VITAL STATISTICS.

Marriages in Victoria can only be celebrated by a minister of religion whose name is registered in the office of the Government Statist, or by the Government Statist, or any duly appointed registrar of marriages. In order to guard against the celebration of marriages by undesirable persons, the present law provides that no person shall be registered as a minister of religion unless he ordinarily officiates as such in one of the officially recognized religious denominations, is supported by the recognized head of the denomination in Victoria, or, if there be no such head, then by at least two registered ministers; and satisfies the Government Statist that he is a fit and proper person to celebrate marriages. The Governor-in-Council may prohibit from celebrating marriages any minister who is proved guilty of any offence, misconduct, or impropriety unworthy of his calling; and the Government Statist may cancel the registration of any minister who ceases to officiate or otherwise loses his qualifications. Any clergyman or person officiating as such who celebrates a marriage without being duly registered, or any person who obtains registration by untruly representing himself as an officiating minister, or who personates a registrar, shall be guilty of a misdemeanour, punishable by a penalty not exceeding £500, or by imprisonment not exceeding five years, or by both; but if the omission were accidental, the penalty is reduced to a maximum of £20 on summary conviction. Marriages of Jews and Quakers are exempted from the above provisions, and are deemed legal and valid if celebrated according to their respective usages. To guard against the abuse of the system of matrimonial agencies, the Governor-in-Council is empowered, if deemed expedient, to prohibit ministers from celebrating marriages in any undesirable place or building. No marriage shall be invalid by reason of having been celebrated by an unqualified person, if either of the parties shall have believed at the time that such person was qualified, nor by reason of any formal defect or irregularity. Marriage with a deceased wife's sister has been legalized in Victoria since 1873; but there is no provision to validate a marriage of a woman with a deceased husband's brother.

The present official system of compulsory registration of births, deaths, and marriages in Victoria has been in force since 1853; and the registers—framed on the best models—are replete with all necessary information bearing on the family history of the people. The statutory duties under the Registration Acts are performed by the Government Statist, who

has control over the local registrars of births and deaths, and (so far as regards their registration duties) of the officiating clergymen and lay registrars; and copies of all entries certified by him or by the assistant Government Statist, are primâ facie evidence in the Courts of Australia of the facts to which they relate. At the head office in Melbourne there is kept for reference a complete collection of all registrations effected since 1st July, 1853, as well as certified copies or originals of all existing church records relating to earlier periods, as far back as 1837. For the registration of births and deaths, the State is divided into 634 registrars' districts, for each of which a registrar is appointed, who (if not a public servant) is paid by fees at the rate of 2s. 6d. per entry, but is not prevented from following his or her own private business; whilst the marriages are recorded by the clergyman or lay registrar who performs the ceremony. Registrations of marriages are made in triplicate, and of births and deaths in duplicate—each copy bearing the original signatures of the parties married and witnesses (in case of marriage), or of the informant (in case of a birth or death), and of the registrar. One copy is retained by the registrar or clergyman; one forwarded to the Government Statist—to be kept as a permanent record; and the third (in case of marriage only) is given to one of the parties married. The parents of any child born in Victoria, or the occupier of a house wherein a birth or death occurs, is required under a penalty of £10 (£25 in the case of an illegitimate child) to give notice (either personally or by authorized agent) to the registrar of the district within 60 days after the birth, and within 15 days after the death. (As an alternative, the notice may be given by the attending doctor or nurse.) No fee is charged for registration, except in the case of a birth registered after 60 days, when 5s. is charged if within 12 months, and 12s. 6d. if over one year; and parents would save themselves much trouble and expense by promptly registering the births of their children. By an Act (No. 1835), passed on the 6th April, 1903, an illegitimate child may be legitimized after the marriage of the parents, if the birth be registered for that purpose within six months after the date of the marriage, or of the passing of the Act, provided there was no lawful impediment, at the time of the birth, to the marriage of the parents. Applicants for searches or certificates of births, deaths, or marriages should, in applying to the Government Statist, furnish particulars of the date and place of the event; also the names of the parties in the case of a marriage, or the name, age (if a death), and parentage in the case of a birth or death.

The number of marriages celebrated in Victoria during the year 1902 was 8,477, as against 8,406 in 1901, and 8,308 in

Marginal notes:
Church records.

Marriages, 1898-1902.

1900, and an average of 8,190 during the last five years. During the same period the numbers show a steady increase from 7,620 in 1898 to 8,477 in 1902.

The proportion which the number of marriages bears to the total population is generally called the marriage rate. This at first gradually declined from over 8 per 1,000 of the population in the years 1860-2 to a minimum of 5·98 in 1879. It gradually recovered to over 8 in the years 1888-90, but reached the minimum again in 1893-4. Since the latter period there has been an improvement, first to a level of 6·43 in 1896-8, and then gradually to 7·02 in 1902, which was the highest since 1891. The following are the rates for the last five years:— *(margin: Marriage rates.)*

1898	...	...	...	...	6·44
1899	...	...	...	...	6·86
1900	...	...	...	...	6·96
1901	...	...	...	...	6·99
1902	...	...	...	...	7·02

It has been shown upon more than one occasion* that the frequency of marriage is not dependent upon the number of the total population, still less upon the number of marriageable women, but almost entirely upon the number of marriageable men the community contains, the tendency of whom to marry is modified by their occupations, and upon the view they take of their future prospects. To demonstrate this, the following table has been constructed showing the proportion of marriages to the population, to the number of single men, and to the number of single women, in each census year from 1854 to 1901:— *(margin: Factors in marriage rates.)*

| Year of Census. | Enumerated Population. | Number Marriageable†— | | Marriages‡ | Proportion of Marriages per 1,000 of the— | | |
		Men.	Women.		Population.‡	Marriageable Men.	Marriageable Women.
1854 ...	234,361	70,865	15,083	3,696	15·77	52·16	245·04
1857 ...	383,668	95,427	26,317	4,465	11·64	46·79	169·66
1861 ...	513,896	106,940	37,006	4,528	8·81	42·34	122·36
1871 ...	712,263	89,921	65,386	4,715	6·62	52·43	72·11
1881 ...	849,438	99,824	119,360	5,732	6·75	57·42	48·02
1891 ...	1,130,463	163,043	173,138	9,007	7·97	55·24	52·02
1901 ...	1,193,340	154,334	211,087	8,468	7·08	54·87	40·12

Exclusive of Chinese and Aborigines.

* See "Victorian Year-Book, 1889-90," pages 265 to 267 ; same work 1879-80, pages 103 and 104 ; same work 1880-81, pages 199 and 200 ; same work 1881-2, pages 165 and 166 ; and same work 1892, vol. i., pages 323 and 324.

† Comprising bachelors aged 20 and upwards, and widowers and divorced men at all ages ; and unmarried women aged 15 and upwards.

‡ During the twelve months of which the date of the census was the middle.

Fluctuations in marriage rate.

It will thus be observed that, whilst the proportion of marriages to the population (marriage rate) and to the marriageable women has fluctuated considerably, the proportion to the marriageable men has been tolerably constant, the extremes being 57½ in 1881, and 42 1·3 in 1861, and the usual range was between the narrow limits of 52 and 55. This proportion steadily diminished from 57½ in 1881 to 55 in 1901, although the latter was higher than at any period prior to 1881. The proportion of marriages per 1,000 married women, on the other hand, has fallen off considerably. Even in the more settled times, after the gold rush, it fell from 72 in 1871 to a level of about 50 in 1881 and 1891, and still further to as low as 40 in 1901, owing to the generally increased proportion of marriageable women to men, which at the last period reached to as high as 137 per 100 men. In other words, the chances of a woman marrying in Victoria are now very much smaller than at any earlier period, the proportions having fallen from about 1 in every 4 of the marriageable women in 1854, 1 in 8 in 1861, to 1 in 20 in 1891, and 1 in every 25 in 1901.

Marriage rates in certain age-groups, 1881-1901.

To further investigate this subject, it will be interesting to ascertain the marriage rates amongst marriageable men and women at different periods of life, and, with this view, the rates have been computed for various age groups between 15 and 50 at each of the last three census periods, and are shown in the following table:—

PROPORTION OF MARRIAGES PER 1,000 MARRIAGEABLE MEN AND WOMEN AT EACH AGE.

Age Group.	Men.			Women.		
	1881.	1891.	1901.	1881.	1891.	1901.
15—21	...	...	...	24·6	23·6	18 8
21—25*	57·8	44·3	44 6	118 8	106·0	87·2
25—30	114·2	85·9	90·5	105·7	100 5	84·7
30—35	82·9	75·2	82·1	73·1	66·4	57·9
35—40	56·4	51·1	62·6	53 8	46·4	37·2
40—45	30·5	33·4	39·9	32·5	27·7	22·3
45—50	21·8	25·9	29·8	22·1	17·8	14 3
50 upwards ...	10·5	9 1	9·1	4·9	4·2	2·4
15—45	...	...	...	55·9	58·7†	49·0

Tendency amongst men to defer marriage.

In the last two periods, as compared with the first, there is every evidence of a tendency amongst men to defer marriage

* In the case of men 20—25.

† The apparent anomaly of the rate for women between 15 and 45 being higher in 1891 than in 1881, whilst the rate in each age group in 1881 is higher than that in the corresponding period in 1891, is due to the changes in the age constitution of women under 45 years of age.

to a later period in life—the turning point being age group 30-35, for there has been a marked decrease in the rates below, but an increase in the rates above that age. In 1901, as compared with 1891, however, there was a considerable increase in the rate at every age period except 20-25 and over 50.

In the case of marriageable women, there was, it will be observed, a slight fall between 1881 and 1891, but a considerable fall between 1891 and 1901 in the proportion marrying at each age group under 35; but a rapid fall from each census to the subsequent one in the proportions at ages over 35. The fall between 1891 and 1901 was almost uniformly distributed over the various age groups, and averaged about 18 per cent. In this connexion it may be noted that whilst the marriageable women between 15 and 45 increased by 25,300 during the intercensal period 1891-1901, the number of marriageable men between 20 and 50 decreased by 9,156—a decrease chiefly due to the efflux of single men to Western Australia and South Africa. Thus, there were resident in Western Australia, according to the recent census returns of that State, 17,433 adult males of Victorian birth (besides 6,909 minors) of whom 6,701 were married, and 10,732 were single.

Fall in marriage rates of women at all ages.

In the following table are shown the marriage rates per 1,000 of the population in the Australian States and New Zealand for each of the last five years, and also the mean rates for the whole period:—

Marriage rates in Australian States and New Zealand.

Year.	Victoria.	New South Wales.	Queens-land.	South Australia	West Australia.	Tasmania.	Common-wealth.	New Zealand.
1898 ...	6·44	6·77	6·03	6·39	9 91	6·59	6 77	6·91
1899 ...	6 86	6·95	6·78	6·45	9·92	6 72	7·03	7·28
1900 ...	6·96	7 38	6·88	6·37	10 06	7·71	7·24	7·67
1901 ...	6·99	7·68	6·61	6·43	9·66	7·71	7·29	7·81
1902 ...	7·02	7·53	6·31	6·61	9 77	7·46	7·23	8·01
Mean	6 86	7·27	6·52	6·42	9·98	7·32	7·17	7·56

It will be observed that, according to the average of the five years, the lowest marriage rates prevailed in South Australia and Queensland, and by far the highest in Western Australia. In Victoria the rate was somewhat below, and in New South Wales slightly above the average; but in both these States the marriage rate has been steadily improving in recent years.

