	·057	·050	·053	·046	·045	·044	·041	·037	·023
15–44	·0126	·141	·225	·604	·332	·242	·218	·213	·196	·176	·155	·132	·114	·055
193														
1948														
15–19	·0041	·468	·509	·599	·372	·352	·260	—	—	—	—	—	—	—
20–24	·0156	·284	·240	·584	·330	·264	·230	·219	·215	·227	·255	·329	—	—
25–29	·0241	·191	·180	·540	·301	·233	·197	·180	·175	·161	·150	·142	·136	·150
30–34	·0217	·119	·149	·441	·258	·206	·170	·157	·149	·134	·122	·111	·101	·086
35–39	·0135	·067	·108	·284	·177	·142	·125	·108	·110	·098	·093	·086	·080	·054
40–44	·0048	·023	·050	·091	·075	·055	·050	·045	·037	·037	·038	·035	·035	·020
15–44	·0116	·123	·229	·521	·295	·230	·193	·173	·162	·143	·126	·111	·096	·046
1949														
15–19	·0040	·472	·555	·494	·368	·317	·306	—	—	—	—	—	—	—
20–24	·0135	·270	·232	·491	·319	·255	·236	·203	·192	·212	·228	·269	—	—
25–29	·0212	·182	·169	·451	·283	·234	·204	·177	·162	·162	·136	·122	·125	·136
30–34	·0216	·109	·145	·370	·237	·187	·174	·150	·133	·138	·114	·093	·091	·078
35–39	·0132	·060	·116	·252	·170	·132	·128	·111	·097	·100	·085	·070	·069	·047
40–44	·0046	·020	·051	·076	·069	·052	·047	·040	·034	·041	·032	·026	·028	·017
15–44	·0106	·116	·232	·439	·283	·222	·197	·167	·148	·146	·118	·095	·087	·041
1950														
15–19	·0041	·461	·544	·483	·359	·314	·278	—	—	—	—	—	—	—
20–24	·0131	·255	·219	·477	·295	·241	·224	·211	·178	·177	·196	·263	—	—
25–29	·0221	·173	·157	·454	·265	·217	·201	·185	·156	·141	·132	·123	·115	·118
30–34	·0198	·106	·148	·406	·237	·181	·168	·157	·133	·113	·112	·098	·089	·075
35–39	·0132	·057	·108	·263	·169	·121	·117	·115	·099	·080	·078	·067	·067	·045
40–44	·0043	·019	·047	·087	·060	·047	·041	·042	·033	·031	·029	·026	·024	·016
15–44	·0104	·110	·223	·437	·266	·209	·189	·172	·143	·123	·114	·098	·084	·040

APPENDIX

Table 6.—Total Maternities achieved per 1,000 Women marrying under age 45 by successive cohorts of marriages by the end of successive durations of marriage.

Note.—(a) Each cohort associated with two calendar years represents the number of marriages of women exposed to risk at durations under one year in the second of the associated years.
 (b) The nominal age at marriage is more precisely the age at the time of exposure to risk in the first year of marriage. The actual age at marriage is approximately half a year less than the nominal age.

PART I. Total Maternities.

Original cohort of new marriages	Marriage Duration *										
	8½ mths.	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years
	Nominal age at Marriage : All ages under 45										
1937-38	187	285	527	711	852	999	1,138	1,275	1,384	1,511	1,620
1938-39	164	256	487	656	825	978	1,132	1,254	1,404	1,531	1,620
1939-40	117	199	409	597	762	922	1,050	1,222	1,374	1,481	1,565
1940-41	109	188	411	592	762	898	1,077	1,249	1,372	1,463	1,544
1941-42	110	189	421	610	760	947	1,139	1,278	1,392	1,486	
1942-43	124	211	473	651	843	1,053	1,211	1,352	1,462		
1943-44	134	240	492	704	919	1,089	1,233	1,352			
1944-45	113	226	509	750	941	1,105	1,244				
1945-46	117	237	569	798	993	1,162					
1946-47	159	310	605	826	1,012						
1947-48	162	292	574	781							
1948-49	164	274	540								
1949-50	158	267									
	Under 25										
1937-38	261	365	629	855	1,022	1,194	1,354	1,514	1,642	1,798	1,938
1938-39	225	324	586	785	978	1,150	1,325	1,465	1,643	1,796	1,908
1939-40	151	239	478	688	869	1,048	1,192	1,395	1,576	1,704	1,807
1940-41	134	218	468	666	854	1,006	1,216	1,422	1,568	1,679	1,778
1941-42	129	213	466	672	838	1,051	1,277	1,440	1,574	1,688	
1942-43	143	234	520	715	927	1,169	1,352	1,517	1,647		
1943-44	154	266	540	771	1,016	1,211	1,380	1,522			
1944-45	132	252	551	821	1,036	1,222	1,382				
1945-46	140	265	630	887	1,108	1,302					
1946-47	196	363	692	944	1,159						
1947-48	204	350	667	904							
1948-49	208	331	628								
1949-50	198	318									
	25-29										
1937-38	112	208	437	607	735	876	1,013	1,148	1,255	1,376	1,478
1938-39	98	189	409	559	723	878	1,032	1,151	1,299	1,422	1,500
1939-40	74	154	341	521	685	841	968	1,129	1,270	1,370	1,448
1940-41	77	155	362	541	708	842	1,011	1,167	1,280	1,364	1,438
1941-42	81	159	379	567	713	892	1,065	1,194	1,301	1,382	
1942-43	96	184	440	613	805	1,000	1,149	1,281	1,380		
1943-44	103	218	464	677	882	1,040	1,173	1,278			
1944-45	86	206	507	738	922	1,082	1,215				
1945-46	96	228	565	791	984	1,150					
1946-47	136	298	595	814	1,000						
1947-48	127	262	542	748							
1948-49	120	233	494								
1949-50	111	225									

* The durations identified are more precisely 8½ months, 1 yr. 11½ months. 2 yrs. 11½ months etc.

PART II. Total Maternities excluding the effect of pre-nuptial conception from the Maternities of the first year of marriage in respect of each cohort.

Original cohort of new marriages	Marriage Duration *										
	8½ mths.	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years
	Nominal age at Marriage : All ages under 45										
1937-38	121	363	547	688	835	974	1,111	1,220	1,347	1,456	
1938-39	110	341	510	679	832	986	1,108	1,258	1,385	1,477	
1939-40	93	303	491	656	816	944	1,116	1,268	1,375	1,459	
1940-41	89	312	493	663	799	978	1,150	1,273	1,364	1,445	
1941-42	89	321	510	660	847	1,039	1,178	1,292	1,386		
1942-43	99	361	539	731	941	1,099	1,240	1,350			
1943-44	122	374	586	801	971	1,115	1,234				
1944-45	127	410	651	842	1,006	1,145					
1945-46	136	468	697	892	1,061						
1946-47	180	475	696	882							
1947-48	155	437	644								
1948-49	132	398									
1949-50	129										
	Under 25										
1937-38	141	415	631	798	970	1,130	1,290	1,418	1,574	1,709	
1938-39	128	390	589	782	954	1,129	1,269	1,447	1,600	1,712	
1939-40	104	343	553	734	913	1,057	1,260	1,441	1,569	1,672	
1940-41	97	347	545	733	885	1,095	1,301	1,447	1,558	1,657	
1941-42	96	349	555	721	934	1,160	1,323	1,457	1,571		
1942-43	106	392	587	799	1,041	1,224	1,389	1,519			
1943-44	132	406	637	882	1,077	1,246	1,388				
1944-45	138	437	707	922	1,108	1,268					
1945-46	145	510	767	988	1,182						
1946-47	208	537	789	1,004							
1947-48	183	500	737								
1948-49	155	452									
1949-50	150										
	25-29										
1937-38	108	337	507	635	776	913	1,048	1,155	1,276	1,379	
1938-39	101	321	471	635	790	944	1,063	1,211	1,334	1,420	
1939-40	86	273	453	617	773	900	1,061	1,202	1,302	1,378	
1940-41	85	292	471	638	772	941	1,097	1,210	1,294	1,367	
1941-42	85	305	493	639	818	991	1,120	1,227	1,308		
1942-43	97	353	526	718	913	1,062	1,194	1,293			
1943-44	128	374	587	792	950	1,083	1,188				
1944-45	131	432	663	847	1,007	1,140					
1945-46	146	483	709	902	1,068						
1946-47	188	485	704	890							
1947-48	155	435	641								
1948-49	128	389									
1949-50	128										

APPENDIX Table 6 (contd.)

PART I—(continued)

(See notes on pages 196 and 197)

Original cohort of new marriages	Marriage Duration *										Original cohort of new marriages	
	8½ mths.	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years		10 years
Nominal age at Marriage :												
30-34												
1937-38	101	204	416	559	668	778	886	986	1,060	1,128	1,177	1937-38
1938-39	92	184	377	515	648	775	896	990	1,079	1,149	1,198	1938-39
1939-40	71	153	330	482	621	753	855	965	1,051	1,108	1,148	1939-40
1940-41	76	156	347	502	645	761	885	987	1,060	1,104	1,138	1940-41
1941-42	80	157	359	519	649	787	909	996	1,059	1,101	1,131	1941-42
1942-43	89	175	397	550	705	847	957	1,045	1,102			1942-43
1943-44	101	203	420	607	765	891	988	1,060				1943-44
1944-45	85	193	452	642	791	913	1,012					1944-45
1945-46	85	202	481	668	818	945						1945-46
1946-47	108	239	486	655	793							1946-47
1947-48	106	216	444	603								1947-48
1948-49	103	196	420									1948-49
1949-50	105	207										1949-50
35-39												
1937-38	85	156	295	387	453	506	545	573	591	601	608	1937-38
1938-39	74	140	269	357	436	493	531	559	578	590	598	1938-39
1939-40	64	122	251	344	420	479	518	546	566	575	583	1939-40
1940-41	64	127	262	359	436	490	535	565	583	589	597	1940-41
1941-42	67	124	263	362	434	495	540	565	579	585	591	1941-42
1942-43	74	138	293	392	480	549	585	614	628			1942-43
1943-44	78	144	296	402	485	540	572	591				1943-44
1944-45	69	142	311	427	504	557	589					1944-45
1945-46	69	145	327	433	511	564						1945-46
1946-47	81	162	318	417	489							1946-47
1947-48	77	148	299	388								1947-48
1948-49	82	145	293									1948-49
1949-50	77	143										1949-50
40-44												
1937-38	40	68	111	133	145	150	153	154	155	155	155	1937-38
1938-39	38	64	103	126	138	144	147	149	150	150	150	1938-39
1939-40	28	50	89	111	124	131	134	135	137	137	137	1939-40
1940-41	33	56	98	124	138	145	148	150	151	151	151	1940-41
1941-42	31	51	95	119	132	137	140	142	143	144	144	1941-42
1942-43	43	66	110	134	149	158	160	162	163			1942-43
1943-44	44	64	112	135	150	157	160	162				1943-44
1944-45	34	60	108	136	150	156	158					1944-45
1945-46	30	54	106	130	143	149						1945-46
1946-47	35	61	112	137	147							1946-47
1947-48	35	58	105	128								1947-48
1948-49	36	55	96									1948-49
1949-50	33	55										1949-50

PART II—(continued)

(See notes on pages 196 and 197)

Original cohort of new marriages	Marriage Duration *										Original cohort of new marriages	
	8½ mths.	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years		10 years
Nominal age at Marriage :												
30-34												
1937-38	115	327	470	579	689	797	897	971	1,039	1,088		1937-38
1938-39	101	294	432	565	692	813	907	996	1,066	1,109		1938-39
1939-40	88	265	417	556	688	790	900	986	1,043	1,080		1939-40
1940-41	87	278	433	576	692	816	918	991	1,035	1,067		1940-41
1941-42	84	286	446	576	714	836	923	986	1,028			1941-42
1942-43	94	316	469	624	766	876	964	1,021				1942-43
1943-44	113	330	517	675	801	898	970					1943-44
1944-45	118	377	567	716	838	937						1944-45
1945-46	128	407	594	744	871							1945-46
1946-47	147	394	563	701								1946-47
1947-48	123	351	510									1947-48
1948-49	104	328										1948-49
1949-50	114											1949-50
35-39												
1937-38	78	217	309	375	428	467	495	513	523	528		1937-38
1938-39	71	200	288	367	424	462	490	509	521	528		1938-39
1939-40	62	191	284	360	419	458	486	506	515	520		1939-40
1940-41	67	202	299	376	430	475	505	523	529	532		1940-41
1941-42	61	200	299	371	432	477	502	516	522			1941-42
1942-43	69	224	323	411	480	516	545	559				1942-43
1943-44	72	224	330	413	468	500	519					1943-44
1944-45	78	247	363	440	493	525						1944-45
1945-46	82	264	370	448	501							1945-46
1946-47	88	244	343	415								1946-47
1947-48	77	228	317									1947-48
1948-49	69	217										1948-49
1949-50	72											1949-50
40-44												
1937-38	29	72	94	106	111	114	115	116	116	116		1937-38
1938-39	27	66	89	101	107	110	112	113	113	113		1938-39
1939-40	23	62	84	97	104	107	108	110	110	110		1939-40
1940-41	24	66	92	106	113	116	118	119	119	119		1940-41
1941-42	21	65	89	102	107	110	112	113	114			1941-42
1942-43	24	68	92	107	116	118	120	121				1942-43
1943-44	21	69	92	107	114	117	119					1943-44
1944-45	27	75	103	117	123	125						1944-45
1945-46	25	77	101	114	120							1945-46
1946-47	27	78	103	113								1946-47
1947-48	24	71	94									1947-48
1948-49	20	61										1948-49
1949-50	23											1949-50

APPENDIX II

Table 7.—Legitimate Maternities of Years 1946-1950 classified by Mother's Age, Duration of Marriage and Number of Previous Children. England and Wales.

Note:—(i) Tables for years 1938-1945 were published on pages 176 *et seq.* of the Statistical Review, Civil Text, England and Wales, 1940-1945.

(ii) Tables for years 1946-1950 already published as SS in Parts II of the Statistical Review of the several years but here adjusted by an ordered distribution of all Not Stated records. The adjusted figures by age, for all durations and numbers of previous children combined, differ to a slight and unimportant extent from those shown in Table EE of the successive Parts II.

(iii) Statements of numbers of children which were incompatible with the duration of marriage were not questioned and are recorded without modification. Such children, if incorrectly stated, were presumably illegitimate or offspring of a previous marriage.