Marriage rates in different States compared.

Marriages in
proportion
to mar-
riageable
males in
Australian
States and
New
Zealand.

For reasons already explained, a better and more reliable index of the frequency of marriage in the different States is a comparison of the marriages with the number of marriageable male adults per 1,000, aged 21 and upwards, such as is contained in the following statement for the average of the three years, 1900 to 1902:—

Victoria	56·0
New South Wales	58·3
Queensland	41·6
South Australia	56·8
Western Australia	41·9
Tasmania	65·7
Total Australia	55·7
New Zealand	55·1

Although the marriage rates are generally regarded as evidence of prosperity in a community, it can hardly be regarded as such in some of the Australian States, where the age and sex constitutions are not normal. Thus, in Queensland and Western Australia, the low rates amongst marriageable men cannot be said to be due to the absence of prosperity, as compared with the other States, or to greater disinclination on the part of the men to marry, but rather to the fact that the number of marriageable women to that of men is small in both those States.

The average marriage rate of Australia is about the same as in Norway, but is lower than in 11 out of the 15 European countries shown in the following table for the period, 1896-1900:—

Hungary ...	8·4		Holland	7·4
German Empire ...	8·4		Denmark ...	7·4
Belgium	8·3		Scotland	7·3
England and Wales	8·1		Australia (1898-02)	7·2
Austria	8·0		Italy	7·1
Spain	7·7		Norway	6·9
Switzerland ...	7·7		Sweden	6·1
France	7·5		Ireland	4·9

Formerly the marriages which were celebrated in urban and rural districts were compared with the populations of those districts respectively, but as the place where a marriage was solemnized is no guide as to domicile, the method has been abandoned, and the classification according to the usual residence of the parties adopted instead. The following table gives the average annual numbers and rates per 1,000 of the population, of brides and of bridegrooms, whose usual place of residence (if in Victoria) was in Melbourne and suburbs, other

urban districts, or rural districts respectively, or was outside the State—during the three years, 1900 to 1902:—

Usual Residence of Bridegroom.	Usual Residence of Bride.				Total Bride-grooms.	Proportion of Bride-grooms per 1,000 of Population.
	Metro-politan.	Other Urban.	Rural.	Outside Victoria.		
In Victoria—						
Metropolitan Districts	3,274	120	191	34	3,619	7·2
Other Urban ,,	105	1,167	212	11	1,495	7·2
Rural ,,	288	261	2,318	22	2,889	5·8
Outside Victoria ...	166	52	82	94	394	..
Total Brides ...	3,833	1,600	2,803	161	8,397	6·99
Proportion of Brides per 1,000 of Population	7·7	7·7	5·6	...	6·99	...

It will first be noticed that nearly 4¾ per cent. of the bridegrooms, and nearly 2 per cent. of the brides resided outside the State. The marriages of the former do not properly belong to Victoria, but the inflation of the marriage rate to that extent will probably be counterbalanced by the marriages of Victorians whilst visiting other States. But excluding non-residents, the figures show that the marriage rate—for both males and females—was the same amongst residents of the metropolitan as amongst those of the other urban districts, whilst in both cases it was considerably higher than amongst residents of the rural districts. *Lower marriage rate in rural than urban districts.*

To what extent the lower rates in the rural districts are due to variations in sex, age, and conjugal condition, is a question which may be solved by an examination of the recent census returns. The first striking fact disclosed is the great preponderance of females over males in both urban districts, whilst the reverse was the case in the rural districts—there being over 111½ females to every 100 males in the former, as compared with only 86½ in the latter. Secondly, there was, when compared with the total population, a larger proportion of adult males, but a much smaller proportion of adult females, in the rural than in the urban districts at each of the three age groups, 15 to 21, 21 to 45, and 45 and over—the actual percentages in the case of males being 6·22 in the country, as against 5·36 in the towns at the first age group, 1·88 as against 1·72 at the second, and 10 as against 8·36 at the third; but in the case of females, 5·52 as against 6·32 at the first, 1·61 as against 2·09 at the second, and 5·40 as against 9·07 at the third age group. So that the tendency which undoubtedly existed in former years for young men starting life to leave their homes in the country and gravitate to the towns, where life is considered more attractive, and higher wages and easier *Causes of lower marriage rate in rural districts.*

F

employment usually prevailed, has, owing to economic causes, been, at least for a time, reversed; although it still continues in the case of women, who can always readily find remunerative employment in the towns. Then again, the census returns show that there is a much larger proportion of marriageable men, but a much smaller proportion of marriageable women in the country than in either of the two urban districts—the percentage of marriageable men (aged 21 and upwards) in the total population being 14·4 in the rural, as against 11·1 in the metropolitan and 10·3 in the other urban districts; and that of marriageable women (aged 15 to 45) 11·9, as against 15·2 and 16·0 respectively. To arrive at definite results in regard to the marriage rate, it will, therefore, be necessary to compare, according to the plan already adopted, the marriages with the marriageable population of each sex in the three districts. Such a comparison shows that the disposition of men to marry is far less in the country than in the towns, but that an eligible woman in the country has— under general conditions—a better chance of marriage than one residing in the metropolis, or in the other urban districts; for, out of every 100 eligible men in the rural districts, 4 marry annually, as against nearly 7 in every 100 in the urban districts; whereas of eligible women more than one-twentieth in the rural, but less than one-twentieth in the urban districts, marry within twelve months. The following are the proportions of marriages per 1,000 marriageable persons, viz., men aged 21 or upwards, or women aged 15 to 45, in each district according to the average of the three years, 1900 to 1902:—

District.	Men.	Women.
Metropolitan	66·9	48·5
Other Urban	69·1	46·7
Rural	38·9	51·5

These results confirm those obtained when comparing the marriages per 1,000 marriageable men in the different States, when it was shown that where there was an excess of marriageable women, such rate was high, but where the proportion of marriageable women to marriageable men was abnormally low, such rate is low, but the rate for women is high.

Marriages in quarters.　　During the twenty years, 1881 to 1900, of the 153,399 marriages celebrated in Victoria, 26·73 per cent. were celebrated in the Autumn quarter, 25·97 per cent. in the Spring, 24·00 in the Summer, and 23·30 in the Winter. In the years 1901 and 1902, the percentages were 27·58 in the Autumn, 25·15 in the Summer, 24·57 in the Spring, and 22·70 in the

Winter quarter. It would thus appear that marriages are most numerous in the Autumn, and least in the Winter quarters.

The following statement shows the percentages of persons in each conjugal condition, who married at the periods specified:—

Conjugal Conditions.	1871-80.	1881-90.	1891-1900.	1901-02.
Bachelors and Spinsters ...	80·59	85·84	87·22	87·35
Bachelors and Widows ...	7 10	4·72	4·23	3·95
Widowers and Spinsters ...	7·75	6·17	6·07	6·22
Widowers and Widows ...	4·56	3·27	2·48	2·48

That these percentages are now approaching somewhat those of a settled community, might be inferred from the slight alteration during the last ten years. This is corroborated by the similar percentages for England and Wales during the year 1900, which were 87·30 for marriages contracted between bachelors and spinsters, 3·27 between bachelors and widows, 5·89 between widowers and spinsters, and 3·54 between widowers and widows.

The number of divorced persons remarrying has shown a steady increase in each year since 1898. A larger number of divorced women remarry than divorced men; the ratio for the last five years being about 10 of the former to every 7 of the latter. The following are the numbers of divorced persons remarrying for the last five years:—

Year.	Males.	Females.	Total.
1898	20	34	54
1899	25	46	71
1900	40	45	85
1901	41	45	86
1902	34	59	93

In all civilized countries minors are not permitted to marry without the consent of their parents or guardians. The following table shows the percentages of males and females who marry under 21 to every 100 marriages, for the periods,

1881-90, 1891-5, and 1898-1902, in Victoria, and for the period 1891-5 in England and Wales:—

	Number under 21 in every 100 Marriages in Victoria.			Number under 21 in every 100 Marriages in England and Wales.
	1898-1902.	1891-5.	1881-90.	1891-5.
Bridegroom	1·95	1·80	2·26	5·62
Bride	15·44	17·13	21·00	18·26
Mean	8·74	9·51	11·63	11·94

Marriages by principal denominations. During the five years, 1898 to 1902, an annual average of 8,190 marriages was registered, of which only 178, or a little over 2 per cent., were celebrated by lay registrars. This proportion was as high as 7 in the ten years 1881-90, but suddenly dropped from 6·6 to 3·7 in 1894, and has since declined to 1·4 in 1902, probably owing to the competition of matrimonial agencies, which sprang up about 1894. Of the other marriages, 1,681 were solemnized according to the rites of the Church of England, 1,257 of the Presbyterians, 1,770 of the Methodists, 300 of the Baptists, 223 of the Independents, 1,374 of "other sects"—chiefly Protestants—1,292 of the Roman Catholic Church, and 25 according to those of the Jews.

Marriages at matrimonial or advertising agencies. The number of marriages solemnized at matrimonial or advertising agencies gradually rose from 1,409 in 1898 to 1,701 in 1900, but have since fallen to 1,188 in 1902. About 20 per cent. of the total marriages were performed in such agencies in 1900, but only 14 per cent. in 1902. This accounts for the unduly large proportion of marriages celebrated by "other sects," whose clergymen acted for such agencies.

Number of births, 1902 The number of births registered in Victoria during the year 1902 was 30,461, viz., 15,583 of males and 14,878 of females—or 225 below the average of the last five years.

Births in 1902 and former years. During the twenty years ended with 1883, the number of births remained almost stationary; but in 1884 a marked increase took place, which continued during the subsequent seven years; the number in 1891 being the highest. Since 1891, however, a rapid falling off has taken place down to the period embraced in the last five years, when the number has fluctuated at a lower level than that which had prevailed at any other period since 1886. The number in 1898 was actually the lowest since 1885, and that in 1902 the next lowest. The following are the figures for the last twelve years:—

Year.	Number.	Year.	Number.
1891 ...	38,505	1897 ...	31,310
1892 ...	37,831	1898 ...	30,172
1893 ...	36,552	1899 ...	31,008
1894 ...	34,258	1900 ...	30,779
1895 ...	33,706	1901 ...	31,008
1896 ...	32,178	1902 ...	30,461

In proportion to population, the births first decreased from 40 per 1,000 in the early sixties, when the affairs of the State were becoming more settled after the gold rushes of the fifties, to 30·06 in 1882; then increased gradually, during a period of unexampled financial and commercial activity, to the moderate rate of $33\frac{1}{2}$ in 1890-1. Since the latter period, however, there has been—consistently with the depressed times—a constant and almost uninterrupted falling off to the extremely low average level of 25·69 during the last five years—the absolute minimum (viz., 25·23) being reached in 1902. The very slow rate of decrease in the last five years appears to indicate, however, that the lowest level has at last been reached, and hence an improvement may be expected in the near future. The following are the birth rates per 1,000 of the population for 1860, and each subsequent fifth year to 1890, also for the last 12 years:—

Year.	Birth Rate.	Year.	Birth Rate.	Year.	Birth Rate.
1860 ...	42·81	1891 ...	33·57	1897 ...	26·49
1865 ...	42·40	1892 ...	32·51	1898 ...	25·51
1870 ...	38·07	1893 ...	31·18	1899 ...	26·14
1875 ...	33·94	1894 ...	29·05	1900 ...	25·79
1880 ...	30·75	1895 ...	28·46	1901 ...	25·78
1885 ...	31·33	1896 ...	27·19	1902 ...	25·23
1890 ...	33·60				

The above rates, based upon the number of births to every 1,000 of the population, are, like marriage rates, calculated on a similar basis, apt to mislead, unless the different constituents or elements of the population bear a normal proportion to one another—especially in respect of sex, age, and conjugal condition. Thus, the high birth rate during the earlier periods is due to the abnormally large proportion of married women in the population; whilst the rate gradually fell off as the proportion of children increased, and will ultimately reach an equilibrium when this and other elements assume their proper proportions. This will be evident from the following table, which shows the birth rate computed in the ordinary manner, also the proportion of

births per 1,000 of the married women at the child-bearing period of life, during the last four census years:—

Year.	Enumerated Population.	Married Women under 45 years of Age.	Legitimate Births.	Proportion of Legitimate Births.	
				Per 1,000 of the Population.	Per 1,000 Married Women under 45 years of Age.
1871	731,528	88,561	26,805	36·64	302·67
1881	862,346	84,831	25,675	29·77	302·66
1891	1,140,405	120,700	35,853	31·44	297·04
1901	1,201,341	127,858	29,279	24·37	229·00

It will be observed that, although the proportion of legitimate births per 1,000 of the population fluctuated considerably during the four census periods, the proportions per 1,000 of married women remained fairly uniform during the first three census years, but showed a remarkable decline in 1901 from 297 to 229, being equivalent to nearly 23 per cent. A noticeable instance of the unreliability of the ordinary birth rate in a new country such as this, appears in the above table on comparing 1881 with 1891, for whereas the birth rate per 1,000 of the population was considerably higher (by nearly 1¾ per 1,000) in the later than in the earlier year, yet the proportion of births per 1,000 married women was actually lower. The fluctuations in the ordinary birth rate from 1871 to 1891 are, therefore, found to have been mainly due to varying proportions of married women in the community at the fruitful period of life. The exceptional fall since 1901, however, cannot be so explained, as other factors must be involved which require further investigation, and which will be dealt with in the following paragraphs.

Percentage of married women in quinquennial groups under 45 years of age.

An analysis of the minor age groups, of which the whole age group, 15 to 45, is composed, will disclose the fact that there has been a considerable falling off in 1901, as compared with previous census periods, in the proportion of married women at the younger, and more fertile ages, but a counterbalancing increase in that at the higher ages—a result chiefly brought about by a decrease in the proportion of young men at marriageable ages, through emigration, and the consequent decline of the female marriage rates at the lower age groups. Thus, the number of married women under 30 years of age fell from 53,778 in 1891 to 39,230 in 1901, or by 27 per cent., whereas the number over 35 but under 45 increased during the same period from 37,460 to 57,161, or by 52½ per cent. Relatively to the whole number at child-bearing ages, the married women under 30 years of age fell from 44½ per cent. in

1891 to 30½ in 1901; whilst those at the higher ages, between 35 and 45, rose from 31 to 44½ per cent. This will be seen in the following statement:—

Census Year.	Percentage of Married Women Under 45 Years of Age.					
	15—20.	20—25.	25—30.	30—35.	35—40.	40—45.
1871	2·03	13·04	21·14	23·07	23·32	17·40
1881	1·73	15·95	20·46	20·60	20·97	20·29
1891	1·35	15·69	27·52	24·41	17·21	13·82
1901	·81	9·90	19·83	24·96	24·92	19·58

To estimate the extent to which these changes in age distribution between the two last periods would influence the birth rate, it is necessary to ascertain the rates of natality for married women at different ages. Up to the present, the available information relating to Victoria on which such rates might be computed, has not yet been tabulated in respect to all married women, although it was done for one year in respect to newly married women.* Such rates were, however, published in the last issue of this work† for several European countries and towns, from which it is proposed to select the rates for Sweden—which it has been decided to adopt as a standard for measuring the extent of the decline in the productiveness of married women in Victoria during the last ten years, owing to changes in their age constitution. The following were the rates of natality in Sweden in 1891, at each quinquennial age group under 45:—

Rates of legitimate natality at various ages in Sweden.

Age of Wives.	Births per 100 Wives.
15—20	51·8
20—25	45·1
25—30	37·5
30—35	31·2
35—40	25·0
40—45	14·2

Applying these proportions to the numbers of married women at similar age groups in Victoria in 1891 and 1901, it is found that the relative fertility of such women diminished by 9 per cent. in the interval, owing to their increased average age alone. This will, however, account for little more than a third of the fall since 1891 in the rate actually experienced. It is also found that in 1891 the rate in Victoria was only 5½ per cent. below that of Sweden under similar age conditions,

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* For particulars, see " Victorian Year-Book," 1895-8, page 663, et seq.
† Ibid, page 666.

whereas in 1901 the former was nearly 22 per cent. below the latter. The following are the results:—

Year.	Births per 1,000 Married Women 15 to 45.		Percentage of Victorian rate below Swedish.
	Actual.	Applying Swedish rates to Victoria.	
1891 ...	302·1	319·8	5·5
1901	227·9	291·2	21·7
Decrease.	74·2	28·6	...
,, %	24·6	8·9	...

Another circumstance to account for the diminished fertility just referred to is the larger proportion in 1901 of wives whose husbands were not only absent from home, but were living out of the State at the time of enumeration—in Western Australia and elsewhere. In 1901, the approximate number of wives whose husbands were thus absent was 8,350,* or 4·6 per cent. of the total number of wives; whereas in 1891, it is estimated that the number did not exceed 4,000,† or 2·3 per cent. It may be fairly assumed that such absences were more or less prolonged—especially in 1901, and hence, to compare the results for 1901 with those for 1891, the number of married women between 15 and 45 ought at least to be reduced by the difference in the percentage, viz., 2·3, before computing the rate. Such reduced number would raise the rate for 1901 from 227·9 to 233·3—the difference being 5·4, which is equivalent to a fall of 1·8 per cent. on the rate for 1891. To sum up the results already arrived at, the following were the proximate causes of the fall in the proportion of births per 1,000 married women in Victoria between 1891 and 1901:—

Cause of Fall.	Fall in Rate since 1891.	Decrease per cent.
1. Altered age distribution ..	27·0	8·9
2. Larger proportion of husbands absent	5·4	1·8
3. Other causes ...	41·8	13·9
Total ...	74·2	24·6

It thus appears that of the total decrease of 74·2 in the rate referred to, about three-sevenths has been satisfactorily accounted for by the absence of husbands in other States; and, more especially, to an advance in the average age of wives—

* Including allowance—estimated at 2,460—for cases where the information was not furnished. The percentage for all cases where the husband was away from home (either in or out of the State) was 14·23 in 1901 as against 11·10 in 1891.

† The excess of wives over husbands was 3,620, but an allowance for wives absent as well as husbands would bring the total up to about 4,000.

due not to a lessened marriage rate amongst eligible men, but to the circumstance that a proportion of the younger men at marriageable ages have emigrated to Western Australia and elsewhere. There still, however, remains a balance of 42 per 1,000—equivalent to a fall of 14 per cent.—to be accounted for, and no doubt there are causes of a varied character which operate to bring about this result.

The following table gives the birth rates, calculated in the ordinary way, per thousand of the population in the Australian States and New Zealand for 1891, and for each of the last five years:— *Birth rates in Australian States and New Zealand.*

Year.	Victoria.	New South Wales.	Queensland.	South Australia.	West Australia.	Tasmania	Australia	New Zealand.
1891	33·57	34·50	36·35	33·92	34·85	33·37	34·23	29·01
1898	25·51	27·60	28·28	25·68	29·40	27·50	27·14	25·74
1899	26·14	27·34	27·31	26·64	30·70	26·84	27·27	25·12
1900	25·79	27·43	30·19	25·55	30·80	28·16	27·31	25·60
1901	25·78	27·60	28·28	25·09	30·32	28·40	27·05	26·34
1902	25·23	27·17	27·68	24·60	30·09	28·92	26·63	25·89
Mean of 5 Years	25·69	27·43	28·35	25·51	30·06	27·96	27·08	25·74

According to the average of the last five years, the highest birth rate, viz., 30·06, prevailed in Western Australia, and the lowest rates—a little over 25½—in New Zealand, Victoria, and South Australia. Queensland and Tasmania came next to Western Australia, with rates about 28, and New South Wales next, with a rate of over 27 per 1,000.

The foregoing rates are useful for certain purposes, but, as already explained, in the case of Victoria cannot be relied on as an index of the productiveness of married women, which can be more closely gauged by a comparison of the legitimate births with the number of married women at reproductive ages. Such a comparison is effected in the subjoined return, which shows the results for each Australian State and for New Zealand at the two last census years:— *Decline in the number of legitimate births.*

State.	Proportion of Legitimate Births per 1,000 Married Women, aged 15 to 45.		Decrease per cent.
	1891.	1901.	
Victoria ...	302·1	227·9	24·6
New South Wales	298·9	235·6	21·2
Queensland	315·0	251·0	20·3
South Australia	311·1	235·0	24·5
Western Australia	352·8	244·0	31·1
Tasmania	315·9	254·6	19·4
New Zealand	279·1	246·1	11·8

It will be seen from these figures that between 1891 and 1901 there was a pronounced decline in the percentage of legitimate births to married women under 45 years of age in the different States, varying from 31 per cent. in Western Australia, and 24 in Victoria and South Australia, to about 20 in Queensland and Tasmania, and to nearly 12 per cent. in New Zealand.

Causes of fall in birth rates in Australasian States.

Following the plan already adopted in the case of Victoria, it may at least be ascertained for the other States what proportion of the decline thus shown was due to alterations in the age distribution of married women at reproductive ages, and what proportion to other causes; and the results are embodied in the following table:—

State.	Decrease in Proportion of Births per 1,000 Married Women due to—			Decrease per cent. Due to—		
	Altered Age Distribution.	Other Causes.	All Causes (Total).	Altered Age Distribution.	Other Causes.	All Causes.
Victoria	27·0	47·2	74·2	8·9	15·7	24·6
New South Wales ...	15·9	47·4	63·3	5·3	15·9	21·2
Queensland ...	20·3	44·2	64·5	6·4	13·9	20·3
South Australia ...	16·1	60·2	76·3	5·2	19·3	24·5
Western Australia ...	9·7	99·3	109·0	2·8	28·3	31·1
Tasmania ...	17·0	44·3	61·3	5·4	14·0	19·4
New Zealand ...	2·7	30·7	33·4	·9	10·9	11·8

It is thus seen that a decrease of from 11 per cent. in the case of New Zealand to 28 per cent. in the case of Western Australia is due to causes other than altered age distribution. The unsettled condition of Western Australia, however, necessitating in a greater degree than in other States a more or less prolonged separation of husband and wife, may be added as a contributing cause in that State—a cause which has already been found to prevail to some extent in the case of Victoria. In Western Australia, the proportion of wives whose husbands were absent at the time of the census of 1901 was 15·2 per cent., as against 14·2 per cent. in Victoria. In New South Wales, the proportion has remained fairly constant at about 14½ per cent. at the two last census periods.