1946

Marriage duration	LEGITIMATE MATERNITIES: the number of previous children (surviving, dead or stillborn) by present husband being													
	Total	0	1	2	3	4	5	6	7	8	9	10-14	15 & over	
Mothers of all Ages														
All durations	777,623	334,813	232,048	105,173	47,077	24,031	13,490	8,010	5,112	3,342	1,950	2,495	82	
0-8 mths.	43,488	42,955	446	55	16	10	4	1	1	—	—	—	—	
9-11 "	45,150	44,578	532	28	6	2	—	2	—	—	—	—	—	
0- yrs.	88,638	87,533	978	83	22	12	4	3	1	2	—	—	—	
1- "	90,040	81,372	8,303	324	24	9	3	2	2	—	1	—	—	
2- "	57,241	34,177	21,312	1,620	96	27	3	3	1	—	—	1	—	
3- "	56,201	26,186	25,071	4,508	364	52	14	4	1	—	—	—	—	
4- "	65,599	27,927	28,622	7,696	1,185	133	25	8	—	1	1	—	—	
5- "	68,287	24,893	29,978	10,524	2,411	395	64	12	6	2	—	2	—	
6- "	76,540	22,173	34,795	14,282	4,079	959	202	27	16	5	1	1	—	
7- "	50,056	9,831	21,920	11,862	4,379	1,495	415	106	33	4	4	7	—	
8- "	39,526	6,272	15,652	10,287	4,650	1,778	635	195	45	8	2	2	—	
9- "	34,621	4,748	12,675	9,235	4,645	2,062	813	308	91	29	7	7	1	
10- "	103,110	8,533	27,794	26,879	17,490	10,329	5,974	3,281	1,646	762	283	138	1	
15- "	37,800	1,065	4,537	6,962	6,620	5,542	4,223	3,024	2,300	1,619	941	953	14	
20- "	9,018	100	393	870	1,061	1,155	1,031	944	887	818	615	1,098	46	
25- "	926	3	16	38	51	83	83	91	81	87	94	279	20	
30 & over	20	—	2	3	—	—	1	2	2	3	1	6	—	
Mothers aged 16-19														
All durations	18,074	16,508	1,466	94	5	1	—	—	—	—	—	—	—	
0-8 mths.	9,138	9,100	37	1	—	—	—	—	—	—	—	—	—	
9-11 "	3,344	3,311	33	—	—	—	—	—	—	—	—	—	—	
0- yrs.	12,482	12,411	70	1	—	—	—	—	—	—	—	—	—	
1- "	4,493	3,712	768	13	—	—	—	—	—	—	—	—	—	
2- "	910	344	520	44	2	—	—	—	—	—	—	—	—	
3- "	175	39	97	35	3	1	—	—	—	—	—	—	—	
4- "	14	2	11	1	—	—	—	—	—	—	—	—	—	
Mothers aged 20-24														
All durations	179,462	125,750	42,180	9,285	1,794	377	58	8	8	—	—	2	—	
0-8 mths.	21,839	21,670	163	5	1	—	—	—	—	—	—	—	—	
9-11 "	24,188	23,929	250	9	—	—	—	—	—	—	—	—	—	
0- yrs.	46,027	45,599	413	14	1	—	—	—	—	—	—	—	—	
1- "	47,920	43,268	4,535	110	7	—	—	—	—	—	—	—	—	
2- "	28,620	16,609	11,177	805	25	4	—	—	—	—	—	—	—	
3- "	23,567	10,258	11,101	2,074	124	10	—	—	—	—	—	—	—	
4- "	18,327	6,765	8,439	2,680	409	30	4	—	—	—	—	—	—	
5- "	9,509	2,463	4,350	2,033	557	97	7	—	2	—	—	—	—	
6- "	4,265	713	1,785	1,176	443	125	17	2	3	—	—	1	—	
7- "	1,021	59	329	332	185	88	20	5	2	—	—	1	—	
8- "	182	12	47	53	39	19	10	1	1	—	—	—	—	
9- "	24	4	4	8	4	4	—	—	—	—	—	—	—	

Table 7.—1946 (contd.)

(See notes on first page of table)

Marriage duration	LEGITIMATE MATERNITIES: the number of previous children (surviving, dead or stillborn) by present husband being													
	Total	0	1	2	3	4	5	6	7	8	9	10-14	15 & over	
Mothers aged 25-29														
All durations	236,696	109,829	80,055	30,427	10,612	3,727	1,367	462	160	44	11	2	—	
0-8 mths.	8,047	7,893	128	20	5	1	—	—	—	—	—	—	—	
9-11 "	12,066	11,911	144	8	2	—	—	1	—	—	—	—	—	
0- yrs.	20,113	19,804	272	28	7	1	—	1	—	—	—	—	—	
1- "	25,597	23,485	1,996	106	6	2	—	2	—	—	—	—	—	
2- "	18,614	11,683	6,437	455	33	6	—	—	—	—	—	—	—	
3- "	21,932	10,923	9,311	1,555	125	15	3	—	—	—	—	—	—	
4- "	32,476	14,775	13,782	3,385	487	40	6	1	—	—	—	—	—	
5- "	37,241	14,134	16,200	5,525	1,177	174	27	4	—	—	—	—	—	
6- "	38,691	10,674	17,729	7,469	2,209	508	90	9	1	2	—	—	—	
7- "	19,450	2,896	8,073	5,229	2,182	814	203	48	5	—	—	—	—	
8- "	11,188	914	3,753	3,397	1,939	778	307	84	15	1	—	—	—	
9- "	6,119	354	1,599	1,832	1,252	629	305	106	35	7	—	—	—	
10-14 "	5,275	187	903	1,446	1,195	760	424	209	104	34	11	2	—	
Mothers aged 30-34														
All durations	196,578	56,443	69,354	36,488	16,967	8,572	4,486	2,297	1,098	525	218	129	1	
0-8 mths.	2,863	2,763	75	18	3	2	—	1	—	—	—	—	—	
9-11 "	3,947	3,863	74	7	3	—	—	—	—	—	—	—	—	
0- yrs.	6,810	6,626	149	25	6	2	—	1	1	—	—	—	—	
1- "	8,239	7,486	678	63	5	3	—	1	2	—	1	—	—	
2- "	6,235	3,806	2,181	215	21	10	—	1	1	—	—	—	—	
3- "	7,312	3,474	3,172	578	70	12	5	—	1	—	—	—	—	
4- "	10,871	4,847	4,679	1,129	175	32	8	1	—	—	—	—	—	
5- "	16,353	6,461	7,221	2,132	447	70	16	5	—	1	—	—	—	
6- "	26,326	8,534	12,147	4,313	1,039	222	61	6	4	—	—	—	—	
7- "	22,285	5,123	10,360	4,757	1,440	429	133	30	11	—	2	—	—	
8- "	20,496	3,773	8,704	5,041	1,941	729	218	71	18	1	—	—	—	
9- "	19,478	2,776	7,526	5,110	2,451	1,050	367	140	41	12	3	2	—	
10- "	48,618	3,453	12,195	12,571	8,747	5,393	3,209	1,704	809	360	124	52	1	
15-19 "	3,555	84	342	554	625	620	469	337	210	151	88	75	—	
Mothers aged 35-39														
All durations	113,338	21,941	32,852	23,224	13,315	8,084	5,205	3,301	2,280	1,485	815	821	15	
0-8 mths.	1,275	1,216	36	10	6	4	3	—	—	—	—	—	—	
9-11 "	1,345	1,315	24	3	1	—	—	1	—	1	—	—	—	
0- yrs.	2,620	2,531	60	13	7	4	3	1	—	1	—	—	—	
1- "	3,080	2,769	276	25	6	3	1	—	—	—	—	—	—	
2- "	2,337	1,409	828	82	8	5	3	1	—	1	—	—	—	
3- "	2,591	1,204	1,131	206	35	10	2	3	—	—	—	—	—	
4- "	3,262	1,292	1,426	420	90	24	5	3	—	1	—	1	—	
5- "	4,404	1,542	1,895	713	188	47	13	1	3	1	—	1	—	
6- "	6,371	1,983	2,789	1,151	331	78	26	6	4	2	1	—	—	
7- "	6,487	1,572	2,840	1,376	475	140	50	18	9	3	1	3	—	
8- "	6,834	1,415	2,856	1,605	628	201	83	33	7	3	2	1	—	
9- "	8,026	1,454	3,224	2,047	791	325	119	42	10	6	4	4	—	
10- "	42,353	4,169	12,738	11,165	6,465	3,566	2,015	1,138	602	313	117	65	—	
15- "	23,221	570	2,681	4,229	4,077	3,455	2,688	1,888	1,468	1,000	581	574	10	
20-24 "	1,752	31	108	192	214	226	197	167	177	154	109	172	5	
Mothers aged 40 and over														
All durations	33,475	4,342	6,141	5,655	4,384	3,270	2,374	1,942	1,566	1,288	906	1,541	66	
0-8 mths.	326	313	7	1	1	3	1	—	—	—	—	—	—	
9-11 "	260	249	7	1	—	2	—	—	—	1	—	—	—	
0- yrs.	586	562	14	2	1	5	1	—	1	—	—			

Table 7.—1947

(See notes on first page of table)

Marriage duration	LEGITIMATE MATERNITIES: the number of previous children (surviving, dead or stillborn) by present husband being													
	Total	0	1	2	3	4	5	6	7	8	9	10-14	15 & over	
Mothers of All Ages														
All durations	844,013	383,599	246,441	109,756	47,376	23,522	13,169	7,817	5,017	2,983	1,862	2,390	81	
0-8 mths.	59,633	58,881	624	90	22	5	5	2	2	1	—	1	—	
9-11 "	53,875	53,156	643	60	12	3	1	—	—	—	—	—	—	
0- yrs.	113,508	112,037	1,267	150	34	8	6	2	2	1	—	1	—	
1- "	119,258	106,352	12,316	526	41	13	6	1	2	—	—	1	—	
2- "	74,856	44,027	28,544	2,108	136	18	8	5	2	1	5	2	—	
3- "	56,943	24,379	26,964	5,024	504	50	10	4	4	4	—	—	—	
4- "	60,118	22,994	27,578	8,167	1,207	139	16	8	7	1	1	—	—	
5- "	66,081	22,151	30,052	10,968	2,423	408	54	15	6	4	—	—	—	
6- "	64,158	17,710	29,243	12,642	3,536	839	152	24	11	1	—	—	—	
7- "	66,246	14,023	29,676	15,201	5,258	1,552	405	102	23	5	—	1	—	
8- "	41,642	6,153	16,706	11,331	4,785	1,849	578	188	35	10	2	5	—	
9- "	33,290	4,198	12,023	9,119	4,619	2,057	839	301	102	25	3	4	—	
10- "	101,751	8,437	27,407	26,811	17,243	10,142	5,835	3,148	1,604	680	300	141	3	
15- "	36,437	1,021	4,236	6,809	6,430	5,227	4,125	2,982	2,250	1,459	941	947	10	
20- "	8,824	111	405	846	1,099	1,155	1,048	953	875	719	533	1,043	37	
25- "	891	6	24	54	61	65	87	81	92	72	76	242	31	
30 & over	10	—	—	—	—	—	—	3	2	1	1	3	—	
Mothers aged 16-19														
All durations	22,544	20,569	1,863	109	3	—	—	—	—	—	—	—	—	
0-8 mths.	11,992	11,955	36	1	—	—	—	—	—	—	—	—	—	
9-11 "	3,825	3,778	46	1	—	—	—	—	—	—	—	—	—	
0- yrs.	15,817	15,733	82	2	—	—	—	—	—	—	—	—	—	
1- "	5,360	4,362	982	16	—	—	—	—	—	—	—	—	—	
2- "	1,165	433	679	52	1	—	—	—	—	—	—	—	—	
3- "	193	40	114	37	2	—	—	—	—	—	—	—	—	
4- "	9	1	6	2	—	—	—	—	—	—	—	—	—	
Mothers aged 20-24														
All durations	215,095	152,697	49,420	10,604	1,948	356	49	16	5	—	—	—	—	
0-8 mths.	29,892	29,637	238	15	2	—	—	—	—	—	—	—	—	
9-11 "	28,496	28,201	277	18	—	—	—	—	—	—	—	—	—	
0- yrs.	58,388	57,838	515	33	2	—	—	—	—	—	—	—	—	
1- "	61,151	54,292	6,625	230	3	1	—	—	—	—	—	—	—	
2- "	37,317	21,522	14,713	1,047	35	—	—	—	—	—	—	—	—	
3- "	23,673	9,489	11,653	2,336	184	10	1	—	—	—	—	—	—	
4- "	18,070	6,037	8,687	2,880	429	37	—	—	—	—	—	—	—	
5- "	10,646	2,673	4,888	2,368	613	87	13	4	—	—	—	—	—	
6- "	4,158	680	1,757	1,190	399	108	18	4	2	—	—	—	—	
7- "	1,401	147	493	426	224	86	16	7	2	—	—	—	—	
8- "	245	17	66	76	56	27	1	1	1	—	—	—	—	
9- "	46	2	23	18	3	—	—	—	—	—	—	—	—	
Mothers aged 25-29														
All durations	270,971	127,266	91,680	34,477	11,425	4,071	1,383	478	149	32	8	2	—	
0-8 mths.	11,815	11,559	207	35	11	3	—	—	—	—	—	—	—	
9-11 "	14,880	14,647	208	22	2	1	—	—	—	—	—	—	—	
0- yrs.	26,695	26,206	415	57	13	4	—	—	—	—	—	—	—	
1- "	36,566	33,045	3,321	177	18	4	1	—	—	—	—	—	—	
2- "	25,821	15,769	9,336	671	41	3	—	1	—	—	—	—	—	
3- "	23,444	10,616	10,794	1,839	175	16	3	1	—	—	—	—	—	
4- "	30,060	12,200	13,566	3,711	521	55	6	1	—	—	—	—	—	
5- "	38,457	13,304	17,660	6,080	1,209	185	18	1	—	—	—	—	—	
6- "	35,694	9,439	16,539	7,216	1,957	457	73	10	2	1	—	—	—	
7- "	29,701	5,150	13,104	7,448	2,868	859	232	34	5	1	—	—	—	
8- "	12,572	1,007	4,298	3,905	2,084	905	289	75	6	2	—	1	—	
9- "	6,553	315	1,692	1,987	1,371	738	308	104	36	2	—	—	—	
10-14 "	5,408	215	955	1,386	1,168	845	453	251	100	26	8	1	—	

Table 7.—1947 (contd).

(See notes on first page of table)

Marriage duration	LEGITIMATE MATERNITIES: the number of previous children (surviving, dead or stillborn) by present husband being													
	Total	0	1	2	3	4	5	6	7	8	9	10-14	15 & over	
Mothers aged 30-34														
All durations	189,611	55,609	65,654	35,690	16,255	8,058	4,199	2,195	1,100	481	229	141	—	
0-8 mths.	3,862	3,729	99	22	5	2	4	—	—	1	—	—	—	
9-11 "	4,732	4,644	69	12	7	—	—	—	—	—	—	—	—	
0- yrs.	8,594	8,373	168	34	12	2	4	—	—	1	—	—	—	
1- "	11,092	10,047	969	60	10	3	3	—	—	—	—	1	—	
2- "	7,310	4,342	2,707	206	37	9	5	2	1	—	—	—	—	
3- "	6,766	3,034	3,081	533	100	13	2	1	—	2	—	—	—	
4- "	8,550	3,438	3,863	1,057	162	21	4	3	2	—	—	—	—	
5- "	12,613	4,672	5,668	1,775	396	84	10	6	1	1	—	—	—	
6- "	18,567	5,845	8,469	3,169	854	185	36	7	2	—	—	—	—	
7- "	26,987	6,621	12,661	5,563	1,583	414	104	35	4	2	—	—	—	
8- "	20,866	3,560	9,053	5,380	1,916	664	212	66	12	2	—	1	—	
9- "	18,092	2,422	6,981	4,891	2,310	911	376	144	41	13	2	1	—	
10- "	46,956	3,204	11,720	12,518	8,330	5,205	3,017	1,597	817	340	145	63	—	
15-19 "	3,218	51	314	504	545	547	426	334	220	120	82	75	—	
Mothers aged 35-39														
All durations	111,635	22,562	31,656	23,031	13,205	7,744	5,108	3,219	2,218	1,333	762	788	9	
0-8 mths.	1,664	1,607	35	16	3	—	1	—	—	—	—	—	—	
9-11 "	1,637	1,591	36	7	1	—	1	—	—	—	—	—	—	
0- yrs.	3,301	3,198	71	23	4	—	2	—	1	—	—	—	—	
1- "	4,158	3,756	351	36	8	—	5	—	—	—	—	—	—	
2- "	2,641	1,542	961	111	13	6	2	1	1	1	2	1	—	
3- "	2,335	962	1,089	231	37	7	4	1	3	1	—	—	—	
4- "	2,786	1,042	1,227	415	75	18	3	2	3	—	1	—	—	
5- "	3,650	1,233	1,569	620	171	42	8	2	3	2	—	—	—	
6- "	4,905	1,485	2,126	924	272	74	19	2	3	—	—	—	—	
7- "	7,151	1,853	3,053	1,531	479	160	43	22	7	2	—	1	—	
8- "	7,018	1,368	2,934	1,751	637	211	61	35	12	6	2	1	—	
9- "	7,633	1,305	2,984	1,974	823	349	127	40	22	7	1	1	—	
10- "	42,299	4,251	12,734	11,101	6,599	3,484	2,012	1,107	575	266	117	51	2	
15- "	22,092	540	2,452	4,136	3,886	3,159	2,620	1,834	1,399	928	557	576	5	
20-24 "	1,666	27	105	178	201	228	207	172	187	120	82	157	2	
Mothers aged 40 and over														
All durations	34,157	4,896	6,168	5,845	4,540	3,293	2,430	1,909	1,545	1,137	863	1,459	72	
0-8 mths.	408	394	9	1	1	—	—	—	—	—	—	—	—	
9-11 "	305	295	7	—	2	—	—	—	—	—	—	—	—	
0- yrs.	713	689	16	1	3	—	—	—	—	—	—	—	—	
1- "	931	850	68	7	9	—	—	—	—	—	—	—	—	
2- "	602	419	148	21	9	—	—	—	—	—	—	—	—	
3- "	532	238	233	48	6	—	—	—	—	—				