By comparing the actual rates experienced with corresponding rates computed on the basis of the Swedish rates of natality at various ages, it may be ascertained what proportions the rates which prevailed in 1891 and 1901 were above, or below, the Swedish rate under similar age conditions; and, by applying those proportions to the average Swedish rate as computed for an age distribution similar to that which

prevailed amongst married women in South Australia in 1891*
as a standard, it will also be possible to compute for compara-
tive purposes an "Index of Natality," from which differences
due to varying age distribution have been eliminated. The
results appear in the following statement, in the last two
columns of which will be found the "Index of Natality"—i.e.,
the proportion of births per 1,000 married women between
the ages of 15 and 45—assuming uniform age distribution for
every State on the same basis:—

State.	Swedish rates—varying with different age distributions.		Percentage of actual above (+) or below (−) Swedish rates.		Index of Natality.	
	1891.	1901.	1891.	1901.	1891.	1901.
Victoria	320	291	−5·5	−21 7	291	241
New South Wales	320	303	−6·6	−22·1	289	241
Queensland	326	305	−3·4	−17·7	298	254
South Australia	309	293	+ 1·0	−19 8	312	248
Western Australia	326	317	+8·3	−23 0	335	238
Tasmania	317	300	Equal	−15·0	308	263
New Zealand	305	302	−8 5	−18 6	282	251

It will be observed that in 1891, the rates in Queensland,
South Australia, and Tasmania approximated closely to the
rate in Sweden, but that in the other States they varied from
5½ per cent. in the case of Victoria, to 8½ per cent. in the case
of New Zealand, below that rate; whilst in Western Aus-
tralia it was 8·3 per cent. in excess of the Swedish rate.

In 1901, however, owing to a most unprecedented and
wide-spread fall in the rates throughout the whole of Aus-
tralasia, the differences as compared with the Swedish rates
were much more pronounced—varying from 15 per cent. below
that rate in Tasmania, to 22 or 23 per cent. below it in the
case of Victoria, New South Wales, and Western Australia.

The "Index of Natality" shows that, in 1891, the degree of
fertility amongst married women was lowest in New Zealand,
but highest in Western Australia, South Australia, and Tas-
mania, where the rate closely approximated to that in Sweden,
whilst the central position was occupied by Victoria, which,
however, was but little in advance of New South Wales. In
1901, Tasmania stood easily at the head of the list; but
Western Australia, which had the highest birth rate per 1,000
of the total population, occupied absolutely the lowest posi-
tion, in which respect it was closely followed by New South
Wales and Victoria; whilst New Zealand rose from the lowest
to the third highest place. The following is the order of the

* The proportion per 1,000 married women at each of the six minor age groups in the State
named were as follow :—11, 131, 244, 253, 205, and 156 respectively.

States in each year—the State with the highest degree of natality being placed first:—

Order in 1891.	Order in 1901.
1. Western Australia.	1. Tasmania.
2. South Australia.	2. Queensland.
3. Tasmania.	3. New Zealand.
4. Queensland.	4. South Australia.
5. Victoria.	5. Victoria.
6. New South Wales.	6. New South Wales.
7. New Zealand.	7. Western Australia.

Birth rates in European countries.

The following is a statement of the birth rates in the principal European countries for the year 1901, also the average birth rates for the 25 years, 1876-1900, arranged in order according to the rates in 1901:—

Country.	Births per 1,000 of Population.		Decline per cent.
	1901.	1876-1900.	
Hungary	37·8	42·9	12
Austria	36·9	37·8	2
Prussia	36·2	37·7	4
German Empire ...	35·7	37·4	4½
Spain	34·7	35·9	3
Italy	32·6	36·6	11
Holland	32·3	34·2	6
Denmark	29·9	31·3	4½
Norway	29·8	30·7	3
Scotland	29·5	32·2	8½
Belgium	29·4	30·1	2
Switzerland ...	29·1	28·9	1 (increase)
England and Wales ...	28·5	32·3	12
Sweden	26·8	28·7	7
Ireland	22·7	23·8	5
France	22·0	23·7	7

It will be seen that there was a decline in the birth rates for 1901 as compared with the averages of the 25 year period in all the countries named with the exception of Switzerland. The decline was relatively greatest (viz., 12 per cent.) in the case of England and Wales, and of Hungary (where the birth rate is still the highest in Europe), and was also very marked in Italy, with a fall of 11 per cent., in Scotland (8½ per cent.), Sweden (7), France (7), Holland (6), and Ireland (5), whilst the fall was less than 5 per cent. in all the other countries shown. The average rate in the Commonwealth of Australia for the past five years was lower than the rate for 1901 in any of the European countries except Sweden, Ireland, and France; but, as already explained, there are exceptional reasons why the rate in Australia is so abnormally low. By a comparison of the birth and marriage rates in European countries, it is found that a high birth rate is generally concurrent with a high marriage rate and vice versâ. A notable

exception to this is France, in which a high marriage rate is co-existent with a lower birth rate than in any other European country.

The following table shows the number of births per 1,000 of the population in the metropolitan, the other urban, and the rural districts, for 1875 and each subsequent fifth year, and the averages of the years 1898-02:—

Year.	Number per 1,000 of the Population.			
	Metropolitan District.	Other Urban Districts.	Rural Districts.	Victoria.
1875	33.63	38.63	31.54	33.94
1880	31.19	34.21	28.72	30.75
1885	34.94	31.87	28.12	31.33
1890	37.71	34.43	28.93	33.60
1895	29.46	34.03	25.49	28.46
1898-02	25.03	31.73	23.86	25.69

It will be noticed that in the last five years, as compared with 1890, the birth rate in the metropolitan district fell off by as much as 33 per cent., in the rural districts by 17 per cent., and in the other urban districts by only 8 per cent.

The subjoined table shows the number of births per 1,000 of married women under 45 years of age in each sub-district of Greater Melbourne, for the year 1902; and the average for the previous ten years:—

Sub-Districts.	Proportion per 1,000 of Married Women Under 45.		Sub-Districts.	Proportion per 1,000 of Married Women Under 45.	
	1902.	Average of Ten Years, 1892-1901.		1902.	Average of Ten Years, 1892-1901.
Port Melbourne ...	231	241	St. Kilda	172	202
Richmond	226	236	Boroondara ...	157	188
Caulfield	169	181	South Melbourne ...	183	221
Melbourne	184	199	Essendon	188	239
Brighton	196	214	Hawthorn	165	209
Brunswick	211	233	Fitzroy	174	222
Northcote	237	261	Williamstown ...	179	229
Footscray	236	262	Coburg	181	232
Flemington and Kensington	215	241	Kew	159	206
			Oakleigh	293	386
North Melbourne ...	227	254	Preston	188	254
Malvern	179	205			
Prahran	189	218	Total District ...	189	218
Collingwood	198	229			

It will be observed that in all the sub-districts there has been a falling off, and in some, a very considerable decline in the rates for 1902, as compared with the average of the preceding ten years—the total decrease for the whole district between the two periods being equal to 13 1·3 per cent.

Fall in birth rate in Melbourne and suburbs, partly due to altered age constitution. But on a closer examination of the census returns, it is found that even in the age groups, 15 to 45 years, the married women in Melbourne and suburbs were on the average about $2\frac{1}{4}$ years older in 1901 than 1891, owing chiefly to the altered age constitution of wives. From this circumstance alone the relative fertility of women at the reproductive period diminished by about 10 per cent. during the decade. The percentages of married women at each age group under 45 years at the censuses of 1891 and 1901 were:—

Census Year.	15—20.	20—25.	25—30.	30—35.	35—40.	40—45.
1891	1·3	16·5	28·8	24·0	16·3	13·1
1901	·8	9·9	19·6	24·9	25·4	19·4

These figures show a decline in the percentage at each age group up to 30 years, amounting to 16·3, and exactly a corresponding increase at the older age groups. Taking the above results, and comparing them with those for the whole State, it will be seen that the decline in the marrying ages, which contributes so materially to a diminishing birth rate, is common to the different divisions of the State—metropolitan, urban, and rural.

Causes of reduced birth rate in Melbourne. If the results for 1901 be compared with those for 1891, a still greater decline will be noticeable, as the birth rate in the metropolitan district fell off from 36·64 to 24·85 per 1,000 of the population, or by nearly 32 per cent.; the legitimate birth rate from 33·81 to 22·75, or by nearly 33 per cent.; and the proportion of legitimate births per 1,000 married women aged 15 to 45 from 274·0 to 188·9, or by over 31 per cent. This serious decline was evidently not, to any marked extent, attributable to a diminished proportion of married women at the reproductive period of life; but, on a closer examination of the census returns, it is found that a large share of it was due to a diminution of the proportion of such women at the lower ages (under 30), and a corresponding increase at the higher and less fertile ages (35 to 45), whereby their average age was increased by about $2\frac{1}{4}$ years. Thus the percentages of married women under 30, between 30 and 35, and between 35 and 45 respectively, to the whole number under 45, were 46·6, 24·0, and 29·4 in 1891, as compared with 30·3, 24·9, and 44·8 in 1901. From this circumstance alone, the relative

fertility, it has been computed, naturally diminished 10 per cent. Hence of the total fall of 32¾ per cent. in the birth rate since 1891, over 12 is due to the reduced proportion, and increased age, of married women at reproductive ages, the balance of 20½ is due to other causes. The following are the results which have been arrived at:—

Year.	Legitimate Births per 1,000 of—	
	Total Population.	Married Women, 15—45.
1891	33·81	274·0
1901	22·75	188·9
Total Decrease ...	11·06 = 32·7%	85·1 = 31·2%
Decrease due to—		
1. Reduced proportion of married women 15—45	·74 = 2 1·5%	...
2. Increased age of ditto	3·38 = 10%	27·4 = 10%
3. Other causes ...	6·94 = 20·5%	57·7 = 21·2%

The number of illegitimate births registered in Victoria during the year 1902 was 1,677, which gives a proportion of 5·50 to every 100 births registered, as compared with 5·58 in 1901, which was identical with the average of the five years ended with 1902. This proportion has been fairly constant during the last twelve years, when it was decidedly higher than at any earlier period within the last 30 years. The proportion in Victoria was much lower than in Queensland and New South Wales, and slightly lower than in Tasmania, but higher than in any other of the Australian States or New Zealand; it was also lower than in Scotland, but much higher than in the other portions of the United Kingdom; it was also lower than in 13 out of 18 countries on the continent of Europe, respecting which particulars are available, in six of which the rates run as high as from 10 to 15 per cent.* The following are the proportions of illegitimate births to every 100 children born in the Australian States and New Zealand, for the five years ended with 1902, and in the United Kingdom for the ten years, 1891-00:—

Illegitimate births and rates.

Australasia—

Victoria	5·6
New South Wales	6·9
Queensland	6·0
Tasmania	5·7
Western Australia	4·5
New Zealand	4·4

Australasia—

South Australia	4·0

United Kingdom—

Scotland...	7·2
England...	4·2
Ireland	2·6

* For particulars, see edition of this work for 1895-8, page 654.

Illegitimacy in town and country

It will readily be supposed that a larger proportion of illegitimacy prevails in Melbourne and suburbs than in any other district of Victoria, and that the proportion in country districts is the smallest of all. In 1902, in the metropolitan district, about 1 birth in 12; in the other urban districts, about 1 in 18; and in the rural districts, only 1 birth in 44 was registered as illegitimate. During the last five years, the averages were 1 in 12, 1 in 19, and 1 in 39 respectively. Of 32 foreign cities, respecting which the information was given in a previous issue of this work, each is burdened with a larger amount of illegitimacy than that prevailing in Melbourne.

Fall in illegitimate birth rate

Although the proportion of illegitimate births to the total births, as already stated, has varied so little for several years past, yet the proportion of such births to the number of unmarried women and widows, between the ages of 15 and 45, shows the same remarkable decline between 1891 and 1901, amounting to 29 per cent., as has already been observed in the proportion of legitimate births to married women at similar ages. With the exception of altered age distribution, which in this instance is estimated to account for less than $1\frac{1}{4}$ per cent. of the fall, the many causes, which have contributed so largely to the decline in the legitimate birth rate, have no doubt operated—but in a major degree—to bring about a reduction in the illegitimate birth rate per 1,000 single women, which will be seen on comparing the rate for 1901 with that of the previous census, 1891, as given in the subjoined statement:—

Period.	Single Women Aged 15 to 45.	Illegitimate Births.	Illegitimate Births Per 1,000 Single Women.
1891	142,443	2,064	14·49
1901	167,760	1,729	10·31

Deaths.

The number of deaths during the year 1902 was 16,177—9,152 males and 7,025 females—a result somewhat under the average of the last five years, when the total was 16,514—the males 9,327, and the females 7,187. According to the experience of the five years, 1898-1902, the Summer quarter of the year, i.e., that ending 31st March, is the most fatal, the next in order being the quarter ending 31st December. These positions, however, were not maintained in the year under review, when the greatest number of deaths occurred in the September quarter, and the next in the December quarter. A gradual increase is observed in the death rate since 1900, but it was lower in 1902 than in 1899, and much

lower than in 1898, when, however, the mortality was exceptionally high, owing to the outbreak of epidemics of measles, typhoid fever, and diarrhœal diseases.

The following return shows the number of deaths—males and females—which took place, also the quarters in which they were registered and proportion per 1,000 of the population, for the years 1898-1902:—

| Year. | Total Deaths. | Sex. | | Quarter of Registration. | | | | Death Rate per 1,000 of the Population. |
		Males.	Females.	March.	June.	September.	December.	
1898	18,695	10,533	8,162	5,444	4,773	4,144	4,334	15·80
1899	16,578	9,286	7,292	4,153	3,806	3,717	4,902	13·97
1900	15,215	8,627	6,588	4,113	3,393	3,758	3,951	12·74
1901	15,904	9,035	6,869	4,129	3,844	4,120	3,811	13·22
1902	16,177	9,152	7,025	3,886	3,930	4,281	4,080	13·40
Average	16,514	9,327	7,187	4,345	3,949	4,004	4,216	13·82

For purposes of comparison the death rates per 1,000 of the population for each of the Australian States and New Zealand are shown in the following statement, for a period of five years from 1898 to 1902:— *Death rates in Australian States and New Zealand.*

Year.	Victoria	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania	Australian States.	New Zealand.
1898	15·80	12·69	12·67	13·58	16·07	14·17	14·11	9·84
1899	13·97	11·92	12·07	12·65	13·79	12·91	12·90	10·24
1900	12·74	11·16	11·72	10·68	12·65	11·02	11·77	9·43
1901	13·22	11·68	11·88	11·22	13·36	10·45	12·17	9·81
1902	13·40	11·95	12·08	11·86	13·63	10·90	12·45	10·50
Average	13·82	11·88	12·34	11·98	14·04	11·88	12·66	9·98

It will be noticed that all the Australian States were affected by a wave of high mortality in 1898, probably due to the prevalence of epidemics similar to those which have been already stated to have occurred in Victoria. Although the death rate of Victoria, according to the average of the five years, was higher than in any other State, except Western Australia, this result is due, as will be shown later on, to the larger proportion of persons aged 60 years and over, amongst whom the death rate is very high.

The following were the maximum, minimum, and mean death rates per 1,000 of the population, in the principal European countries during the five years ended with 1900, *Death rates in European countries.*

also the average of the 25 years ended with the same year. It is remarkable that, with the exception of Sweden, Austria and Hungary, Spain and Italy, the minimum rate during the five year period almost invariably occurred in 1896, and the maximum in 1900. In all, except Ireland, there has been a noticeable decrease, and in Austria, Hungary, Switzerland, Germany (including Prussia), Holland, and Italy, a considerable decrease in the recent five year period, as compared with the average of 25 years. The countries are arranged in order according to the average rate of mortality in the more recent period:—

Country.	Five Years 1896-1900.			Average of 25 Years.
	Max.	Min.	Mean.	
1. Norway	15·8	15·2	15·7	16·6
2. Sweden	17·7	15·1	16·1	17·1
3. Denmark	17·3	15·5	16·4	18·3
4. Holland	17·8	16·9	17·2	20·3
5. England and Wales	18·2	17·0	17·7	19·1
6. United Kingdom	18·4	17·0	17·8	19·0
7. Scotland	18·5	16·6	17·9	19·2
8. Ireland	19·6	16·6	18·1	18·2
9. Belgium	19·3	17·2	18·1	20·1
10. Switzerland	19·3	17·6	18·1	20·6
11. France	21·9	19·5	20·7	21·9
12. Prussia	21·8	20·0	21·0	23·7
13. Germany	22·1	20·5	21·2	24·2
14. Italy	24·0	21·8	22·9	26·4
15. Austria	26·4	24·9	25·6	28·8
16. Hungary	28·9	26·9	27·9	32·3
17. Spain	29·9	28·6	29·2	30·6

Death rates of European and Australian States compared.

Comparing this statement with a previous one, it will be noticed that the death rate of Western Australia—the highest in Australasia, is considerably lower than that in Norway—the lowest in Europe. And although, owing to the fact that emigration from the old to the newer countries tends to raise the death rate in the former, but to lower it in the latter, the death rates, calculated on the total population, would naturally be on a higher level in Europe than in Australasia, yet it may be safely affirmed that the true rate of mortality, allowing for differences in the age constitution of the people, is lighter in

Australasia than in any States in Europe, except, perhaps, Norway, Sweden, and Denmark.

In every country the death rate is higher in towns than it is in the country districts. This circumstance, although no doubt partly attributable to the superior healthfulness and immunity from contagion prevailing in the latter, is also to a great extent due to the fact that hospitals and charitable institutions, which are frequented by patients from the country as well as by town residents, are generally situated in the towns; and further, that outside of charitable institutions many persons die who have come from the country on the approach of a serious illness for the sake of the superior nursing and medical attendance to be obtained in town. In the ten years ended with 1890, the rate in the metropolitan district was higher than in the other urban districts, but in more recent years was much lower, in consequence of a marked decrease in the rate in the former district; whilst in the rural districts the rate has remained fairly constant, at about 9 per 1,000, or much less than half the rate in the extra-metropolitan towns. The year 1898, for which the rates were so high, was characterized by epidemics of measles and typhoid fever, although their influence was not nearly so marked in the rural as in the urban districts. The following are the figures for the last five years, and the means for the periods, 1881-90 and 1891-5:— *Death rates in town and country.*

Annual Mean.				Metropolitan District.	Other Urban Districts.	Rural Districts.
1881-90	...	...	...	20·65	19 90	8·90
1891-5	...	...	...	16·74	20 63	9·02
1898	...	...	...	18·34	25·23	10·18
1899	...	...	...	15·39	22·99	9·34
1900	...	...	...	14·32	19·38	8·46
1901	...	...	...	15·09	19·54	8·73
1902	...	...	...	14·93	20·86	8·77

The misleading results arrived at by a comparison of the ordinary death rates of different countries, or of the same country at different periods, unless the age distribution is identical, have often been pointed out in former editions of *Unreliability of ordinary death rate.*

this work. This applies more especially to such a comparison of newly-settled communities—such as the Australian States —with one another, and with the old-established countries of (say) Europe. In the former, the population is, on the average, younger than in the older countries, and is, moreover, constantly being strengthened by immigrants at the younger adult ages, at which the mortality is low; whereas in the latter, not only is the age distribution more constant from year to year, but there is relatively a much larger proportion of elderly people, amongst whom the death rate is very high, concurrent with a smaller proportion of the younger and middle-aged adults, at the most vigorous period of life. Some idea of the differences of age distribution at present existing between European countries and the Australian States (as a whole) will be obtained by the following comparison of the proportions of the population living at various age groups in Sweden —as representative of the former—and in Australia:—

Age Group. (Years).	Percentage of Population Living at each Age Group in—	
	Sweden in 1890.	Australia in 1901.
Under 1 year	2·55	2·47
1 to 5	9·25	9·05
5 to 15	21·10	23·60
15 to 20	9·50	10·04
20 to 25	8·20	9·36
25 to 30	6·70	8·50
30 to 35	6·00	7·79
35 to 40	6·00	7·25
40 to 45	5·60	5·88
45 to 55	9·40	7·29
55 to 65*	7·70	4·76
65 to 75	5·40	3·01
75 to 85	2·34	·89
85 and over	·26	·11
Total	100·00	100·00

It will be observed that the most striking differences occur between the ages of 20 and 40—the migratory period— under which ranged 33 per cent. of the population in Australia, as against only 27 per cent. in Sweden; and at ages over 45, at which the preponderance was in favour of Sweden, where there were 25 per cent. over that age as against only 16 in Australia.

Index of mortality.

Several methods have been proposed at various times as a basis for computing a death rate, which would fairly allow

* At age 55 to 60 the proportion in Sweden was 4·20, and in Australia 2·54 per cent.

for important differences in age distribution, amongst which the four following are worthy of notice:—

Method.	By whom and when proposed.	Short description.*
1. Absolute Death-rate.	Government Statist of Victoria. 1885.	Applying the ascertained death-rates at 10 age-groups under 75 (quinquennial groups to 25, and then decennial groups to 75) to a population assumed to have an equal number living at every age. (Abandoned in favour of No. 3).
2. "Health Standard."	Government Statist of Tasmania. 1887.	A simple comparison of the whole number of deaths under the age of 60 with the population under 60—thus eliminating the "Healthy Old Age-element."
3. Adjusted Death-rate.	Government Statist of Victoria. 1887.	As in No. 1, but adopting as a Standard Population one having the same age distribution as in England in 1881.
4. Index of Mortality.	International Institute of Statistics.	Applying the ascertained death-rates at five age-groups (viz., under 1, 1 to 20, 20 to 40, 40 to 60, and 60 and over) to a Standard population, whose age distribution corresponds with that of Sweden in 1890.