Table 7.—1948

(See notes on first page of table)

Marriage duration	LEGITIMATE MATERNITIES: the number of previous children (surviving, dead or stillborn) by present husband being													
	Total	0	1	2	3	4	5	6	7	8	9	10-14	15 & over	
Mothers of All Ages														
All durations	741,524	315,884	226,577	101,827	44,566	21,797	12,105	7,178	4,479	2,912	1,812	2,283	104	
0-8 mths.	62,304	61,208	901	142	30	11	5	4	1	1	1	—	—	
9-11 "	50,210	49,258	858	71	13	5	4	1	—	—	—	—	—	
0- yrs.	112,514	110,466	1,759	213	43	16	9	5	1	1	1	—	—	
1- "	107,846	90,588	16,429	737	56	19	10	1	4	2	—	—	—	
2- "	81,388	40,377	37,647	3,123	185	39	10	2	—	2	3	—	—	
3- "	58,596	20,586	30,732	6,608	583	66	8	7	4	2	—	—	—	
4- "	44,142	11,362	23,066	8,138	1,368	168	21	13	5	1	—	—	—	
5- "	44,550	9,818	21,976	9,724	2,521	427	65	9	3	3	2	2	—	
6- "	47,079	9,211	22,020	11,317	3,458	878	156	28	7	2	—	2	—	
7- "	44,875	7,553	19,635	11,696	4,292	1,250	362	66	14	2	4	1	—	
8- "	46,052	6,096	18,575	13,013	5,569	1,962	612	169	39	13	2	2	—	
9- "	29,450	2,911	9,896	8,560	4,660	2,125	870	298	94	26	4	6	—	
10- "	84,942	5,976	21,060	22,350	15,411	9,245	5,377	2,874	1,477	710	306	155	1	
15- "	30,921	817	3,385	5,484	5,357	4,426	3,590	2,769	1,968	1,370	830	911	14	
20- "	8,372	119	377	829	993	1,111	951	872	776	703	591	993	57	
25- "	790	3	20	33	69	64	64	65	87	74	68	211	32	
30 & over	7	1	—	2	1	1	—	—	—	1	1	—	—	
Mothers aged 16-19														
All durations	25,235	22,651	2,430	151	3	—	—	—	—	—	—	—	—	
0-8 mths.	14,190	14,124	65	1	—	—	—	—	—	—	—	—	—	
9-11 "	3,894	3,834	59	1	—	—	—	—	—	—	—	—	—	
0- yrs.	18,084	17,958	124	2	—	—	—	—	—	—	—	—	—	
1- "	5,640	4,279	1,334	27	—	—	—	—	—	—	—	—	—	
2- "	1,329	380	864	84	1	—	—	—	—	—	—	—	—	
3- "	173	33	103	35	2	—	—	—	—	—	—	—	—	
4- "	9	1	5	3	—	—	—	—	—	—	—	—	—	
Mothers aged 20-24														
All durations	198,987	132,498	52,475	11,364	2,195	376	64	12	3	—	—	—	—	
0-8 mths.	30,940	30,600	310	25	5	—	—	—	—	—	—	—	—	
9-11 "	26,646	26,248	385	12	—	—	—	—	—	—	—	—	—	
0- yrs.	57,586	56,848	695	37	5	1	—	—	—	—	—	—	—	
1- "	54,942	45,793	8,854	280	13	2	—	—	—	—	—	—	—	
2- "	37,349	17,670	18,201	1,416	55	6	—	1	—	—	—	—	—	
3- "	23,274	7,561	12,366	3,094	240	13	—	—	—	—	—	—	—	
4- "	13,217	2,890	6,925	2,825	529	47	—	—	—	—	—	—	—	
5- "	7,789	1,256	3,600	2,184	641	91	13	4	—	—	—	—	—	
6- "	3,480	369	1,422	1,091	454	121	21	2	—	—	—	—	—	
7- "	1,051	80	334	345	195	74	17	5	1	—	—	—	—	
8- "	260	25	67	84	55	19	7	1	2	—	—	—	—	
9- "	39	6	11	8	8	2	4	—	—	—	—	—	—	
Mothers aged 25-29														
All durations	240,620	99,534	87,561	34,987	12,075	4,271	1,482	493	154	45	14	4	—	
0-8 mths.	11,443	11,057	317	58	10	—	1	—	—	—	—	—	—	
9-11 "	13,577	13,263	272	34	4	2	1	—	—	—	—	—	—	
0- yrs.	25,020	24,320	589	92	14	2	2	1	—	—	—	—	—	
1- "	32,242	27,524	4,422	263	23	8	—	—	—	—	—	—	—	
2- "	30,150	15,663	13,311	1,091	71	13	1	—	—	—	—	—	—	
3- "	25,382	9,380	13,298	2,452	224	23	4	1	—	—	—	—	—	
4- "	22,000	6,027	11,548	3,812	549	56	7	1	—	—	—	—	—	
5- "	25,725	5,859	12,868	5,434	1,316	220	27	—	—	1	—	—	—	
6- "	28,356	5,452	13,312	6,935	2,039	519	84	11	4	—	—	—	—	
7- "	22,877	3,236	9,790	6,349	2,547	717	195	34	9	—	—	—	—	
8- "	16,776	1,550	5,985	5,203	2,604	1,014	324	80	14	1	—	1	—	
9- "	6,846	324	1,591	2,114	1,471	844	347	116	32	6	—	1	—	
10-14 "	5,246	199	847	1,242	1,217	855	489	249	95	38	13	2	—	

Table 7.—1948 (contd.)

(See notes on first page of table)

Marriage duration	LEGITIMATE MATERNITIES: the number of previous children (surviving, dead or stillborn) by present husband being													
	Total	0	1	2	3	4	5	6	7	8	9	10-14	15 & over	
Mothers aged 30-34														
All durations	151,176	39,165	52,345	30,280	14,570	7,081	3,827	1,971	1,060	512	233	132	—	
0-8 mths.	3,692	3,499	142	33	6	7	3	—	1	1	—	—	—	
9-11 "	4,199	4,075	99	19	5	—	—	—	—	—	—	—	—	
0- yrs.	7,891	7,574	241	52	11	7	4	—	1	1	—	—	—	
1- "	10,081	8,697	1,259	104	8	6	3	—	3	1	—	—	—	
2- "	8,706	4,454	3,806	395	31	12	4	2	—	1	1	—	—	
3- "	6,752	2,431	3,503	725	72	13	2	2	2	2	—	—	—	
4- "	6,282	1,713	3,288	1,035	195	35	7	7	2	—	—	—	—	
5- "	7,874	1,898	4,008	1,489	389	70	13	3	3	1	—	—	—	
6- "	11,179	2,467	5,489	2,373	669	149	26	6	—	—	—	—	—	
7- "	15,385	3,085	7,141	3,687	1,064	298	87	19	2	—	2	—	—	
8- "	21,261	3,170	9,326	5,706	2,142	653	192	56	10	5	—	1	—	
9- "	15,035	1,545	5,420	4,405	2,232	894	376	119	36	7	1	—	—	
10- "	37,881	2,091	8,641	9,875	7,249	4,508	2,734	1,445	754	371	146	67	—	
15-19 "	2,849	40	223	434	508	436	379	312	247	123	83	64	—	
Mothers aged 35-39														
All durations	94,729	17,658	26,244	19,735	11,773	7,060	4,488	3,009	1,935	1,281	729	801	16	
0-8 mths.	1,605	1,519	54	21	3	4	—	3	—	—	1	—	—	
9-11 "	1,596	1,552	36	4	2	—	2	—	—	—	—	—	—	
0- yrs.	3,201	3,071	90	25	5	4	2	3	—	—	1	—	—	
1- "	3,960	3,417	474	53	8	2	1	1	—	—	—	—	—	
2- "	3,143	1,764	1,230	116	26	4	2	—	1	—	—	—	—	
3- "	2,441	890	1,233	265	36	13	1	2	1	—	—	—	—	
4- "	2,108	557	1,070	367	80	24	5	2	2	1	—	—	—	
5- "	2,666	660	1,281	530	140	40	10	2	—	1	1	1	—	
6- "	3,432	773	1,541	771	248	71	19	6	1	1	—	1	—	
7- "	4,758	982	2,060	1,133	391	129	52	5	2	2	1	1	—	
8- "	6,829	1,179	2,844	1,795	673	230	66	26	9	5	2	—	—	
9- "	6,580	906	2,558	1,781	819	314	120	48	19	9	2	4	—	
10- "	35,404	3,011	9,892	9,574	5,910	3,281	1,792	986	521	253	116	67	1	
15- "	18,637	419	1,898	3,166	3,241	2,735	2,226	1,760	1,222	876	510	576	8	
20-24 "	1,570	29	73	159	196	213	190	168	157	131	96	151	7	
Mothers aged 40 and over														
All durations	30,777	4,378	5,522	5,310	3,950	3,009	2,244	1,693	1,327	1,074	836	1,346	88	
0-8 mths.	434	409	13	4	6	—	1	—	—	—	—	—	—	
9-11 "	298	286	7	1	2	—	—	—	—	—	—	—	—	
0- yrs.	732	695	20	5	8	2	1	—	—	—	—	—	—	
1- "	981	878	86	10	4	1	2	—	—	—	—	—	—	
2- "	711	446	235	21	1	4	2	—	—	—	2	—	—	
3- "	574	291	229	37	9	4	1	2	1	—	—	—	—	

Table 7.—1949

(See notes on first page of table)

Marriage duration	LEGITIMATE MATERNITIES: the number of previous children (surviving, dead or stillborn) by present husband being													
	Total	0	1	2	3	4	5	6	7	8	9	10-14	15 & over	
Mothers of All Ages														
All durations	700,496	287,435	222,037	99,382	42,758	20,449	11,281	6,642	4,118	2,562	1,605	2,148	79	
0-8 mths.	59,185	58,084	889	122	57	18	8	3	1	3	—	—	—	
9-11 "	40,515	39,684	744	60	15	7	2	—	—	3	—	—	—	
0- yrs.	99,700	97,768	1,633	182	72	25	10	3	1	6	—	—	—	
1- "	107,189	88,916	17,251	914	67	29	5	1	3	1	1	—	—	
2- "	80,234	37,644	38,345	3,858	312	47	17	6	1	3	—	—	1	
3- "	68,632	21,447	37,102	9,013	944	96	15	8	4	1	—	2	—	
4- "	49,586	11,354	26,295	9,860	1,841	194	32	4	3	1	1	—	—	
5- "	36,949	6,860	18,385	9,069	2,562	482	66	18	4	2	1	—	—	
6- "	39,164	5,797	18,141	10,383	3,651	935	209	31	9	4	2	—	—	
7- "	37,800	5,070	16,621	10,251	4,045	1,348	353	89	17	4	1	—	—	
8- "	32,923	3,939	13,588	9,148	4,052	1,523	480	148	32	9	3	1	—	
9- "	35,618	3,476	13,016	10,472	5,045	2,299	860	313	96	27	8	6	—	
10- "	77,547	4,891	18,508	20,861	14,559	8,518	5,001	2,775	1,384	630	261	158	1	
15- "	27,400	694	2,800	4,750	4,754	4,050	3,304	2,412	1,754	1,217	758	890	17	
20- "	7,056	76	341	602	801	844	850	779	732	598	498	899	36	
25- "	688	3	11	19	50	59	78	54	77	58	71	184	24	
30 & over	10	—	—	—	3	—	1	1	1	1	—	3	—	
Mothers aged 16-19														
All durations	26,878	23,791	2,881	193	12	1	—	—	—	—	—	—	—	
0-8 mths.	15,797	15,741	55	1	—	—	—	—	—	—	—	—	—	
9-11 "	3,346	3,278	67	—	—	—	—	—	—	—	—	—	—	
0- yrs.	19,143	19,019	122	1	—	1	—	—	—	—	—	—	—	
1- "	6,000	4,327	1,640	31	2	—	—	—	—	—	—	—	—	
2- "	1,517	418	989	104	6	—	—	—	—	—	—	—	—	
3- "	213	27	126	56	4	—	—	—	—	—	—	—	—	
4- "	5	—	4	1	—	—	—	—	—	—	—	—	—	
Mothers aged 20-24														
All durations	191,643	121,645	54,335	12,800	2,375	406	66	12	4	—	—	—	—	
0-8 mths.	28,765	28,409	324	24	6	2	—	—	—	—	—	—	—	
9-11 "	21,986	21,647	327	12	—	—	—	—	—	—	—	—	—	
0- yrs.	50,751	50,056	651	36	6	2	—	—	—	—	—	—	—	
1- "	55,589	45,772	9,482	325	8	2	—	—	—	—	—	—	—	
2- "	36,647	15,619	19,064	1,885	72	7	—	—	—	—	—	—	—	
3- "	24,739	6,631	13,808	3,935	339	25	—	—	—	—	—	—	—	
4- "	13,393	2,466	6,929	3,269	681	46	1	—	—	—	—	—	—	
5- "	6,336	732	2,856	2,000	619	118	10	1	—	—	—	—	—	
6- "	3,024	278	1,168	986	449	115	22	5	1	—	—	—	—	
7- "	933	60	309	300	163	67	27	5	2	—	—	—	—	
8- "	183	23	56	53	27	20	3	1	—	—	—	—	—	
9- "	48	8	12	11	11	4	2	—	—	—	—	—	—	
Mothers aged 25-29														
All durations	236,897	90,516	90,012	36,518	12,919	4,595	1,540	534	179	61	15	8	—	
0-8 mths.	9,639	9,271	296	46	15	8	3	—	—	—	—	—	—	
9-11 "	10,562	10,308	220	25	6	2	1	—	—	—	—	—	—	
0- yrs.	20,201	19,579	516	71	21	10	4	—	—	—	—	—	—	
1- "	31,340	26,559	4,400	352	24	4	1	—	—	—	—	—	—	
2- "	29,857	15,229	13,169	1,297	135	20	4	2	1	—	—	—	—	
3- "	31,314	10,612	16,628	3,611	417	41	4	1	—	—	—	—	—	
4- "	26,180	6,435	14,011	4,812	819	92	8	3	—	—	—	—	—	
5- "	21,794	3,913	11,133	5,056	1,419	229	35	9	—	—	—	—	—	
6- "	24,187	3,482	11,334	6,470	2,226	540	117	13	5	—	—	—	—	
7- "	21,554	2,572	9,419	6,021	2,465	832	202	41	1	—	—	—	—	
8- "	14,483	1,343	5,474	4,268	2,157	870	281	72	12	6	—	—	—	
9- "	9,879	595	2,926	3,024	1,837	964	346	131	47	9	—	—	—	
10-14 "	6,108	197	1,002	1,536	1,399	993	538	262	113	45	15	8	—	

Table 7.—1949 (contd.)