The third method is that which has been followed in Victoria for several years, and the only difference between it and the "Index of Mortality" of the International Institute of Statistics is that the number of age groups in the latter has been reduced from 10 to 5, and the population of Sweden is substituted for that of England as the standard. The former being based on more numerous age subdivisions is naturally the more reliable; whilst the latter is more readily computed, and might, under ordinary conditions—such as prevail in European countries—be expected to afford a fair basis for comparison. The age group 60 and over is, however, too large for new countries, where the average age of the population over 60 may vary considerably. For, if the population over 60 in any country is on the average younger than in Sweden, the death rate of the whole group would naturally be lower, although age for age, the rates of mortality might be identical. For example, if uniform death rates of (say) 30, 55, 120, and 500 at four minor age periods of 60-65, 65-75, 75-85, and 85 and over respectively be applied first to the Swedish, and then to the Australian population at similar age groups, it will be found that the death rate for the major group, 60 and over, will average 69·1 per 1,000 for Sweden, but only 61·9 for Australia; and if these again be applied to the

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* For further particulars of the three first methods, see "Victorian Year-Book 1884-5," paragraph 563; for 1886-7, paragraphs 9 et seq.; and for 1892, Vol. I., paragraph 655 et seq.

standard proportion over 60, viz., 115, the indices of mortality for that age group will be 7·95 and 7·12 respectively, thus showing under exactly the same conditions of mortality an apparently lower rate in Australia of nearly 1 (or ·83) per 1,000 in the mortality at all ages, which was not really the case.

With this reservation, the "Index of Mortality" will be used, since it was adopted (but not unanimously) by a Conference of Australasian Statisticians, held in Hobart in 1902. The following is an example of the method of computing it —the result showing the Index of Mortality for Victoria in 1901 to be 15·63:—

Age.	Standard Population per 1,000. (Sweden, 1890.)	Death Rate per 1,000 at each Age in Victoria, 1901.	Index of Mortality for Victoria, 1901.
0—1	25·5	112·55	2·88
1—20	398·0	4·19	1·67
20—40... ...	269·6	6·21	1·68
40—60... ...	192·3	13·19	2·54
60 and over ...	114·6	59·81	6·86
Total ...	1,000·0	13·22	15·63

In order to compare with the proportion in Sweden, as shown in the second column of the previous table, as well as to afford a basis for the computation of the "Index of Mortality," the proportions per 10,000 living at the same five age groups in each Australian State and New Zealand, for the year 1901, are given in the following table for both sexes, and also for males. The great preponderance of population at the age groups between 1 and 40, and the large and increasing deficiency at age groups over 40, are the characteristic features of the Australian populations when compared with the Swedish. Amongst the Australian States, Victoria is conspicuous in having by far the largest proportion of persons aged 60 and over—an age group which has an important influence in determining the death rate. On the other hand, Victoria has, with one exception, the lowest proportion of both sexes between 1 and 20, and also, with one exception, the lowest proportion of males between 20 and 40—at which age groups the death rate is lightest:—

Proportions Living at Five Age-groups in Australian States and New Zealand, 1901.

State.	Proportion per 10,000 of Total Population Living at the Age Period—					Total.
	Under 1 Year.	1 to 20.	20 to 40.	40 to 60.	60 and over.	
Both Sexes.						
Victoria	236	4,163	3,272	1,531	798	10,000
New South Wales	253	4,382	3,210	1,597	558	10,000
Queensland	260	4,348	3,309	1,601	482	10,000
South Australia	227	4,445	3,054	1,641	633	10,000
Western Australia	273	3,324	4,548	1,529	326	10,000
Tasmania	267	4,519	3,118	1,488	608	10,000
Australia	247	4,269	3,290	1,571	623	10,000
New Zealand	238	4,195	3,295	1,596	676	10,000
Males Only.						
Victoria	120	2,093	1,585	795	434	5,027
New South Wales	127	2,210	1,664	915	324	5,240
Queensland	132	2,201	1,910	1,016	302	5,561
South Australia	116	2,234	1,527	897	312	5,086
Western Australia	140	1,704	2,994	1,073	219	6,130
Tasmania	135	2,297	1,639	802	323	5,196
Australia	125	2,154	1,723	890	350	5,242
New Zealand	124	2,117	1,692	906	415	5,254

The "Index of Mortality" has been computed for each Australian State and New Zealand for the year 1901, with the following results, which is contrasted with the death rate per 1,000 of the total population for the same year. The death rates for 1901 differ but slightly from the average of the 3 years, 1900-2:—

Index of mortality in Australian States, 1901.

State.	Ordinary Death Rate.	"Index of Mortality."
Victoria	13·22	15·63
New South Wales	11·68	15·33
Queensland	11 88	15·24
South Australia	11·22	14·30
Western Australia	13·36	17·89
Tasmania	10·45	13 82
Australia	12·17	15 41
New Zealand	9·81	12·42

Although the order of the States is but slightly affected by the new method, Western Australia is shown to have really

a far higher rate of mortality than that indicated by the ordinary method; but Victoria only a slightly higher rate than in the two other principal Australian States—New South Wales and Queensland—and probably even this small difference in favour of the latter States would disappear if the old age group 60 and upwards were subdivided as suggested.   New Zealand enjoys the enviable position of supremacy—its death rate not only being the lowest Australasian, but probably the lowest of any country in the world for which statistics are available.

"Adjusted" death rates, 1871 to 1902.

The "Index of Mortality" has not yet been computed for earlier years, or for other countries, except Sweden (where it was, in 1900, 16·72); but an equally fair comparison is available for Victoria, for three successive decades, and for the triennial period 1900-2, by means of the "Adjusted"* death rates, already alluded to, and these are embodied in the following table for each sex, together with the ordinary death rates, based on the total population of either sex, irrespective of age variations:—

Period.	Ordinary Death Rate.†		Adjusted Death Rate.‡	
	Males.	Females.	Males.	Females.
1871 to 1880 ...	16·45	14·15	16·48	14·64
1881 to 1890 ...	16·65	13·56	15·97	13·85
1891 to 1900 ...	15·47	12·36	14·14	12·04
1900 to 1902 ...	14·80	11·43	13·05	10·75

Diminishing rate of mortality in Victoria.

The "adjusted" rates indicate that there has been a considerable falling off in the true rates of mortality at each successive decade, more especially the last, at which the rate was about 2½ per 1,000 lower than in the first decade, and over 1¾ lower than in the second one.   A further fall occurred during the last three years, when the mortality was exceptionally low, being more than 1 per 1,000 below that of the ten years, 1891-00.

Proportion of deaths at each age to population.

The following are the death rates at various age groups in Victoria, according to the average of the ten years, 1891-00, and of the three years, 1900-2.   The population on which the rates in the last column but one are based is the mean of the populations enumerated at the censuses of 1891 and 1901; and the population, according to the census of 1901, taken at the

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* For the method of calculating the " Adjusted death rate " see " Victorian Year Book, 1892," Vol. I., paragraph 665 *et seq.*
† Per 1,000 of the actual population.
‡ Per 1,000 of the standard population.

end of March, was used for computing the rates in the last column :—

Ages.	Deaths.		Deaths per 1,000 Living at each Age.	
	Average of Ten Years, 1891-1900.	Average of Three Years, 1900-2.	Average of Ten Years, 1891-19C0.	Average of Three Years, 1900-2.
Males—				
Under 5 years ...	2,794	2,282	39·29	34·07
5—10	231	195	3·36	2·70
10—15	139	142	2·20	2·10
15—20 ...	191	184	3·28	3·11
20—25	274	249	4·79	4·90
25—35	672	579	6·60	6·25
35—45	633	742	9·03	8·84
45—55	671	655	15·32	15·34
55—65	1,200	910	32·90	29·86
65—75	1,460	1,724	62·99	61·57
75 and upwards ...	1,032	1,276	145·05	141·59
All Ages ...	9,297	8,938	15·47	14·80
Females—				
Under 5 years ...	2,367	1,900	34·09	29·10
5—10	209	186	3·12	2·63
10—15 ...	128	128	2·06	1·92
15—20	202	175	3·43	2·92
20—25 ...	289	237	4·81	4·10
25—35	676	608	6·89	6·00
35—45	543	642	8·68	8·32
45—55	476	454	12·12	11·48
55—65	693	635	23·64	21·49
65—75	785	994	45·87	45·07
75 and upwards ...	673	868	124·33	122·77
All Ages ...	7,041	6,827	12·36	11·43

It will be observed that the rate of mortality in the last three years was lower at every age group in the case of females, and at all age groups except two—20 to 25 and 45 to 55—in the case of males. *Low mortality in 1900-2.*

A still greater improvement is noticeable on comparing the rates for the decade, 1891-00, with those for the previous one;* for in the case of males, there was a much diminished rate of mortality at every age group below 55, and only a slight increase in the groups over that age, and, in the case of females, a considerable decrease at every age group except 55-65. *Decreased mortality at various ages, 1881-90 to 1891-1900.*

* See " Victorian Year Book," 1895-8, page 685.

Infantile mortality 1902.

The mortality of infants in 1902, in proportion to the number born, was higher than in the two preceding years, but a little lower than the average of the ten years ended with 1900. The total number under 1 year of age who died in 1902 was 3,308, and as the births numbered 30,461, it follows that 1 infant died in every 9·2 births, or 10·86 infants to every 100 births. In the ten years ended with 1900, the proportion of infants dying before completing their first year was 11·11 to every 100 births.*

Infantile mortality of illegitimates.

Particulars of the deaths of illegitimate infants under 1 year were ascertained, for the first time, for the year 1901. The number of such deaths was 441, which gives an average of 25·5 deaths to every 100 illegitimate children born, which is more than two and a half times the rate for legitimate children during the same year, viz., 9·39 per 100.

Deaths of infants at different ages.

In classifying the deaths of infants, those are distinguished which occur at under the age of one month, at from 1 to 3 months, at from 3 to 6 months, and at from 6 to 12 months. The annual numbers of these during the ten years ended with 1900. and the triennial period, 1900 to 1902, are shown in the following table, together with the proportion of deaths at each of those periods of age and the number at each such period to every 100 births—after making due allowance for immigration. It will be noticed that in the last three years the mortality of infants under 1 month was above, but that of those at every other age period was below, the average of the ten years ended with 1900:—

	Average Annual Deaths at under 1 year of Age.					
Ages.	Ten Years—1891 to 1900.			Three Years—1900-2.		
	Number.	Percentage at each Age.	Number per 100 Births.	Number.	Percentage at each Age.	Number per 100 Births.
Boys.						
Under 1 month	650	31·7	3·79	604	34·7	3·83
1 to 3 months	355	17·3	2·07	312	17·9	1·98
3 to 6 ,,	445	21·7	2·59	367	21·1	2·33
6 to 12 ,,	600	29·3	3·50	459	26·3	2·91
Total ...	2,050	100·0	11·95	1,742	100 0	11·05
Girls.						
Under 1 month	488	28·7	2·98	467	33·3	3·12
1 to 3 months	301	17 7	1·84	220	15·7	1·47
3 to 6 ,,	385	22·6	2·35	310	22·1	2·07
6 to 12 ,,	528	31·0	3·23	406	28·9	2·70
Total ...	1,702	100·0	10·40	1,403	100·0	9·36

* See next table but one.