(See notes on first page of table)

Marriage duration	LEGITIMATE MATERNITIES: the number of previous children (surviving, dead or stillborn) by present husband being													
	Total	0	1	2	3	4	5	6	7	8	9	10-14	15 & over	
Mothers aged 30-34														
All durations	132,849	32,306	46,471	27,420	13,235	6,518	3,427	1,853	876	421	173	149	—	
0-8 mths.	3,020	2,831	132	30	18	4	3	1	—	—	—	—	—	
9-11 "	3,069	2,965	81	13	5	3	—	—	—	—	—	—	—	
0- yrs.	6,089	5,796	213	43	23	7	3	1	—	—	—	—	—	
1- "	9,308	7,944	1,195	135	21	9	1	—	2	—	—	—	—	
2- "	8,198	4,212	3,492	404	67	12	8	1	—	—	—	—	—	
3- "	8,514	2,838	4,550	978	120	16	5	4	—	—	—	—	—	
4- "	7,070	1,728	3,835	1,221	237	32	13	1	2	1	—	—	—	
5- "	6,242	1,197	3,145	1,435	355	89	15	3	2	1	—	—	—	
6- "	8,547	1,452	4,089	2,068	676	202	49	6	2	2	—	—	—	
7- "	11,171	1,731	5,180	2,865	969	321	72	23	8	—	1	1	—	
8- "	13,247	1,832	5,924	3,521	1,352	433	127	42	14	—	6	5	—	
9- "	17,900	1,858	7,053	5,266	2,255	954	361	115	27	6	112	64	—	
10- "	34,163	1,686	7,615	9,175	6,718	4,043	2,403	1,415	643	289	117	54	81	
15-19 "	2,400	32	180	309	442	400	370	242	173	117	—	—	—	
Mothers aged 35-39														
All durations	85,001	15,353	23,496	17,879	10,714	6,232	4,224	2,685	1,809	1,165	659	768	17	
0-8 mths.	1,545	1,437	66	19	14	3	2	—	—	—	—	—	—	
9-11 "	1,315	1,263	43	6	1	1	—	—	—	—	—	—	—	
0- yrs.	2,860	2,700	109	25	15	4	3	2	1	—	—	—	—	
1- "	4,003	3,475	450	56	9	10	1	—	1	—	—	—	—	
2- "	3,272	1,698	1,401	137	24	5	5	1	—	—	—	—	—	
3- "	3,179	1,064	1,671	372	57	7	4	1	1	—	—	—	—	
4- "	2,430	572	1,267	473	90	19	9	—	—	—	—	—	—	
5- "	2,151	419	1,057	487	144	37	4	2	1	—	—	—	—	
6- "	2,807	461	1,309	711	242	63	13	5	1	—	—	—	—	
7- "	3,546	590	1,500	922	375	95	39	17	6	2	—	—	—	
8- "	4,392	647	1,886	1,151	440	175	59	25	5	2	—	—	—	
9- "	6,883	879	2,726	1,934	823	319	120	51	16	10	2	3	—	
10- "	31,647	2,460	8,495	8,652	5,509	2,903	1,758	930	517	255	105	63	—	
15- "	16,535	377	1,562	2,864	2,836	2,442	2,043	1,504	1,121	774	455	543	14	
20-24 "	1,296	11	63	95	150	153	166	147	140	117	93	158	3	
Mothers aged 40 and over														
All durations	27,228	3,824	4,842	4,572	3,503	2,697	2,024	1,558	1,250	915	758	1,223	62	
0-8 mths.	419	395	16	2	4	1	—	—	—	—	—	—	—	
9-11 "	237	223	6	4	3	—	—	—	—	—	—	—	—	
0- yrs.	656	618	22	6	7	1	—	—	—	—	—	—	—	
1- "	949	839	84	15	3	4	2	1	—	—	—	—	—	
2- "	743	468	230	31	8	3	—	2	—	—	—	—	—	
3- "	673	275	319	61	7	7	1	2	—	—	—	—	—	
4														

Table 7.—1950

(See notes on first page of table)

Marriage duration	LEGITIMATE MATERNITIES: the number of previous children (surviving, dead or stillborn) by present husband being													
	Total	0	1	2	3	4	5	6	7	8	9	10-14	15 & over	
Mothers of All Ages														
All durations	668,286	262,562	212,285	101,063	44,144	20,725	11,078	6,394	3,966	2,473	1,534	1,977	85	
0-8 mths.	54,188	53,539	498	105	25	12	5	2	1	—	—	1	—	
9-11 "	38,211	37,519	587	64	25	9	5	2	—	—	—	—	—	
0- yrs.	92,399	91,058	1,085	169	50	21	10	4	1	—	—	1	—	
1- "	94,809	77,285	16,356	969	133	38	16	2	4	2	2	2	—	
2- "	78,228	36,804	36,757	4,232	348	59	13	9	—	4	1	1	—	
3- "	67,037	19,786	35,859	10,079	1,153	130	24	5	1	—	—	—	—	
4- "	58,803	12,175	30,737	12,662	2,782	372	57	11	3	3	1	—	—	
5- "	41,623	6,683	20,147	10,769	3,242	652	101	19	8	1	—	1	—	
6- "	30,090	3,907	13,225	8,430	3,362	931	188	36	7	3	—	1	—	
7- "	29,912	3,360	12,341	8,614	3,793	1,325	386	76	13	3	1	—	—	
8- "	30,904	3,252	12,075	8,944	4,229	1,660	541	161	31	4	3	3	1	
9- "	28,845	2,644	10,484	8,461	4,306	1,822	752	250	89	27	6	4	—	
10- "	82,049	4,893	20,360	22,589	15,214	8,887	5,012	2,680	1,366	608	277	162	1	
15- "	26,051	627	2,551	4,479	4,685	3,877	3,126	2,325	1,717	1,155	705	789	15	
20- "	6,817	81	289	633	790	899	786	751	660	580	464	842	42	
25- "	698	7	19	31	57	52	63	64	63	82	71	167	22	
30 & over	21	—	—	2	—	—	3	1	3	1	3	4	4	
Mothers aged 16-19														
All durations	25,788	22,380	3,168	223	17	—	—	—	—	—	—	—	—	
0-8 mths.	15,069	15,037	32	—	—	—	—	—	—	—	—	—	—	
9-11 "	3,269	3,215	54	—	—	—	—	—	—	—	—	—	—	
0- yrs.	18,338	18,252	86	—	—	—	—	—	—	—	—	—	—	
1- "	5,646	3,774	1,846	25	1	—	—	—	—	—	—	—	—	
2- "	1,543	320	1,097	123	3	—	—	—	—	—	—	—	—	
3- "	248	32	132	71	13	—	—	—	—	—	—	—	—	
4- "	13	2	7	4	—	—	—	—	—	—	—	—	—	
Mothers aged 20-24														
All durations	181,829	111,541	52,679	14,080	2,914	517	83	10	4	1	—	—	—	
0-8 mths.	26,385	26,179	184	22	—	—	—	—	—	—	—	—	—	
9-11 "	20,915	20,642	261	12	—	—	—	—	—	—	—	—	—	
0- yrs.	47,300	46,821	445	34	—	—	—	—	—	—	—	—	—	
1- "	50,111	40,549	9,175	369	13	3	1	—	1	—	—	—	—	
2- "	36,235	15,418	18,684	2,033	92	7	—	—	—	1	—	—	—	
3- "	24,252	5,720	13,455	4,604	449	24	—	—	—	—	—	—	—	
4- "	14,122	2,113	7,068	3,902	941	87	8	2	1	—	—	—	—	
5- "	6,441	706	2,761	2,018	774	158	22	2	—	—	—	—	—	
6- "	2,382	163	825	799	430	140	22	3	—	—	—	—	—	
7- "	765	30	213	254	175	70	21	1	1	—	—	—	—	
8- "	184	17	44	57	32	25	7	1	1	—	—	—	—	
9- "	37	4	9	10	8	3	2	1	—	—	—	—	—	
Mothers aged 25-29														
All durations	221,618	80,331	83,922	36,968	13,387	4,667	1,651	467	161	51	11	2	—	
0-8 mths.	8,112	7,910	148	37	9	6	1	1	—	—	—	—	—	
9-11 "	9,378	9,190	157	19	7	2	1	2	—	—	—	—	—	
0- yrs.	17,490	17,100	305	56	16	8	2	3	—	—	—	—	—	
1- "	26,112	22,068	3,647	325	52	14	5	—	1	—	—	—	—	
2- "	27,957	14,553	11,815	1,407	156	21	4	1	—	—	—	—	—	
3- "	29,569	9,717	15,482	3,856	447	55	8	3	1	—	—	—	—	
4- "	30,939	6,892	16,369	6,171	1,296	178	26	5	—	2	—	—	—	
5- "	24,059	3,946	11,930	6,113	1,700	321	40	3	5	1	—	—	—	
6- "	18,348	2,358	8,158	5,138	2,026	538	114	13	3	—	—	—	—	
7- "	17,157	1,740	6,981	5,044	2,288	829	238	30	6	1	—	—	—	
8- "	14,513	1,207	5,298	4,386	2,296	937	289	85	13	2	—	—	—	
9- "	8,548	512	2,595	2,595	1,605	764	321	104	41	10	1	—	—	
10-14 "	6,926	238	1,342	1,877	1,505	1,002	604	220	91	35	10	2	—	

Table 7.—1950 (contd.)

(See notes on first page of table)

Marriage duration	LEGITIMATE MATERNITIES: the number of previous children (surviving, dead or stillborn) by present husband being													
	Total	0	1	2	3	4	5	6	7	8	9	10-14	15 & over	
Mothers aged 30-34														
All durations	133,154	31,163	46,570	28,230	13,750	6,635	3,397	1,776	898	405	201	129	—	
0-8 mths.	2,918	2,791	81	30	10	3	3	—	—	—	—	—	—	
9-11 "	3,156	3,049	71	20	9	5	2	—	—	—	—	—	—	
0- yrs.	6,074	5,840	152	50	19	8	5	—	—	—	—	—	—	
1- "	8,615	7,242	1,149	158	42	12	7	1	2	1	1	—	—	
2- "	8,637	4,409	3,665	474	59	20	5	4	—	1	—	—	—	
3- "	9,107	2,995	4,817	1,077	173	35	9	1	—	—	—	—	—	
4- "	9,854	2,202	5,339	1,847	380	72	13	—	1	—	—	—	—	
5- "	8,187	1,500	4,062	1,935	545	115	22	8	—	—	—	—	—	
6- "	6,906	990	3,206	1,842	648	170	33	14	2	1	—	—	—	
7- "	8,991	1,178	3,943	2,469	985	296	84	33	2	1	—	—	—	
8- "	12,323	1,503	5,234	3,413	1,435	503	165	58	10	1	1	—	—	
9- "	14,519	1,387	5,726	4,262	1,966	750	308	83	28	7	1	1	—	
10- "	37,809	1,886	9,136	10,417	7,107	4,307	2,444	1,349	674	284	134	71	—	
15-19 "	2,132	31	141	286	391	347	302	225	179	109	64	57	—	
Mothers aged 35-39														
All durations	80,363	13,682	21,553	17,149	10,633	6,393	4,092	2,657	1,764	1,088	654	683	15	
0-8 mths.	1,337	1,274	40	15	5	2	1	—	—	—	—	—	—	
9-11 "	1,237	1,178	37	10	9	2	1	—	—	—	—	—	—	
0- yrs.	2,574	2,452	77	25	14	4	2	—	—	—	—	—	—	
1- "	3,547	2,964	471	79	22	6	2	1	—	—	—	—	—	
2- "	3,154	1,674	1,272	160	31	8	4	2	—	1	1	1	—	
3- "	3,217	1,049	1,681	402	64	14	6	1	—	—	—	—	—	
4- "	3,222	772	1,631	626	145	33	8	4	1	1	1	—	—	
5- "	2,481	418	1,200	595	197	49	14	5	3	—	—	—	—	
6- "	2,031	306	879	540	211	72	16	4	1	1	—	1	—	
7- "	2,531	339	1,053	719	279	98	31	10	2	—	—	—	—	
8- "	3,323	441	1,308	933	379	174	62	14	6	1	2	3	—	
9- "	5,068	628	1,925	1,423	634	266	108	50	17	10	4	3	—	
10- "	31,875	2,286	8,549	8,887	5,625	3,037	1,650	915	516	239	107	64	—	
15- "	16,017	343	1,465	2,657	2,860	2,438	2,020	1,493	1,089	721	446	476	9	
20-24 "	1,323	10	42	103	172	194	169	158	129	113	93	134	6	
Mothers aged 40 and over														
All durations	25,534	3,465	4,393	4,413	3,443	2,513	1,855	1,484	1,139	928	668	1,163	70	
0-8 mths.	367	348	13	1	1	1	—	1	—	—	—	1	—	
9-11 "	256	245	7	3	—	—	1	—	—	—	—	—	—	
0- yrs.	623	593	20	4	1	1	1	—	1	—	—	1	—	
1- "	778	688	68	13	3	3	1	—	—	—	1	1	—	
2- "	702	430	224	35	7	3	—	2	—	—	1	—	—	
3- "	644	273	292	69	7	2	1	—	—	—	—	—	—	

APPENDIX III

I. National Reproductive Capacity and the E.R.R.

In a discussion of the significance of the Effective Reproduction Rate (E.R.R.) which appeared in the preceding volume* of this series, the conclusion was reached that it would be best understood and treated in relation to and as part of a system of population measurements expressed in terms, not of persons, but of reproductive capacity. In the development of this approach it was necessary to envisage the said reproductive capacity in measurable quantitative form and a conventional definition of unit capacity was provisionally introduced and adopted for the purpose. In terms of the unit so conceived, figures were provided showing for a series of calendar years over the period 1871 to 1948 (a) the total reproductive capacity of the population of each year (b) the capacity consumed in the year and (c) the capacity created by the new births of the year; the measure of replacement given by the ratio of capacity created to capacity consumed being seen to be the practical equivalent of the E.R.R. which, for some years, has been employed as the Department's birth replacement index.

The treatment was somewhat novel and tentative in character. But it appears not to have aroused any basically adverse criticism and it is felt that it will be justifiable and informative to carry the subject further in the matter described below.

General Principles.—The memorandum in the previous volume* should be referred to for a fuller statement of the arguments underlying the treatment but it will be appropriate to restate the general principles and conventions in summary form.

A human population, in common with other living species, propagates itself by virtue of its inherent reproductive power and it is assumed as a general premise that the total reproductive capacity possessed by a community at any time is the fundamental factor governing its prospective potentiality for future development. And that since possession of reproductive capacity is confined to its younger elements, who may be present in differing proportions in different communities or in the same community at different points of time, a truer appreciation of prospects or of changes in prospects in course of time will be obtained by evaluating the population and changes in terms of reproductive capacities rather than in numbers of individuals.

In the course of a population through time, its total reservoir of capacity is being constantly depleted on the one hand as its members steadily pass through and beyond the reproductive ages, and at the same time it is being constantly replenished by the latent capacity possessed by the newly born children; the level of the reservoir thus going up or down according as the added capacity of the children is greater or less than that expended in the course of their production.

Since the operation of the capacity existing at any point of time will be spread over a number of subsequent years, the study of current levels and ascertained changes in capacity levels should be valuable in providing advance indications of tendencies that are going to influence, if not to dominate, the shaping of population trends of the future. A rising trend in total reproductive capacity would be a factor predisposing to a future population increase; likewise a falling trend would presage a future decline of population and it was no doubt the continuous fall in the reproductive power of the population of Great Britain between the two wars that was fundamentally responsible for the public apprehension concerning the population position that manifested itself

*Statistical Review, 1940-45 Text, Vol. II p. 204.

at the time and that led to the setting up of the Royal Commission on Population in 1944. On the other hand, the maintenance of reproductive capacity at a constant level would conduce to a general degree of population stability and it should be noted that references here to a stable population are to be associated, not with constancy in the total numbers of persons of all ages, but with constancy in its total reproductive capacity as hereafter defined.

The unit of reproductive capacity adopted for the basis of the quantitative measurements was defined as "the total ability to bear live born children exercisable by an average woman who lives throughout the full range of child bearing ages"; and, to meet the practical requirements of the measurement procedure, this was interpreted in the light of the conventions (a) that the child bearing period was limited to ages between 15 and 45 and (b) that the unit could be regarded as distributed over that age range in the following proportions:—

Ages	15-	20-	25-	30-	35-	40-	Total unit 15-45
	.12	.22	.21	.19	.17	.09	1.00

So that in the case of a woman who had reached age 30, for example, .55 of the unit would be regarded as having been expended, leaving only .45 of her full capacity as outstanding and available. The general choice of the unit was governed by the facts that the female is the essential medium of reproduction, and that the said total unit ability could be regarded as having remained constant, at any rate over the century or so covered by this review. The possibility of a decline had been recently considered by the Biological and Medical Committee of the Royal Commission who could find no definite evidence that such a decline had occurred.

With the aid of a unit so defined and circumscribed, a capacity value can be associated with any and every female in the community at any time. The said value in the case of a girl under age 15 is the full unit discounted by the chance of loss through her dying before she reaches age 45; in the case of a female over age 15, it is the unexpended portion of the unit similarly discounted by the remaining mortality risk.

For females born more than 45 years ago, the relevant mortality is known and the capacity value can be calculated exactly; for females born within the past 45 years, part of the mortality will not yet have been experienced and will need to be estimated, but experience suggests that the degree of approximation likely to be introduced thereby need not be regarded as of great significance in the general perspective of the conditions they are designed to illumine. Capacities assessed in this way can be aggregated to show the total capacity possessed by the population at any time, the amounts expended from time to time, and the replenishments that accrue in the shape of new female births.

Capacity measurements in respect of the population of England and Wales over the period 1871 to 1948 were set out, and the implications arising from them discussed at length in the preceding volume. Further reference to them here is only necessary to the extent by which they may be affected by the new matter now introduced.

Revision of projected mortality and consequential capacity measurements.—It will have been understood from the last paragraph but one that capacity measurements in respect of females who have not yet attained the age of 45 involve forecasts of the mortality to be experienced by them over the period still to be passed through before reaching that age. With the passage of time the actual mortality experienced gradually emerges and thus opportunities are provided for adjusting the measurements, at suitable intervals, to bring in the new known mortality element, and to revise the outstanding projected element in the light of the later knowledge available.

It is customary to review mortality projections at the end of the calendar quinquennia for which death rates are customarily published in the Annual Review so that the emergence of the 1946-50 record provides such an opportunity, and is an appropriate occasion for revising the capacity measurements. Generally speaking, the mortality experienced by females under age 45 in 1946-50 has proved to be materially lighter than had been anticipated, and the increased rate of mortality fall it betokens has led to the expectation of even more favourable conditions ahead. The revised mortality projections are shown below, and the effect of the improved prospects which they represent is to raise the capacity values and the E.R.R.s. over the whole of the period to which the revision is applied. Strictly the revision should be extended to cover all females who were under age 45 at the end of 1945, that is, those born in years from 1901 onwards, but the effect of the revision in the case of the older women would be comparatively slight, and, for practical purposes, it has been regarded as sufficient to limit it to females born in 1921 and subsequent years.

Numerical details of the revision are shown in the adjoining tables.

Table 1.—Revised Female Generation Death Rates and Age Capacity Values.

Age	Year of Birth				
	1921	1931	1941	1951	1961
1. Female Generation Death Rates (per 100,000 per annum)					
0-4	2,180	1,600	1,230	582	334
5-9	225	171	64	31	27
10-14	137	97	41	26	22
15-19	187	105	59	51	43
20-24	241	122	85	73	62
25-34	161	109	94	79	64
35-44	171	150	128	107	86
2. Reproductive Capacity per female at each age (according to the year of birth)					
At birth	·8602	·8978	·9256	·9592	·9732
0-	·9051	·9328	·9536	·9730	·9814
5-	·9613	·9750	·9849	·9880	·9902
10-	·9700	·9816	·9874	·9895	·9914
15-	·9179	·9266	·9301	·9314	·9331
20-	·7571	·7617	·7631	·7640	·7653
25-	·5487	·5504	·5509	·5517	·5525
30-	·3521	·3527	·3531	·3535	·3538
35-	·1741	·1743	·1745	·1745	·1748
40-	·0450	·0450	·0450	·0450	·0450

Section 1 of the table shows the revised Female Generation Death Rates which now supplant and extend the corresponding figures from 1921 onwards given in Section 1 of the table on page 212 of the previous text volume. The rates shown above the stepped dotted line are *experienced* rates taken from Table 4 of Part I of the Statistical Review, and those below the line are the new *projected* values.

Section 2 of the table shows the Revised Female Age Capacity Values which likewise supplant and extend the corresponding figures given in Section 6 of the table on p. 212 of the previous volume. They are derived from the revised death rates in the manner described in that volume, and in conjunction with the unrevised figures there provided for birth years prior to 1921, they constitute

Table 2.—Population Measurements in Units of Reproductive Capacity 1871-1952, England and Wales.

Calendar Year	Total re-production capacity of population (thousands)	Units consumed in calendar year (thousands)	Percentage of total capacity consumed in year	Units replaced by new births in year (thousands)	Excess or Defy. (-) of units created over units consumed	Capacity Replacement Ratio E.R.R. (5) ÷ (3)
1	2	3	4	5	6	7
Long Range						
1871	6,139	178.3	2.90	268.3	90.0	1.505
1881	7,238	203.5	2.81	306.5	103.0	1.506
1891	8,172	234.7	2.87	317.1	82.4	1.351
1901	9,007	278.1	3.09	342.0	63.9	1.230
1911	9,548	306.0	3.20	343.6	37.6	1.123
1916	9,671	313.9	3.25	313.6	— .3	.999
1921	9,487	318.2	3.35	355.8	37.6	1.118
1931	9,247	332.1	3.59	277.0	— 55.1	.834
1941	8,721	335.6	3.85	261.0	— 74.6	.778
1951	8,899	315.2	3.54	315.5	.3	1.001
Individual Calendar Years						
1921	9,487	318.2	3.35	355.8	37.6	1.118
1922	9,493	319.6	3.37	327.0	7.4	1.023
1923	9,473	320.8	3.39	322.4	1.6	1.005
1924	9,455	322.2	3.41	311.5	— 10.7	.967
1925	9,437	323.9	3.43	304.8	— 19.1	.941
1926	9,415	325.5	3.46	300.0	— 25.5	.922
1927	9,419	327.0	3.47	283.5	— 43.5	.867
1928	9,384	328.7	3.50	287.0	— 41.7	.873
1929	9,330	330.0	3.54	280.9	— 49.1	.851
1930	9,278	331.2	3.57	284.0	— 47.2	.857
1931	9,247	332.1	3.59	277.0	— 55.1	.834
1932	9,198	332.2	3.61	269.8	— 62.4	.812
1933	9,145	331.9	3.63	256.4	— 75.5	.773
1934	9,081	331.4	3.65	263.6	— 67.8	.795
1935	9,019	334.0	3.70	264.8	— 69.2	.793
1936	8,975	335.9	3.74	268.8	— 67.1	.800
1937	8,930	336.2	3.76	271.7	— 64.5	.808
1938	8,898	335.1	3.77	277.8	— 57.3	.829
1939	8,882	334.3	3.76	274.9	— 59.4	.822
1940	8,834	336.7	3.81	265.3	— 71.4	.788
1941	8,721	335.6	3.85	261.0	— 74.6	.778
1942	8,689	335.8	3.86	293.1	— 42.7	.873
1943	8,690	335.0	3.86	308.9	— 26.1	.922
1944	8,694	333.4	3.83	340.3	6.9	1.021
1945	8,669	331.1	3.82	309.8	— 21.3	.936
1946	8,676	330.1	3.80	375.6	45.5	1.138
1947	8,731	325.2	3.72	404.5	79.3	1.244
1948	8,804	323.0	3.67	357.4	34.4	1.107
1949	8,867	320.8	3.62	338.0	17.2	1.054
1950	8,886	318.2	3.58	323.7	5.5	1.017
1951	8,899	315.2	3.54	315.5	.3	1.001
1952*	8,900	312.5	3.51	313.4	-.9	1.003

* Provisional.

the frame from which the reproductive capacity of every female in the populations of the past century can be assessed in terms of the capacity unit adopted, assessments in respect of females born in years other than those identified in the table being adequately obtained by interpolation from the stated numbers on the several age lines.

The figures in this section are of incidental interest in showing the progressive effect the improvement of mortality has had on the effective reproductive power of successive generations; the improvement is naturally more pronounced at the younger ages with a maximum at birth, and the top line of the section, which assesses the capacity at birth, shows that the prospective population producing power of the girl infant of 1951 is more than 10 per cent. higher than it was in 1921 and half as much again as that of her forerunner of 100 years ago.

Measurements of the population of England and Wales constructed on the basis of the foregoing revised Age Capacity values are shown in Table 2 annexed; they supersede the corresponding figures shown in the previous volume for years up to 1948 and at the same time extend the period coverage by the inclusion of figures for the years 1949 to 1952.

Total Population Capacity.—The leading feature of this presentation is undoubtedly that provided by col. (2) which purports to show the total reproductive capacity of the population at the several dates identified from 1871 to the present time. Three fairly well marked phases of development can be distinguished over the period.

The first is the one of rapid growth over the earliest years which must have commenced some decades before 1871—the first year shown in the table—but which raised the total capacity from the 6 million odd units in that year to the maximum of about 9½ million units reached during the First World War, the highest yearly figure being that of 9671 thousands in 1916; it was this rise that was not only responsible for the rapid growth of the population up to 1916 but, by virtue of its delayed action, was largely responsible for the continued increase in population which has been maintained since that date, though with diminished incidence.

The second phase covers the decline in reproductive power which was a feature of the inter-war period, when from the 1916 maximum of 9,671 thousand units it fell steadily to just below 8,900 thousands at the outbreak of the second world war. The immediate influence of the decline was to slow up the momentum of population growth derived from the earlier capacity increases, and, had it continued, there is no doubt that it would have culminated in an actual decline in the numbers of the population; it was undoubtedly this prospect which gave rise to the public uneasiness that led to the setting up of the Royal Commission in 1944.

But, from about the outbreak of the recent war, the declining phase appears to have been arrested and to have given place to a period of comparative stability. It is true that there was a slight further fall during the period of hostilities but it has been countered during the post-war adjustment years by a corresponding rise with the final capacity now settling down to a level little different from what it was at the outbreak of war. If, as may well be the case, the recent fluctuations are little more than war disturbances, the present phase would appear to be one of stability which has now lasted for thirteen or fourteen years; and as the present level of 8,900 thousand capacity units, in conjunction with mortality at rates contemplated for the future, is commensurate with a stabilised population above rather than below present numbers, it seems not unreasonable to hazard the view that no serious decline in the total population need be contemplated at least over the next 20 years or so.

The changes in total capacity over more recent periods are analysed in the following statement according to three main contributory factors, namely, the two natural factors comprising the gain by additions from new births, and the loss from units consumed in the course of producing the births, together with a third balancing item mainly ascribable to migration.

Approximate Analysis of Capacity Increase or Decrease (—)

(in thousands of units)

Period	Total Capacity gain or loss (—)	Units Created	Units Consumed	Gain or loss (—) from natural factors	Balance due mainly to Migration
1916-1920	-176	1535	1579	- 44	-132*
1921-1925	- 62	1621	1605	16	- 78
1926-1930	-164	1435	1642	-207	43
1931-1935	-265	1332	1662	-330	65
1936-1939	-139	1093	1342	-249	110
1939-1945	-186	1778	2008	-230	44
1946-1950	20	1799	1617	182	38

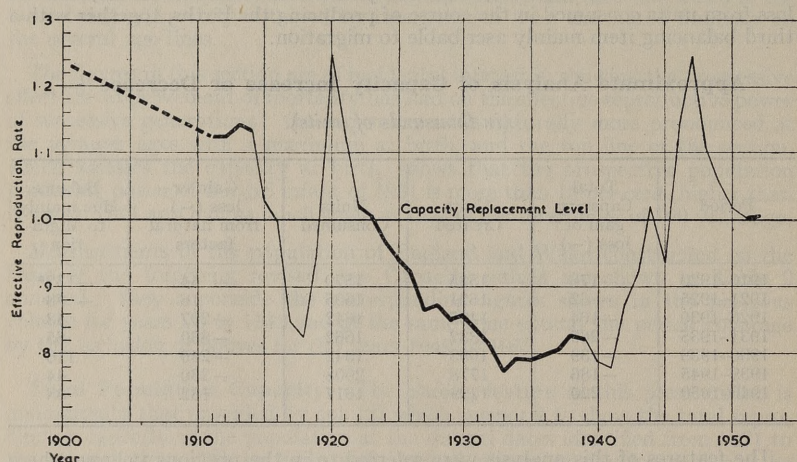
The features of this analysis were referred to in the previous volume where attention was drawn to the favourable effect of the net inward balance of migration since 1925 in mitigating the capacity loss arising from the natural factors. That gain has been continued in the new record for 1946-1950 now added, but the main interest in this is in its showing that the gain from the natural factors in the post-war period has gone far to offset the corresponding loss during the period of hostilities so that for the 1939-1950 period as a whole the natural loss is reduced to 48 thousands coupled with a migration gain of 82 thousands, neither the separate items or the net gain of 34 thousands being of significance in relation to the total population capacity of nearly 9 million units.

Effective Reproduction Rate (E.R.R.).—The columns of Table 2 more directly associated with the birth experiences of the successive years are column (5), which shows the capacity units created by the new births of each year, and column (3) which shows the units consumed in the course of the production of the births, the difference between them (column (6)) being the amount added to or deducted from the total capacity by the process. This, in general, is small in relation to the total, and it is quite obvious that the effect of the births of a single year or even of two or three adjacent years are rarely sufficient by themselves to make any great impression on the fundamental future population producing prospects of the community—a self evident fact which is not always appreciated and therefore needs to be emphasised if misunderstanding is to be avoided. This relative non-significance of a single year's experience is one to be borne in mind when the units created and units consumed are considered in terms not only of the difference between them but also in the form of the ratio of the former to the latter providing the capacity replacement ratio which, as shown in the preceding report, is equivalent to the Effective Reproduction Rate (E.R.R.) in which it has been customary to express the birth record in this series of reports.

E.R.Rs. based on the revised mortality prospects are shown in column (7) of the table and their course over the years of the present century will be more readily appreciated from their portrayal in Diagram A.

* The exceptional influenza mortality of 1918 and 1919 was a contributory factor here.

**DIAGRAM A.—Effective Reproduction Rates. 1901–1952.
England and Wales.**



It will at once be seen that the year to year gradations of the E.R.R. follow the similar gradations of the fertility curve depicting the births per 1,000 women aged 15-45 shown on page 77 with faithful consistency over the whole range portrayed so that presentation in this form is not advanced as throwing new light on the factors responsible for the moulding of events over the period. The virtue of the E.R.R. as an index lies in its superiority as a standard of measurement bearing on the future survival of the nation, showing directly—within a small margin of approximation—whether the births of each year or period are themselves sufficient to maintain the basic population producing power of the community over the year or period, or alternatively, whether and to what extent the said births are superfluous or deficient for that purpose.

Like the crude birth rate (births per 1,000 population) or the fertility rate (births per 1,000 women aged 15-45), the E.R.R. is a collective index summing up the effect of all the factors or forces operating to determine the births of a period. The said forces have all been profoundly influenced by war conditions which have been responsible for the comparatively violent fluctuations in the index over recent years and which have been sufficient to obscure any underlying trends of a continuing nature. The most that appears possible to say at the moment is that, with the gradual disappearance of the temporary war abnormalities, the E.R.R. appears to be settling down in the neighbourhood of the 100 per cent. replacement level; and that, though a number of further years' records will be necessary before the coming peace time tendencies can be in any way established, there appear to be no sufficient grounds, at the present time, for anticipating changes of any significantly disturbing character.