During both periods referred to in the table, the mortality of male infants in proportion to the number born exceeded that of female infants at each of the age periods—more especially in the first month of life, when the excess was about one-fourth. During the period of ten years, the births of male infants were in the proportion of about 105 to every 100 female infants; but as the numbers shown above indicate a proportion of 120½ deaths of the former to 100 of the latter, the proportion alive at the end of the first year is reduced to 102½ males to every 100 females.

In the same period of ten years, nearly a third of the male and nearly two-sevenths of the female infants who died before they were a year old died in the first month after birth; over a sixth of both males and females in the next two months; between a fourth and a fifth of both males and females in the next three months; and about three-tenths in the next six months.

Of infants of both sexes who died, under 12 months, 47·8 were under 3 months, 22·1 were from 3 to 6 months, and 30·1 per cent. from 6 to 12 months. In England and Wales, for the same period, the percentages were—under 3 months, 48·4; 3 to 6 months, 20·9; 6 to 12 months, 30·7. In New South Wales the percentages were 50·3, 22·6, and 27·1 respectively.

According to the experience of the ten years 1891-00, it appears that of every 20,000 newly-born boys and girls in equal numbers, 379 of the former and 298 of the latter may be expected to die before they are a month old; 207 more boys and 184 more girls may be expected to die between one and three months of age; 259 more boys and 235 more girls between three and six months; 350 more boys and 323 more girls between six and twelve months. At the end of a year it is probable that 1,195 of the boys and 1,040 of the girls will have died, and 8,805 of the former and 8,960 of the latter, or 17,765 of mixed sexes, will be still living. In the previous ten years, the proportion surviving the first year was 8,652 males and 8,816 females. Hence there has been an improvement in the rate of infantile mortality in the last decade, as compared with the previous one, which has resulted in the saving of 148 lives in every 10,000 infants of both sexes.

The following table shows the proportion of deaths of infants under one year to the total births in each Australian

State and in New Zealand for each of the last five years, and the average for the ten years ended with 1900:—

Year.	Deaths Under 1 Year per 100 Births.						
	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania	New Zealand.
1891—1900 ...	11·11	11·22	10·34	10·54	14·48	9·58	8·38
1898	13·41	12·19	11·05	13·94	16·61	11·59	7·96
1899	11·09	11·87	10·94	11·13	13·99	11·61	9·59
1900	9·53	10·32	9·84	9·93	12·61	7·99	7·51
1901	10·29	10·37	10·19	10·01	12·89	8·90	7·14
1902	10·86	10·97	10·02	9·40	14·20	7·91	8·29

It will be observed that the average rate for the ten years, 1891-00, was far higher in Western Australia, and much lower in New Zealand and Tasmania, than in any other Australasian State. Next to Western Australia, New South Wales and Victoria—which in this respect were nearly on a level—had the highest rates; and next South Australia and Queensland.

Infantile mortality in various countries. Of all the countries respecting which information is available, infantile mortality is highest in Russia, Austria, and some of the German States—where at least one out of every four infants born die within twelve months—whilst it is lower in Tasmania and New Zealand than in any of the European countries, and lower in all the Australian States than in any except Sweden and Ireland. The following table shows the various rates:—

Deaths under 1 Year of Age to 100 Births.		Deaths under 1 Year of Age to 100 Births.		Deaths under 1 Year of Age to 100 Births.	
Russia	30·0	Italy	19·0	Victoria ...	11·1
Bavaria	27·0	Belgium ...	17·0	South Australia	10·5
Austria	25·0	France	17·0	Queensland ...	10·3
Wurtemburg ...	25·0	Great Britain ...	15·0	Sweden ...	10·0
Prussia	21·0	Greece	15·0	Ireland ...	10·0
Holland	20·0	Western Australia	14·5	Tasmania ...	9·6
Roumania ...	20·0	Denmark ...	14·0	New Zealand ...	8·4
Switzerland ...	19·0	New South Wales	11·2		

NOTE.—The information respecting all the countries except the Australasian States is for the year 1895 and was obtained from "Mulhall," (page 685). That respecting the Australasian States is based on the average of the ten years ended with 1900.

Death of children under 5. In the year 1902 deaths of male children under 5 years of age numbered 2,348, and deaths of female children under that age numbered 2,013—the former being in the proportion of about 26 per cent., and the latter of about 29 per cent., to the total number of deaths at all ages. These proportions are much below the average of former years. Comparing the

averages of the last three decades, a marked falling off took place, from period to period, in the mortality of children relatively to that of persons of all ages, and the following table shows the annual number of such deaths at each year of age, and their proportion to the deaths at all ages, in each of the last three years and during the three decennial periods ended with 1880, 1890, and 1900, respectively:—

Period.	Years of Age at Death.					Total Under 5 Years.	
	0	1	2	3	4	Number.	Proportion Per 100 Deaths at all ages.
Males.							
1871-80	1,783	508	206	148	119	2,764	39·41
1881-90	2,158	464	161	114	92	2,989	34·28
1891-1900 ...	2,050	432	143	93	76	2,794	30·05
1900	1,645	319	85	53	56	2,158	25·01
1901	1,788	317	90	77	58	2,330	25·79
1902	1,793	345	106	67	37	2,348	25·65
Females.							
1871-1880 ...	1,482	482	198	139	106	2,407	46·06
1881-1890 ...	1,805	423	151	105	84	2,568	39·61
1891-1900 ...	1,702	385	129	82	68	2,366	33·61
1900	1,291	271	84	67	53	1,766	26·81
1901	1,404	308	100	61	48	1,921	28·11
1902	1,515	285	110	52	51	2,013	28·65

The average number of male and female children at each year of age under 5 living, during the period of ten years ended with 1900, is compared in the next table with the average number of deaths of children of the same sexes at those ages which occurred annually during that period:—

Number of children under 5 and their deaths.

Age last Birthday.	Males.				Females.			
	Mean Number Living, 1891 and 1901.	Annual Deaths. 1891 to 1900.		Deaths per 1,000 Children Living.	Mean Number Living, 1891 and 1901.	Annual Deaths, 1891 to 1900.		Deaths per 1,000 Children Living.
		Number.	Percentage.			Number.	Percentage.	
0	15,516	2,050	73·38	132·12	15,089	1,702	71·94	112·80
1	14,124	432	15·46	30·59	13,783	385	16·27	27·94
2	13,981	143	5·11	10·23	13,428	129	5·45	9·61
3	13,780	93	3·33	6·75	13,667	82	3·47	6·00
4	13,698	76	2·72	5·55	13,437	68	2·87	5·06
Total	71,099	2,794	100·00	39·29	69,404	2,366	100·00	34·09

Proportion of infants dying annually.

Of every 1,000 boys under 1 year of age, 132, and of every 1,000 girls under 1 year of age, 113, died annually in the decade under notice; the corresponding proportions for the previous ten years being 152 and 130 respectively. These proportions are naturally higher than those quoted in the table showing the comparison of deaths of children under 1 with the births, the proportions in which were 120 deaths of male infants and 104 deaths of female infants to every 1,000 births of infants of those sexes respectively during the recent decade, and 135 and 118 respectively during the previous one.

More boys died than girls.

• In proportion to their respective numbers in the population, more boys than girls died at every year of age, the difference per 1,000 living being as much as 19 at under 1 year, but only about 2 2-3 at from 1 to 2, and less than 1 at subsequent ages.

Boys and girls dying under 1.

According to the figures, deaths of boys under 1 year of age furnish a larger proportion to the total deaths of boys under 5 than deaths of girls under 1 do to the total deaths of girls under 5, but the reverse is the case at each of the years of age after the first.

Proportion of deaths of children at each age.

Of the whole number of children who died before they attained the age of 5, nearly three-fourths, viz., 73 per cent. of the boys, and 72 per cent. of the girls, were under 1 year of age; less than a sixth of the boys and about a sixth of the girls were between 1 and 2; about 1 in 19 of the boys and about 1 in 18 of the girls were between 2 and 3; 1 in 33 of the boys and 1 in 28 of the girls were between 3 and 4; 1 in 37 of the boys and 1 in 35 of the girls were between 4 and 5.

Probable mortality of children under 5.

It results from actuarial calculations, based upon the figures for the decade 1891-00 in the last table, that of every 20,000 boys and girls in equal numbers born in Victoria, 1,195 boys and 1,040 girls may be expected to die before they complete a year of life, 265 more boys and 247 more girls before they complete 2 years, 81 more boys and 84 more girls before they complete 3 years, 63 more boys and 52 more girls before they complete 4 years, and 47 more boys and 43 more girls before they complete 5 years. At the end of that period it is probable that 1,651 of the boys and 1,466 of the girls will have died; and 8,349 of the boys and 8,534 of the girls will be still living. The average result for both sexes is 8,441 per 10,000, which is more favourable than that deduced from the mortality of either of the two previous decades 1881-90, and 1871-80, which showed the number of survivors at the end of the first five years of life to be 8,211 and 8,103 respectively.

Out of every 10,000 infants born in Victoria, there will on the average be 5,120 boys and 4,880 girls—being in the ratio of 105 of the former to every 100 of the latter. These, according to the results just arrived at, will be reduced at the end of 5 years to 4,275 boys and 4,165 girls—or in the ratio of $102\frac{1}{2}$ of the former to every 100 of the latter. Thus, one-half of the excess of males over females at birth is neutralized in the first five years.

The number of survivors at the age of 5 out of every 1,000 children born has also been computed in this office for New South Wales and New Zealand, and the results are compared with those given in "Mulhall's Dictionary of Statistics" for several European countries, as follow. It will be noticed that a larger number of infants survive the first five years in New Zealand, New South Wales, and Victoria than in any European country:—

	No. of Survivors.			No. of Survivors.
New Zealand	889	Denmark	755
New South Wales ...	850	France	751
Victoria	844	Switzerland	748
Norway	838	Prussia	684
Ireland	837	Italy	632
Sweden	783	Austria	614
Scotland	780	Hungary	598
England and Wales ...	762	Spain	571
Belgium	756		

It is remarkable that those countries (with the exception of France) in which the greatest infantile mortality occurs are those which possess a high birth rate, and on the contrary those countries which have a low birth rate have also the lightest mortality. It is evident, therefore, that there is an intimate association between the birth rate and the infantile mortality, and in view of the importance at present attaching to the subject of the declining birth rate, both by medical men and economists, the figures shown above should prove of some interest. So great indeed is the mortality per 1,000 births in the high birth rate countries that the ultimate gain to the population of those countries at the expiration of five years is in some cases below that of the low birth rate countries, and it is highly probable that could the mortality have been traced for a year or two beyond that period, it would be found that the supremacy rests with the low birth rate countries. The following statement shows the birth rate per 1,000 of the

population, and the number surviving their fifth year similarly estimated:—

Country.	Birthrate.	Surviving the 5th Year.
Hungary	39·4	23·6
Austria	37·2	22·8
Prussia	36·5	25·0
Spain	34·8	19·9
Italy	33·9	21·4
Holland	32·1	25·6
Norway	30·3	25·4
Denmark	30·0	22·7
England	29·2	22·2
Belgium	28·9	21·9
Switzerland	28·4	21·2
New South Wales	27·4	23·3
Sweden	26·9	21·1
New Zealand	25·7	22·8
Victoria	25·7	21·7
France	22·0	16·5

Thus it will be seen that the superiority of the birth rate of European States, so far as population is concerned, has for the most part disappeared at the end of five years.