II. Generation Achievements in the replacement of females and their Reproductive Capacities

The general principle that each generation of women should, in the course of their reproductive history, produce sufficient girl progeny to enable the process to be repeated at the same quantitative level in the course of the progeny's ensuing cycle of reproductive life is one which may be said to be inherent in any concept of population stability; it implies the continuous production of new

creative power to take the place of the power which is steadily being lost or used up by the passing of adult females beyond the end of their reproductive period or through their death before that time.

This principle of replacement has been recognized and adopted as an appropriate standard by which any birth experience can be tested and measured and it is so applied to the national experiences of successive calendar years in the table on pages 220-221, which shows, for each year, the separate amounts of reproductive capacity created and consumed, their relationship to one another and their net effect on the total capacity of the population. And since any preview of likely future population development will tend to be largely governed by the knowledge of its existing reproductive capacity at any time, the evaluation of the capacity by calendar years as they successively pass is both appropriate and important for keeping total population prospects and changes in prospects under continuous and up to date review.

But for the measurement of fertility achievements of specific generations of women, the presentation by calendar years is not adequate for two main reasons. In the first place the progenitor women in a calendar year's experience comprise a number of generations and they differ in generation content in each successive year. In the second place the calendar year arrangement tends to mask basic underlying changes in fertility habits by throwing into relief the effect of temporary secular factors which influence the births of the year but which may have little or no influence whatever on the ultimate progeny of the generations of women involved; the child bearing period of each generation may be considered as covering the 30 calendar years which elapse between its reaching the ages of 15 and 45, a period long enough to embrace years both favourable and unfavourable for the begetting of children—years, for example, of economic prosperity or depression or years of the type encountered during the war—and a preference for favourable as against unfavourable years for the purpose which would be reflected in the calendar years records would affect the timing of the generation achievement without necessarily influencing its ultimate amount.

For a generation analysis, it is necessary to trace the fertility history of each generation at ascending ages throughout the 30 calendar years which cover its child bearing period and to do this requires an analysis of each calendar year's births by the mother's age. This item of information was not recorded at the registration of births in this country for years prior to 1938 but from the more general information which is available for those years it has been possible to construct an approximate age analysis of sufficient validity to reveal the more important features of the secular change and trend in reproductivity, and it is thought that it will be equally informative and instructive likewise to trace and set out the generation history of fertility in this country on the basis of these constructive approximations.

The construction and the implications arising therefrom will be best appreciated and understood by following the successive sections of the work as set out in the two accompanying tables. The analysis is necessarily subject to approximation and for that reason refinements have been avoided where it seemed unlikely that they would add anything of consequence to the significance of the results; for the same reason and also to keep the computations within reasonable dimensions it has been regarded as sufficient for this somewhat broad survey to limit the identification of ages and calendar years to five year groups or periods of the conventional limits customarily recognised in the treatment of these records.

In Table 3 the 37 million live female births which have taken place in England and Wales over the 95 years 1856 to 1950 are first distributed so as to provide female fertility rates in 6 quinary age groups for each of the 19 calendar quinquennia involved.

Table 3.—Construction of Live Female Birth Rates per 10,000 women at quinary age periods 15-45 in calendar quinquennia 1856/60 to 1946/50. England and Wales.

Women's Age Group	Calendar Quinquennia																		
	1856-60	1861-65	1866-70	1871-75	1876-80	1881-85	1886-90	1891-95	1896-00	1901-05	1906-10	1911-15	1916-20	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50
1. Average number of women in the population (in thousands—Census interpolations 1841-1911; Annual estimates after 1911)																			
15-	952	1,005	1,065	1,141	1,233	1,331	1,434	1,524	1,600	1,649	1,671	1,699	1,759	1,774	1,768	1,596	1,701	1,549	1,427
20-	945	990	1,032	1,094	1,175	1,262	1,353	1,461	1,586	1,654	1,667	1,645	1,676	1,728	1,778	1,773	1,610	1,703	1,552
25-	819	860	912	970	1,034	1,110	1,196	1,303	1,432	1,528	1,591	1,600	1,599	1,646	1,702	1,763	1,771	1,606	1,690
30-	708	747	791	837	882	941	1,013	1,106	1,218	1,331	1,444	1,517	1,542	1,537	1,588	1,663	1,750	1,758	1,595
35-	615	651	684	725	772	826	886	965	1,062	1,171	1,292	1,387	1,471	1,468	1,489	1,547	1,638	1,729	1,735
40-	561	597	626	661	705	745	783	839	915	1,004	1,106	1,226	1,341	1,384	1,408	1,456	1,522	1,611	1,684
15-45	4,600	4,850	5,110	5,428	5,801	6,215	6,665	7,198	7,813	8,337	8,771	9,074	9,388	9,537	9,733	9,798	9,992	9,956	9,683
2. Assumed Live Female Birth Rates per 10,000 Women (from p. 236 of S.R. Civil Text 1938-39)																			
15-	137	139	138	131	118	104	90	78	70	63	58	60	62	59	55	65	The record shown in (3) for periods 1936-50 are the actual occurrences from mid 1938, supplemented by appropriate allowance for 1936-mid 38. The rates shown in (6) for this period are accordingly (3) ÷ (1) × 2,000.		
20-	772	788	798	791	767	732	684	641	604	568	533	530	496	506	428	394			
25-	1,125	1,141	1,156	1,154	1,136	1,101	1,051	1,002	957	907	854	812	705	710	611	543			
30-	1,091	1,100	1,119	1,125	1,118	1,082	1,016	952	890	827	765	701	576	573	487	416			
35-	916	918	940	941	921	880	819	753	683	613	542	473	366	358	284	242			
40-	506	507	521	517	496	466	428	385	337	289	241	196	142	132	99	85			
3. Calculated Live Female Births in thousands = (1) × (2) × .0005																			
15-	65	70	73	75	73	69	65	59	56	52	48	51	55	52	49	52	60	59	70
20-	365	390	412	433	451	462	463	468	479	470	444	436	416	437	380	349	349	415	497
25-	461	491	527	560	587	611	628	653	685	693	679	650	564	584	520	479	482	466	609
30-	386	411	443	471	493	509	515	526	542	550	552	532	444	440	387	346	342	384	402
35-	282	299	321	341	356	363	363	363	363	359	350	328	269	263	211	187	185	225	242
40-	142	151	163	171	175	174	168	162	154	145	133	120	95	91	70	62	63	74	75
Total	1,701	1,812	1,939	2,051	2,135	2,188	2,202	2,231	2,279	2,269	2,206	2,117	1,843	1,867	1,617	1,475	1,481	1,623	1,895
4. Actual Live Female Birth Occurrences in thousands. (Registrations up to 1938 adjusted for regn. deficiencies prior to 1874 and regn. time lag 1890-1938)																			
	1,681	1,810	1,928	2,054	2,174	2,190	2,175	2,229	2,269	2,304	2,256	2,113	1,840	1,865	1,614	1,472	1,481	1,623	1,895
5. Ratio of Actual to Calculated Live Female Births = (4) ÷ (3)																			
	.988	.999	.994	1.0015	1.018	1.001	.988	.999	.996	1.015	1.023	.998	.998	.999	.998	.998	—	—	—
6. Constructed Live Birth Rates per 10,000 women at each age = (5) × (2). Actual from 1936-1950																			
15-	135	139	137	131	120	104	89	78	70	64	59	60	62	59	55	65	71	76	98
20-	763	787	793	792	781	733	676	640	602	577	545	529	495	505	427	393	434	487	640
25-	1,112	1,140	1,149	1,156	1,156	1,102	1,038	1,001	953	921	874	810	704	709	610	542	544	580	721
30-	1,078	1,099	1,112	1,127	1,138	1,083	1,004	951	886	839	783	700	575	572	486	415	391	437	504
35-	905	917	934	942	938	881	809	752	680	622	554	472	365	358	283	242	226	260	279
40-	500	506	518	518	505	466	423	385	336	293	247	196	142	132	99	85	83	92	89

Section 1 shows the average number of women in the population in the several age date cells. For periods between 1856 and 1911, they have been obtained as linear interpolates between adjacent decennial census records on horizontal age lines but for periods after 1911 they are derived from aggregations of the annual age estimates of the national population.

Section 2 shows the annual live female birth rates provisionally assigned to the several population groups of section 1. For periods prior to 1938 they are derived basically from the curves shown on page 205 of the Civil Text Section of the Annual Review for 1938-39 in the manner described in the context thereto.

Section 3 shows the hypothetical live female births of each period as given by the product of the provisional birth rates of (2) and the women exposed to risk in (1).

Section 4. In this section are shown the actual births which occurred in the successive quinquennia, so far as their ascertainment is possible from the records. For periods prior to 1938, they are the numbers registered, after supplementation for registration deficiencies prior to the Act of 1874 and certain adjustments—of negligible incidence other than during the war years 1915-1922—to counter the effect of registration time lag. Since July 1938, the births have been classified by date of occurrence and for them no modification or adjustment has been made or required.

Section 5 shows the ratios of the actual births of (4) to the calculated births of (3) and these serve as multipliers which, when applied to the provisional rates of (2), yield the final rates of

Section 6. The live female birth rates thus set out here are virtually factual for years after 1938. For earlier years they are constructed as described above, but, inasmuch as they conform in age shape to those of such records as are available, and at the same time fulfil the basic requirement of reproducing the actual total births of each period when applied to the women at risk, they are regarded as displaying the magnitudes of and changes in the actual age frequencies with a degree of fidelity amply sufficient for the present survey.

The construction is now transformed from a calendar period series to a generation series and is continued in the latter form in Table 4. It will be readily appreciated, for example, that the women responsible for the births at ages 15-19 in the calendar years 1856-60 were themselves born over a period centred round January 1841 and that this selfsame 1841 generation was also responsible for the births at ages 20-24 in the period 1861-65, at ages 25-29 in the next period 1866-70 and so on; from which it will be seen that the generation representation of section 6 will be obtained by assembling together the age rates on diagonals falling from left to right in that section.

Section 7 shows for a 1,000 girls of each successive generation, at intervals of five years from 1841 to 1931, the years of life lived by them over various sections of their reproductive ages 15 to 45. The figures for generations of years ending in digit 1 are taken from section 2 of the table on page 212 of the 1940/45 Text Volume, modified from 1921 onwards in respect of the revised mortality projections referred to on pages 211-214 of this volume. The values for intermediate generation years ending in digit 6 have been inserted by interpolation on horizontal lines.

Section 8 sets out the rates at which each generation bore its female progeny over successive sections of its reproductive life. The figures are those on falling left-right diagonals in Section 6 as described above.

Section 9: In this section is calculated the actual numbers of the female progeny produced at successive age periods by each original generation (section 8 \times section 7) and in

Table 4.—Replacements of Females and their Reproductive capacities by Generations 1841-1931.
England and Wales.

Age	Female Generation born around 1st Jan. of Year																		
	1841	1846	1851	1856	1861	1866	1871	1876	1881	1886	1891	1896	1901	1906	1911	1916	1921	1926	1931
7. Years of Life lived per 1,000 girls born (over quinary ages 15-45)—Generations 1841, 1851, etc. to 1931 as calculated; 1846, 1856 etc. to 1926 interpolated.																			
15-	3,453	3,444	3,435	3,439	3,456	3,495	3,472	3,623	3,695	3,733	3,766	3,814	3,881	3,975	4,094	4,250	4,398	4,474	4,550
20-	3,323	3,323	3,323	3,336	3,363	3,411	3,550	3,552	3,629	3,672	3,709	3,752	3,813	3,915	4,044	4,202	4,351	4,438	4,524
25-	3,185	3,194	3,203	3,226	3,263	3,319	3,388	3,477	3,560	3,604	3,641	3,687	3,752	3,859	3,992	4,153	4,308	4,403	4,498
30-	3,040	3,058	3,076	3,109	3,156	3,220	3,299	3,397	3,487	3,529	3,564	3,618	3,694	3,805	3,942	4,111	4,274	4,374	4,474
35-	2,889	2,914	2,940	2,983	3,040	3,116	3,204	3,311	3,408	3,450	3,486	3,549	3,634	3,751	3,892	4,068	4,239	4,342	4,446
40-	2,731	2,762	2,792	2,843	2,910	3,000	3,102	3,214	3,315	3,365	3,410	3,478	3,567	3,689	3,837	4,023	4,202	4,308	4,413
8. Generation Birth Rates—Live Female Births per 10,000 women. Transposed from calendar arrangement in (6).																			
15-	135	139	137	131	120	104	89	78	70	64	59	60	62	59	55	65	71	76	98
20-	787	793	792	781	733	676	640	602	577	545	529	495	505	427	393	434	487	640	
25-	1,149	1,156	1,156	1,102	1,038	1,001	953	921	874	810	704	709	610	542	544	580	721		
30-	1,127	1,138	1,083	1,004	951	886	839	783	700	575	572	486	415	391	437	504			
35-	938	881	809	752	680	622	554	472	365	358	283	242	226	260	279				
40-	466	423	385	336	293	247	196	142	132	99	85	83	92	89					
9. Live Female Births to original generation of 1,000 girls—at separate age groups. (7) × (8) ÷ 10,000.																			
15-	47	48	47	45	41	36	32	28	26	24	22	23	24	23	23	23	31	34	45
20-	262	264	263	261	247	231	222	214	209	200	196	186	193	167	159	182	212	284	
25-	366	369	370	356	339	332	323	320	311	292	256	261	229	209	217	241	311		
30-	343	348	333	312	300	285	277	266	244	203	204	176	153	149	172	207			
35-	271	257	238	224	207	194	178	156	124	124	99	86	82	98	109				
40-	127	117	107	96	85	74	61	46	44	33	29	29	33	33					
10. Total Live Female Births produced by original generation of 1,000 girls at end of successive age groups.																			
15-	47	48	47	45	41	36	32	28	26	24	22	23	24	23	23	23	31	34	45
20-	309	312	310	306	288	267	254	242	235	224	218	209	217	190	182	210	243	318	
25-	675	681	680	662	627	599	577	562	546	516	474	470	446	399	399	451	554		
30-	1,018	1,029	1,013	974	927	884	854	828	790	719	678	646	599	548	571	658			
35-	1,289	1,286	1,251	1,198	1,134	1,078	1,032	984	914	843	777	732	681	646	680				
40-	1,416	1,403	1,358	1,294	1,219	1,152	1,093	1,030	958	876	806	761	714	679					
11. Units of Reproductive Capacity possessed by 1,000 girls of original generation.																			
	626	628	630	635	644	655	670	689	706	715	722	732	747	768	795	828	860	881	898
12. Units of Reproductive Capacity per 1,000 female progeny produced by original generation at successive ages.																			
15-	639	649	662	679	698	711	718	727	739	757	781	811	845	872	890	905	918	934	952
20-	649	662	679	698	711	718	727	739	757	781	811	845	872	890	905	918	934	952	
25-	662	679	698	711	718	727	739	757	781	811	845	872	890	905	918	934	952		
30-	679	698	711	718	727	739	757	781	811	845	872	890	905	918	934	952			
35-	698	711	718	727	739	757	781	811	845	872	890	905	918	934	952				
40-	711	718	727	739	757	781	811	845	872	890	905	918	934	952					
13. Reproductive Capacity Units produced at successive age groups per generation of 1,000 girls. (12) × (9) ÷ 1,000.																			
15-	30	31	31	31	29	26	23	20	19	18	17	19	20	20	20	25	28	32	43
20-	170	175	179	182	176	166	161	158	158	156	159	157	168	149	144	167	198	270	
25-	242	251	258	253	243	241	239	242	243	237	216	228	204	189	199	225	296		
30-	233	243	237	224	218	211	210	208	198	172	178	157	138	137	161	197			
35-	189	183	171	163	153	147	139	127	105	108	88	78	75	92	104				
40-	90	84	78	71	64	58	49	39	38	29	26	27	31	31					
14. Reproductive Capacity Units produced at successive age groups per 1,000 Capacity Units in progenitor generation. (13) ÷ (11) × 1,000.																			
15-	48	49	49	49	45	40	34	29	27	25	24	26	27	26	25	30	33	36	48
20-	272	279	284	287	273	253	240	229	224	218	220	214	225	194	181	202	230	306	
25-	387	400	410	398	377	368	357	351	344	331	299	311	273	246	250	272	344		
30-	372	387	376	353	339	322	313	302	280	241	247	214	185	178	203	238			
35-	302	291	271	257	238	224	207	184	149	151	122	107	100	120	131				
40-	144	134	124	112	99	89	73	57	54	41	36	37	41	40					
15. Reproductive Capacity Units produced by end of age group per 1,000 Capacity units in progenitor generation.																			
15-	48	49	49	49	45	40	34	29	27	25	24	26	27	26	25	30	33	36	48
20-	320	328	333	336	318	293	274	258	251	243	244	240	252	220	206	232	263	342	
25-	707	728	743	734	695	661	631	609	595	574	543	551	525	466	456	504	607		
30-	1,079	1,115	1,119	1,087	1,034	983	944	911	875	815	790	765	710	644	659	742			
35-	1,381	1,406	1,390	1,344	1,272	1,207	1,151	1,095	1,024	966	912	872	810	764	790				
40-	1,525	1,540	1,514	1,456	1,371	1,296	1,224	1,152	1,078	1,007	948	909	851	804					
16. Percentage of total ultimate achievement produced in successive age groups (generations of completed fertility only).																			
15-	3	3	3	3	3	3	3	2	2	2	3	3	3	3	3	3	3	3	3
20-	18	18	19	20	20	20	20	20	21	22	23	24	26	24	24	26	24	24	24
25-	25	26	27	27	28	28	29	30	32	33	31	34	32	31	32	31	31	31	31
30-	24	25	25	24	25	25	25	26	26	24	26	23	22	22	22	22	22	22	22
35-	20	19	18	18	17	17	17	16	14	15	13	12	12	15	15	15	15	15	15
40-	10	9	8	8	7	7	6	5	5	4	4	4	5	5	5	5	5	5	5
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

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Section 10 the numbers are accumulated to show the total achievements of each generation at advancing ages of its reproductive period.

In thus assigning recorded births to the generations responsible for them and thereby ascertaining the progeny achievements of successive generations in this country since data first became available under the earliest Registration Act of 1837, this section furnishes the first objective of the present enquiry.

It shows that the first generation for which the necessary information exists, viz. that of the girls born 110 years ago, had replaced itself in the numbers of its female progeny before reaching age 35 and that thereafter it went on reproducing until by the end of its reproductive period, the total progeny was over 40 per cent. in excess of the generation originally responsible for them. It shows also that the achievement was at a maximum for the earliest generation recorded, and that, ever since, the successive performances have declined, continuously and fairly steeply, right down to the generation which has only just completed its reproductive period, viz. that of 1906, with a total achievement barely more than two thirds of its originating element.

Perhaps the most surprising feature of this demonstration is the revelation that the last generation in this country to reproduce itself completely was born as long ago as 1876 or thereabouts.

From the partial achievements available for generations subsequent to 1906 there is evidence that the record for that generation may prove to be a minimum which is being succeeded by a steady improvement, steeper apparently than that of the preceding fall.

As population producers, however, it is not so much the number of girl children born that matters, as the numbers of them who survive to their reproductive ages, and as indexes of population producer sufficiency, the generation replacement rates of section 10, which are expressed in terms of girls born, need adjusting to take account of the consistently higher survival rates exhibited by the progeny over that of the generation which produced them. This is carried out in the remaining sections of Table 4 by expressing the girl births throughout in terms of the units of reproductive capacity they represent.

Section 11 sets out the units of reproductive capacity possessed by 1,000 girls born in the generation year; as derived from the top line of section 6 of the table on page 212 of the 1940-45 Text volume or section 2 of the table on page 212 of this volume.

Section 12 likewise sets out the similar capacity values attaching to the progeny of each generation according to their successive periods of birth.

Section 13 shows the number of capacity units produced by each generation, obtained as the product of sections 12 and 9, and these when divided by section 11 lead to

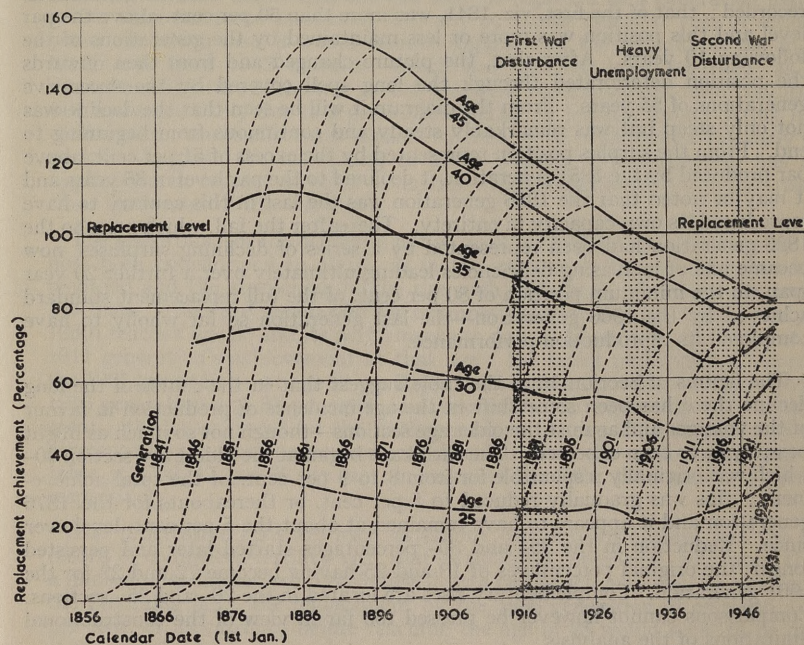
Section 14 which shows the capacity units produced at each age per 1,000 units in the parent generation.

Section 15 finally accumulates the age capacities of section 14 so as to show the build up of the capacity production of each generation through its reproductive ages and its ultimate total achievement at the end.

Section 16 supplements 15 by showing, for generations which have completed their reproduction, the percentage of the total ultimate achievement produced in successive intervals of the reproduction period.

As was anticipated, the relative replacements in terms of reproductive capacity (Sections 14 and 15) are higher throughout than the corresponding replacements expressed in terms of girls born (Sections 9 and 10), and to enable the changes and trends associated with them to be more readily seen and appreciated, the figures of Section 15 are supplemented by their representation in picture form in Diagram B.

DIAGRAM B.—Rates of Reproductive Capacity Replacement by successive generations 1841-1931. England and Wales.



The performance of each generation is shown in the diagram by a broken line curve of S shape passing across the 30 calendar years during which the reproductive ages (15-45) of the generation were spent. Thus the curve to the extreme left depicts the way and extent to which the generation born round 1841 replaced itself (in terms of reproductive capacity units) over the calendar years 1856 to 1885 which covered its reproductive period; it shows that by the time the generation had reached age 25 in 1866 it had produced progeny with a capacity equal to 32 per cent. of its own original capacity and 21 per cent. of the total capacity it was destined ultimately to produce; by age 35 in 1876 it had more than replaced itself (108 per cent.) and thereafter still went on producing to reach an ultimate achievement 52 per cent. in excess of its own original capacity. Similar S curves exhibit the like performances of successive generations at five year intervals down to the present time, and the whole taken together provides a vivid visual image of the contraction which has taken place in the reproductive habits of the community over the past century.

The transverse thick line curves drawn through the successive S curves indicate the relative degrees of replacement achieved by the successive generations on reaching ages 25, 30 etc., up to 45 at which reproduction is assumed to end. Regarding these it must be borne in mind that only the records since 1938 can be regarded as strictly factual, those for earlier years being constructed as described in sections 2-6; at the same time the controls applied to the construction were reasonably rigorous and it is difficult to conceive of any logical alternative interpretation of the available facts that would lead to a significantly different presentation.

From the bottom line of Section 15 of the table or its representation by the top transverse line of the diagram, it will be seen that, in terms of capacity replacement, reproduction was at a maximum for the earliest generations recorded; that of the first, viz. 1841, was more than 50 per cent. above the par level and this position was more or less maintained by the generations of the following 10 years. After that, the picture changed and from then onwards the position deteriorated through the long spell covered by the successive generations of 55 years. From the diagram it will be seen that the decline was not only steep but was remarkably steady and continuous from beginning to end. From the surplus position represented by the excess of 51 per cent. above par produced by the 1851 generation, it declined to the par level in 35 years and it may be noted that the 1886 generation was the last in this country to have reproduced its own capacity in entirety. Thereafter the fall, which prior to the 1886 generation had been represented by a series of declining surpluses, now became one of increasing deficiencies leading ultimately over a further 20 year span, to the minimum position of 80 per cent. of the full replacement standard achieved by the 1906 generation—the last generation so far wholly to have completed its reproduction performance.

The figures of Section 16 of the table suggest that in the course of the long decline there has been some shift in the age incidence of production in favour of the younger and against the older age sections—though not so much as might possibly have been expected. The shrinkage began at the oldest age section 40—which was originally responsible for from 8 to 9 per cent. of the total achievement; this was gradually reduced to 5 per cent. or thereabouts for the 1876 generation and it appears to have remained at about the 5 per cent. level ever since. Reduction in the 35- and 30- percentages started later and persisted longer, the original percentages of 18 and 25 having become 12 and 22 for the 1901 generation. Complementary rises are located in the 20- and 25- sections. Comparisons cannot however be pressed too far in view of the constructional limitations of the analysis.

From the position of the three vertical hatchings in the diagram it will be seen that more than half the generations portrayed have been subject in varying degrees to one or more of the disturbances associated with the two wars or the intense economic depression of the early nineteen thirties. Some evidence of the impact of those events on reproduction seems to be present in the irregularities of the transverse curves for ages 25 and 30—e.g. the tendency towards recovery after the First World War appears to have been arrested and deflected downward during the economic depression which followed some years later—but whether they had any permanent effect or were merely of a temporary nature is not disclosed by the presentation, their general diffusion among the generations affected being such as to leave little visible impression in the progression of their ultimate total fertilities as reflected by the top transverse curve for age 45.

But the issue of immediate importance overshadowing all other features emerging from the generation analysis, lies not in the achievements of the generations whose fertility is complete—that is up to and including the generation of 1906—but in the partial performances of all the subsequent generations down to the latest falling within the picture. And it is of the more significance since these are largely derived from factual record and are only to a small degree subject to the constructional conventions inseparable from the treatment of the earlier records.

The feature in question is the rise in the transverse curves of partial performances, i.e. for ages up to 40, which shows itself with unbroken consistency over successive generations from 1911 onwards. The degree of approximation

which must attend an analysis of this kind makes it impossible to assess the position of the minimum points of the transverse curves with precision, but there seems little doubt that the rise may be regarded as a generation feature rather than one to be associated with any particular calendar year or series of years; in which case, it would seem to suggest that the remarkable rise in the birth rate from 1942 onwards, which has hitherto been regarded as an unexplained feature of the war period, had little basic relation to war conditions but was more likely due to a generation change in fertility habits dating from earlier years, whose effect was masked by the special conditions of the early war period. It would be interesting to know whether this suggestion has any application in respect of other countries which experienced a similar rise in their birth rates of the war years.

The importance of the change is not so much in the fact that the long fall has now been transformed to a rise, as in the amount of the rise that has been recorded and the steepening of the rise with each fresh record on the several age lines. The 1916 generation for example has now (by the end of the year 1950) reached age 35 and its performance to date is 13 per cent. in excess of the 1911 generation's achievement at that age; the latest performance record of the 1921 generation—at age 30—is 20 per cent. higher than that of the preceding 1916 generation and 33 per cent. in excess of the corresponding 1911 achievement; the latest record for the 1926 generation (at age 25) is higher than any corresponding generation performance back to 1841, the earliest shown in the table, it is 30, 47 and 66 per cent. in excess of the 1921, 1916 and 1911 records respectively.

The progressive rises are such as almost certainly to ensure that the last record of completed fertility viz., that of the 1906 generation, will prove to be a minimum of the series, to be followed by a rise which may well be as steep as the preceding fall; the replacement by the 1926 generation of as much as 34 per cent. of its capacity before reaching the age of 25 would seem to be more than enough to encourage the expectation of an ultimate achievement of 100 per cent. or more.

III.—Analysis of Changes in the E.R.R.

The numbers of births occurring from time to time are influenced by a variety of factors of differing intensities operating with or against one another; and the supreme merit of collective indexes like crude rates or the E.R.R. lies in their summing up of the several factors with automatic allowance for any interacting relationship that may exist between them, the net result of the whole necessarily being of greater significance and importance than that of the separate parts of which it is composed. But changes in the total throw no light on changes in the separate parts and since it is of interest to consider the behaviour of the separate forces and—in normal periods—the trends, if any, associated with them, it will be of advantage to provide a breakdown of the net total change so far as this can be done.

A method of analysis appropriate for the purpose was provisionally introduced and described in the 1938-39 Text (page 212) and this is re-examined and its coverage extended in the paragraphs which follow. The method is described in relation to changes in the E.R.R. but it is equally applicable—with appropriate adaptation—for analysis of changes in crude rates or in the actual numbers of births.

It will be appropriate, at the outset, to refer to the various factors which can be identified as contributing, in one way or another to the differences between the gross numbers of births or the rates representing them in two separate

experiences; distinguishing, as far as may be, between factors reflecting intrinsic fertility habits and those arising from the more extraneous features of the experiences.

Regarding a population fertility experience as the relationship between the number of women in the population of reproductive age and the number of live children borne by them in a given period, it is at once recognized that the overall relationship is compounded of three primary elements, consisting of, the separate fertilities of the married and unmarried sections of the women concerned, and the relative proportions in which the two sections are combined in the community—proportions determined in the main by the marriages of the preceding 30 years or more; each of the three exerts its own influence and needs separate examination in the identification of differences. Again the legitimate and illegitimate elements are themselves subject to factors not directly bearing on fertility; each will be influenced to some extent by the age distribution of the women within the reproductive field while the legitimate section will be further influenced by the distribution of the married women over successive marriage durations, a feature arising, like the total numbers married, from the marriages of earlier years. The legitimate and illegitimate fertility sections are also affected by a series of minor factors which are outside the volition of the parents involved; the latter may be regarded as responsible for the maternities which occur, but they cannot control the product of a maternity which may be either a male or female birth, a live birth or a still birth or a single or multiple birth, and changes in sex proportions or in still birth or plurality incidence all enter as contributors to the changes in the E.R.R. over and above that arising from changes in the fertility habits of the population concerned. The E.R.R. is also influenced by the factor of mortality in that it depends on the numbers of the female births who may be expected to survive to reproductive ages in the future; their survival prospects have been steadily improving for many decades, and the improvement has consistently imparted positive contributions to the changes in the E.R.Rs. of successive years, thus providing a further factor needing separate identification in any breakdown of the total change.

Further appreciation of the factors involved and the evaluation procedure employed will be better understood by means of an example, the 1946-47 change in the E.R.R. (an increase of .106) being analysed for the purpose.

The E.R.Rs. for 1946 and 1947 are first set out at (iii) below, preceded by details of their construction at (i) and (ii).

(i) Reproductive Capacity Expended—

Age	Estimated Female Population (thousands)		Capacity Units Expended		
	1946	1947	Per Female	Amount	
				1946	1947
15-20	1,480	1,439	.024	35,520	34,536
20-25	1,637	1,559	.044	72,028	68,596
25-30	1,617	1,659	.042	67,914	69,678
30-35	1,718	1,660	.038	65,284	63,080
35-40	1,752	1,742	.034	59,568	59,228
40-45	1,654	1,670	.018	29,772	30,060
Total	9,858	9,729	—	330,086	325,178

(ii) Reproductive Capacity Created—

Live Female Births		Capacity Units Created			
		Per live female birth		Amount	
1946	1947	1946	1947	1946	1947
398,420	427,436	.9428	.9465	375,630	404,568

(iii) E.R.R. i.e. Ratio of Capacity Created to Capacity Expended .. 1.1380 1.2441

The amount of the 1946-47 increase in the E.R.R. is thus seen to be .1061 and this in relation to the mean of the E.R.Rs. (1.1910) gives a mean rate of increase of .0891. The problem is to apportion this increase amongst its contributory factors.

The first stage of the apportionment is shown in the following table:

(iv)

	Birth Capacity Value (see (ii) above)	Ratio of live female births to total live births	Ratio of total live births to total births	Ratio of total births to maternities	Maternity rate (per capacity unit expended)
1946 .. ..	.9428	.4855	.9728	1.0131	2.5229
1947 .. ..	.9465	.4852	.9759	1.0127	2.7416
1946/47 mean ..	.9446	.4854	.9744	1.0129	2.6322
1946/47 increase	-.0037	-.0003	-.0031	-.0004	-.2187
Mean rate of increase ..	-.0039	-.0006	-.0032	-.0004	-.0830
Portion of E.R.R. increase accounted for (mean rate × mean E.R.R.)	-.0046	-.0007	-.0038	-.0005	-.0990
					.1062

The effect of mortality improvement is reflected by the increase in the birth capacity value shown in (ii) and the share of its contribution to the total E.R.R. increase of .1061 is calculated and recorded on the bottom line of the first column of the table as .0046. Likewise, the positive or negative contributions arising from changes in sex, still birth and plurality incidence are evaluated in the second, third and fourth columns, the balance necessary to make up the total E.R.R. increase of .1061 being due to the increase in the maternity rate as shown in the final column. The result in each case has been reached by the simple process of ascertaining the mean rate of change affecting the factor concerned and applying that rate to the mean of the E.R.Rs. for 1946 and 1947.

There remains the task of apportioning the maternity rate change of .0990 amongst its own contributory components.

It is to be noted that, in this analysis, the maternity rates referred to are in the form of maternities "per capacity unit expended" instead of the more customary form of "per woman exposed to risk". The capacity units expended are directly related to the numbers of women exposed to risk by the simple age capacity factors shown in (i) above, and with the aid of the latter, the

estimates of women and their consequential maternity rates for 1946 and 1947 as shown in Appendix II can be readily transformed to the alternative form required here.

The maternities of 1946 and 1947 numbered 832,761 and 891,504 respectively and the method proceeds by applying the apportionment to the difference between them, viz. 58,743.

If the maternities of a year are regarded as the product of the capacity units expended and the maternity rate experienced, then a difference between the maternities of successive years will arise partly from variation in the units expended and partly from variation in the maternity rates experienced. The portion of the difference associated with the capacity units expended can be evaluated as the increase in units expended multiplied by the mean maternity rate and that associated with the maternity rate as the increase in the maternity rate multiplied by the mean of the units expended, the two products necessarily aggregating to the total increase in the maternities in accordance with the simple algebraic identity

$$(a' - a)(b' + b) \frac{1}{2} + (b' - b)(a' + a) \frac{1}{2} = a'b' - ab$$

where a and a' represent the units expended and b and b' the successive maternity rates.

Applying the procedure to the total units expended in 1946 and 1947 as shown in (i) and the corresponding maternity rates shown in (iv) there will be seen to have been

A. a loss of maternities from the decline in units expended equal to $-4,908 \times 2.6322 \dots \dots \dots -12,919$

B. a gain in maternities from the increase in the all ages maternity rates equal to $.2187 \times 327,632 \dots \dots \dots 71,653$

the two portions accounting—within limits of significance—for the total maternity increase of 58,743.

Alternatively the process may be applied to separate age groups and the results aggregated as in the following section

(v)

Age	Increase in units expended	Mean Maternity rate	Product 1 × 2	Increase in Maternity rate	Mean units expended	Product 4 × 5
	1	2	3	4	5	6
15—	— 984	.7636	— 751	-.1042	35,028	3,650
20—	— 3,432	3.0466	— 10,456	-.6058	70,312	42,595
25—	— 1,764	3.8824	— 6,849	-.3797	68,796	26,122
30—	— 2,204	3.1378	— 6,916	-.0151	64,182	— 969
35—	— 340	1.9767	— 672	-.0236	59,398	— 1,402
40—	— 288	1.1910	— 343	-.0119	29,916	356
Total	— 4,908		— 11,603		327,632	70,352

in which case the division is between

C. Loss of maternities from the combined effect of reduction in numbers and change of age incidence in the units expended . . . -11,603

D. Gain in maternities from increase in the combined fertility factors after excluding the effect of age changes in the units expended . . . 70,352

The effect of the age change in units expended alone will be given by C-A indicating a gain of about 1,316 maternities thereby.

Finally the separate contributions from changes in legitimate and illegitimate fertility are obtained by aggregating the products of mean units expended and maternity rate change in each of the age and marriage duration cells identified in the experiences as follows

(vi)

Age	Non-married women	Married Women at following marriage durations										
		0-8½ mths.	8½-11½ mths.	1-year	2-years	3-years	4-years	5-years	6-years	7-years	8-years	9-years
(a) Mean Capacity units Expended 1946-47												
15-	33,828	624	152	324	86	14	—	—	—	—	—	—
20-	39,380	5,627	1,996	7,254	5,693	4,371	3,254	1,784	728	196	30	—
25-	20,265	2,534	963	4,008	3,959	4,482	6,168	7,532	7,617	5,484	2,935	1,605
30-	12,749	936	332	1,303	1,258	1,442	2,075	3,232	5,136	6,075	5,684	5,759
35-	11,764	469	162	614	572	628	806	1,112	1,597	2,005	2,247	2,797
40-	6,444	146	51	198	184	194	235	288	344	380	402	476
(b) Increase or Decrease (-) in Maternity Rate per unit Expended. 1946-47												
15-	-.041	5.063	7.337	4.979	3.004	4.033	—	—	—	—	—	—
20-	-.062	1.593	3.743	1.480	1.027	.834	-.836	-.695	-.643	—	—	—
25-	-.041	1.329	2.850	.961	.469	.638	.614	-.307	-.005	1.113	1.848	—
30-	-.043	.855	1.500	.682	.242	.260	.290	-.111	-.044	-.179	-.040	-.029
35-	-.010	.523	.644	.462	.144	-.056	-.144	-.050	-.220	-.232	-.029	-.003
40-	-.001	.394	.489	.328	.178	-.339	-.355	-.039	-.000	-.134	-.200	-.016
(c) Product of (a) × (b)												
15-	-1,387	3,159	1,115	1,613	258	56	—	—	—	—	—	—
20-	-2,442	8,964	7,471	10,736	5,847	3,645	2,720	1,240	468	218	55	—
25-	— 831	3,368	2,744	3,852	1,857	2,860	3,787	2,312	— 38	795	-795	47
30-	— 548	800	498	889	304	375	602	359	— 226	-1,087	227	-317
35-	— 118	245	104	284	82	— 35	116	— 56	— 351	— 465	65	— 8
40-	— 6	58	25	65	33	— 66	83	— 11	—	51	80	8
Total of age items	-5,320	16,594	11,957	17,439	8,381	6,835	7,308	3,844	-147	-488	-368	-270
								66,191				-4,894

This indicates

E. A fall in maternities due to decline in illegitimate fertility of -5,320

F. A gain in maternities from a net improvement in legitimate fertility of 66,191

and from these, the balance required to make up D which represents the contribution arising from change in the incidence and duration distribution of the married women in the community is ascertainable as 9,610 (=D - E - F).

The relevant portions of the increase in the numbers of maternities are assembled in the following statement

(vii)

	Proportion of Maternity increase due to			
	Legitimate Fertility	Illegitimate Fertility	Marriage Incidence	Age change in units expended
Number of Maternities ..	66,191	-5,320	9,481	1,316
Proportion of total mean maternities ..	.0768	-.0062	.0110	.0015
Portion of E.R.R. increase accounted for (proportion × mean E.R.R.) ..	.0915	-.0074	.0131	.0017

The four items together account for .0990 of the 1946-47 increase in the E.R.R. and with the contribution from the other factors identified in (iv) make up the whole of the E.R.R. increase of .106.

The third section of statement (vi) is of interest in showing the distribution of the gains and losses in different sections of the reproductive population, the bulk of the gains in 1946-47 being seen to be associated with the younger and more recently married women. The first column in the married woman's section shows that more than a quarter of the total 1946-47 increase in maternities was due to increases in maternities from premarital conceptions.

Apportionments of the E.R.R. changes over successive calendar years since 1938 have been carried out in accordance with the procedure illustrated for 1946-47 and the results are appended in Table 5. For years prior to 1938 the basic data are not available in the detail necessary for the purpose but with the aid of suitable assumptions it is thought that the main elements can be reconstructed with sufficient accuracy to disclose the more important features and phases of the changes and these are shown in the table in the form of quinquennial or other period averages back to 1911.

Table 5.—Apportionment of Annual changes in the E.R.R. amongst contributory factors 1911-1950.

Period	Total Change in E.R.R.	Proportion of total change (× 10,000) due to variation in:—								Change in Prenuptial element included in Legit. Fertility component
		Legit. Fertility	Illeg. Fertility	Marriage Incidence (Propn. and Duration)	Mortality (Experienced or Expected)	Age Incidence of Female Popn.	Sex Ratio of Births	Still Birth Incidence after 1927	Plurality of Births after 1938	
Annual Averages for period										
1911-14	-.003	-.124	1	75	77	-9	6	—	—	—
14-18	-.077	-.805	4	6	64	-9	16	—	—	—
18-23	-.036	193	21	94	92	0	6	—	—	—
23-28	-.026	-.232	6	42	40	8	1	16*	—	—
28-33	-.020	-.266	10	25	29	24	2	2	—	—
33-38	-.011	-.64	9	166	24	-17	4	5	—	—
38-45	-.015	-.78	80	119	29	-6	6	14	0	87
45-50	-.016	32	59	127	41	8	1	12	1	48
Individual Years										
1938-39	-.007	-.270	0	245	24	-44	-19	2	-2	-136
39-40	-.034	-.845	13	409	23	29	13	7	2	-283
40-41	-.010	-.530	90	287	23	13	-3	19	-1	-52
41-42	-.095	769	83	100	26	0	41	14	0	-10
42-43	-.049	356	102	2	31	-21	-2	28	-2	55
43-44	-.099	955	159	-159	36	-34	-6	25	8	-41
44-45	-.085	-.984	115	47	38	12	18	0	-6	-82
45-46	-.202	1,947	-120	112	41	22	8	4	10	46
46-47	-.106	915	74	131	46	17	-7	38	-5	229
47-48	-.137	-1,612	47	200	45	30	0	10	-2	6
48-49	-.053	-.665	48	117	39	19	0	5	3	4
49-50	-.037	-.423	6	76	32	-49	4	1	1	-38
Total 1938-50	-.188	-.387	267	1,469	404	-6	-35	153	6	-228

* Figure for year 1927-28 only.

Perhaps the main virtue of an analysis of this kind at the present time is not so much that it distributes the E.R.R. change amongst the factors contributing to it, as in demonstrating that there are a number of factors involved whose contributions, whether positive or negative, are sufficiently significant to merit separate identification and evaluation.

Over the earlier portion of the period covered by the analysis, viz., from 1911 to 1933, during which the E.R.R. was rapidly falling, the decline may be seen to have been due primarily to the diminution of the legitimate fertility component. The decline in family building reflected by this component was

considerable and though its full impact on total birth capacity production was offset to some extent—partly by simultaneous improvement in the marriage factor reflecting an increase in the number of couples available to have families and partly by the mortality factor indicating improvement in the survival power of the new births—neither of these compensations was sufficient to do more than mitigate an otherwise serious decline. Within this period the sections for 1914-18 and 1918-23 should preferably be read together in that to a large extent they are dominated by complementary effects arising from the abnormalities associated with the first world war and its aftermath.

In 1933 the E.R.R. touched its lowest point and from then up to the outbreak of the second world war, the earlier fall was superseded by a small but steady improvement. The analysis shows that this was due, not to any increase in the rate of family building (legitimate fertility) but to the considerable increase in the marriage contribution which was more than enough to counteract the decline in family building, which still went on though on a much smaller scale than had characterized the preceding years.

From 1938 up to the present time the record is overshadowed by temporary fluctuations originated during the initial period of hostilities but continued thereafter throughout the post war adjustment years. For the period as a whole—as shown by the bottom line of the table—there would appear to have been a further decline in the legitimate fertility component but it is relatively small, and even so may to some extent be a matter of record rather than reality for the last column of the table indicates that more than half has been due to decline in legitimate births arising from premarital conception, a decline which appears to have been compensated by an increase in the illegitimate factor of a not dissimilar order. The whole of the considerable increase in the E.R.R. which has been recorded is shown to be due to the positive marriage and mortality contributions, the former reflecting the large increase in the proportion of married women at the reproductive ages which has been so outstanding a feature of recent years.

The significance of the mortality factor lies not in its contribution in a single year but in its persistency over the whole period covered. Its cumulative effect over the years from 1911 to 1938 resulted in a positive contribution to the E.R.R. of .14, to which there has been a further addition of .04 over the remainder of the period up to the present date.

The identification of the four remaining factors helps to sharpen the definition of the picture but individually they are not of significance except perhaps that reflecting the improvement arising from the decline in stillbirth incidence, which, like the mortality factor already mentioned, is cumulative in character. But with still births as with mortality, the lower the incidence becomes, the less room is there for further fall and, though some further contributions from those sources may be anticipated, they will tend to be of a diminishing character.

Movements in the primary factors over recent years have been far too disturbed by temporary abnormal features to enable any satisfactory inference to be drawn concerning their future movements, and experience of their behaviour under more stable conditions must be awaited before it can be seen whether and to what extent this type of analysis may assist in the assessment of birth expectations of the future.

APPENDIX IV

Population Statistics Branch of the General Register Office,
31st December, 1950.

<i>Administrative :</i>	S. G. Holloway (Assistant Secretary). H. E. Millbank, M.B.E. (Principal).
<i>Professional :</i>	V. P. A. Derrick, C.B.E., F.I.A. (Chief Statistician). N. H. Carrier, M.A. (Statistician). Miss M. P. Newton, M.A. (Statistician). J. R. L. Schneider, B.Sc. (Econ.) (Assistant Statistician).
<i>Executive :</i>	H. A. Hallett (Senior Executive Officer). E. Graver, D.F.C. (Higher Executive Officer). C. F. James (Higher Executive Officer). Miss N. C. Jones (Higher Executive Officer). T. C. Williams (Higher Executive Officer).

APPENDIX V

Committees on which the Registrar General was represented during
the years 1946 to 1950 included the following :—

Alien Passenger Movement Working Party on Home Office Statistics.
Boundary Commission for England.
Boundary Commission for Wales.
Change of Name Interdepartmental Working Party.
Cremation Regulations Home Office Committee.
Government Local Offices Working Party.
Industrial Classification Inter-Departmental Committee.
International Organisations Committee Population and Vital Statistics Working Party.
National Health Service Records Ministry of Health Committee.
Occupational Classification Inter-Departmental Committee.
Overseas Travel Committee (Irish Section).
Royal Commission on Population Statistics Committee.
Social and Economic Research Inter-Departmental Committee.
Statistics of Passenger Movement Inter-Departmental Working Party.

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Index to the Tables and Diagrams in this Volume, and to the Tables in
the related Parts II of the Registrar General's Statistical Reviews

- Notes.*—1. Unless otherwise stated, all items relate to England and Wales.
2. Unless otherwise stated, the tables in the Parts II relate to the years 1946 to 1950 respectively, and in the Text volume to the years 1946 to 1950 inclusive, either separately, or over the period as a whole.
3. An asterisk (*) indicates that the data are distributed according to the age of the mother, or in the case of the Infertility section, the age of the deceased.

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* In the Statistical Review for 1949 and 1950 only.

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