Deaths in childbed.

The death rate of women in childbed is usually ascertained by comparing the number of deaths of parturient women with the total number of births. Such deaths are classified in two ways. If the death is supposed to occur merely from the consequences of childbearing without specific disease, it is set down under the head of childbirth, Class VI., Sub-class 9; but, if it should arise from puerperal fever, it is placed under that head, Class I., Sub-class 6. The proportion of deaths of childbearing women has fallen decade by decade from 64 per 1,000 in 1871-80 to 56 in 1891-00. In the years 1901 and 1902, however, the rate was as high as in the decade 1871-80. This rise was no doubt partly attributable to the increased average age of mothers, previously referred to. The proportions which prevailed in the last two years, and the averages of previous periods back to 1864, are shown in the following table:—

Period.	The Number of Women who Died Annually of—			Deaths of Mothers to every 10,000 Children Born Alive.
	Child Birth.	Puerperal Fever.	Total.	
1864-70	108	20	123	49·06
1871-1880	127	46	173	64·38
1881-1890	121	64	185	59·19
1891-1900	117	66	183	56·01
1901	130	71	201	64·82
1902	131	68	199	65·32

PREVALENCE OF TUBERCULOSIS IN VICTORIA.

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DEPARTMENT, AND CHAIRMAN OF THE BOARD OF PUBLIC HEALTH.

In June, 1902, in reporting to the Board of Public Health on "Measures to be adopted for the prevention and cure of Tuberculosis," I furnished a table showing the average yearly death rates per 100,000 of the population for successive triennial periods between 1862 and 1902, from phthisis and other tubercular diseases in the metropolitan and the extra metropolitan districts as follows:—

AVERAGE YEARLY DEATH RATES PER 100,000 OF THE POPULATION IN TRIENNIAL PERIODS BETWEEN 1862 AND 1902.

Locality.	(a) From Phthisis.												
	1863-65	1866-68	1869-71	1872-74	1875-77	1878-80	1881-83	1884-86	1887-89	1890-92	1893-95	1896-98	1899-1901
Metropolitan Districts	216	205	223	202	221	224	226	231	217	188	181	164	144
Extra-Metropolitan Districts	93	83	78	82	85	87	93	92	100	99	103	95	96
	(b) From Other Tubercular Diseases.												
Metropolitan Districts	84	69	58	50	65	56	56	58	65	61	44	45	42
Extra-Metropolitan Districts	43	47	30	30	32	22	19	20	19	20	20	23	22

From this it will be seen that the rates for the 9 years preceding 1902 were lower than those for any of the previous years in regard both to phthisis and to other tubercular diseases. In the same report I also furnished a chart showing that the mortality in Victoria from tuberculosis in all its forms during the 14 years prior to 1902 had fallen fairly steadily from 180 to 149 per 100,000 of the population, a rate, it may be added, that still further fell during the year 1902.

Striking as these facts are, and conclusive as they may appear to be in deciding the question whether the prevalence of tubercular diseases can properly be said to have diminished or not in Victoria, it was pointed out in the report that there were considerations to be entered upon before that conclusion

could be definitely accepted. Some of them were in part discussed in the report referred to, but in this place it will be possible to add somewhat to the discussion in the light of other data that have since been put together.

First, it may be asked whether the selection of Victoria as a place of residence for consumptives from other States or other countries has of late years been materially checked. But, though unable to give evidence in support of a negative reply, there is, it should be said, an impression in the minds of the Port Health Officers that there has been some reduction in the number of consumptives arriving in Victoria.

Secondly, the question may be put whether the fall is due to any excess in the number of deaths from other diseases. To supply the answer to this question, it will be necessary to refer to the mortality as a whole, and to the mortality from diseases that may be thought of as having taken the place of tuberculosis as a cause of death.

Table A shows that the general mortality has fallen somewhat markedly, and especially during the last ten years, so that the table cannot be used as an argument in support of the view that the fall of the tubercular death rate has been due to excess of deaths from other causes, nor can it be adduced for that purpose unless it be shown that certain concurrent changes took place in the age constitution of the population and in that of the groups that died.

When the different fatal diseases are brought under consideration, there are similar difficulties to be dealt with, such as I have pointed out in my report. For instance, influenza in its epidemic prevalences has, in the opinion of many, caused large numbers of deaths among consumptives, and so, from time to time, has more or less cleared the field, as it were, of persons that would later have died of consumption; and when dealing in the report with the great fall of mortality from tubercular diseases that has taken place in the metropolis, I gave data concerning influenza and respiratory diseases, serving to suggest that the fall may have been in part a matter of compensation.

It has been suggested that possibly more definite conclusions might be arrived at on examination of the mortality from the diseases just mentioned during trienniads, the middle third of each of which was a census year, and accordingly several tables, B, C, D, E, F, G, and H, have been prepared for the triennial periods 1870-2, 1880-2, 1890-2, and 1900-2.

It will be seen that in the first three of these trienniads there was a progressively increasing mortality from respiratory

diseases and influenza, both among males and females, and with one or two small exceptions, for each age group, and that in the fourth trienniad there was both among males and females, and with one or two small exceptions, for each age group, a very considerable fall. It will also be seen that among females the mortality from phthisis rose in the second trienniad for all of the age groups, and that it fell in the third, and still further, except in regard to one age group, in the fourth; and that among males the mortality in all but one of the age groups rose in the second, and in some age groups rose further in the third trienniad, and that in the fourth trienniad it fell for all but two of the age groups. Other tubercular diseases may in this connexion be almost ignored, but it may be mentioned that for persons from 1 to 15 years of age, i.e., for the group in which those diseases are most fatal, both among males and females, the same order of facts is revealed.

Speaking generally, it may be said that the mortality from phthisis, the mortality from other tubercular diseases, and the mortality from respiratory diseases and influenza, increased during the first three trienniads under consideration, and diminished during the fourth, the latest, trienniad. This is practically shown also in Table E, which sets out the death rates for different age groups from consumption and other tubercular diseases, together with influenza and respiratory diseases; and it may be argued that had it not been for the influenzal outbreaks, the reduction in the fourth period would not have occurred. In other words, my argument put out in the report cannot, on the further data here furnished, be dismissed, though it cannot, I think, be said that those data afford any material aid in solving the problem; while there still remain for reflection the widespread and fatal epidemics of influenza that took place in years not coinciding with the periods under review.

Brief reference may now be made to the marked fall in the tubercular mortality that has occurred of late years in the metropolis, and to the question whether this similarly can be accepted as showing removal of conditions that favoured the spread of tubercular diseases; and here the same order of questions arises as was presented when dealing with Victoria as a whole.

In the report already several times adverted to, I drew attention to the fact that the table showed a very considerable fall of mortality during the last 9 to 12 years in the metropolitan districts both from phthisis and from other tubercular diseases, and but little change of mortality during that period from those diseases in the extra metropolitan districts, at the

same time noting that as the mortality from phthisis and from other tubercular diseases was only rarely half as high in the extra metropolitan as in the metropolitan districts, there had not been the same room for improvement in the former as in the latter, though in some parts of the former high death rates from consumption had ruled for years, as, for instance, in the great mining centres of Ballarat* and Bendigo,* and I invited attention to the chart, which showed that the tubercular mortality in the metropolis had presented an almost continuous yearly fall from 27·8 in 1888 to 19·8 in 1901 (here I may add to 18 in 1902) per 10,000 of the population.

As just said, the question as to the full meaning of this reduction raises the same order of questions as was dealt with in regard to Victoria as a whole.

First, it may be asked whether of late years any large migration of tubercular patients has taken place countrywards from the metropolis, or whether any large customary migration to the metropolis of such patients has of late years been much reduced. I know of no data to support the view that there has been any such great change in the place of residence of the consumptives of Victoria at the time of death, though I am inclined to think that there has been some such change. Moreover, seeing that the population of the metropolis constitutes almost one-half of that of the State, there is for special notice the fact already mentioned that, while the metropolitan mortality from tuberculosis has fallen greatly, the extra metropolitan has not sensibly, if at all, changed.

Secondly, the question already dealt with may again be put, whether the selection of Victoria as a place of residence for consumptives from other States and other countries has of late years been materially checked, a question to which I am not able to give an affirmative reply, though there is a belief that consumptives have of late years arrived in Victoria in somewhat smaller numbers than previously. The general mortality, too, cannot be

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* The average yearly rate per 10,000 of the population during the 13 years prior to 1902 was 24·8 in the case of Bendigo and suburbs, and 16·9 in that of Ballarat and suburbs, the excess of these rates being no doubt attributable in part to mining operations, and in the case of Bendigo to the selection of that city as a place of residence by consumptives.

adduced as evidence that there has been no abolition of the factors favourable to the dissemination of tuberculosis. But, as stated in my report several times referred to, "Com-"parison of the mortality from respiratory diseases and in-"fluenza on the one hand, with that from consumption and "all tubercular diseases on the other, will serve, I think, to "suggest that the fall in the latter may have been in part "a matter of compensation."

Statistics in this connexion are as follow:—"In successive "quinquennial periods from 1864 to 1898, both years included, "the average yearly death rates in Melbourne and suburbs "per 100,000 of the population were—(1) in the case of phthisis, "206, 211, 221, 227, 227, 191, and 170; (2) in the case of re-"spiratory diseases and influenza, 165, 155, 199, 225, 227, 227, "and 198; and (3) in the case of all tubercular diseases, 282, "264, 283, 282, 288, 250, and 214."

Of course the question of age constitution of the population needs also to be considered, but until the age constitution is known, both of the population in general and of those that died during the period under review, no absolutely definite conclusion can be arrived at. At the same time, while allowing that the view I expressed in my report as to the fall having been, in part, a matter of compensation, is not set aside by the further data brought to bear on the discussion, there is nothing to show that there has not been an absolutely material reduction of the factors fostering tuberculosis in the metropolis, while it can scarcely be supposed that the reports distributed by the Board of Public Health to the municipal councils, as the local sanitary authorities, and the placards of information that have been distributed by the Board throughout the State, reports and placards that have, during the past 13 years, numbered some hundreds of thousands, and the action taken by the councils thereon, have failed to produce any beneficial results.

The object of this inquiry will be further prosecuted with the aid of statistics of mortality and age constitution for the successive years of the period reviewed in this report, and with the aid also of statistics as to immigration of consumptives into the State during the same period.

A.

RETURN SHOWING MALE AND FEMALE DEATH RATES PER 1,000 OF THE POPULATION OF VICTORIA FOR EACH YEAR, 1861-1902.

Year.	Death Rate per 1,000 of the Population.		Year.	Death Rate per 1,000 of the Population.	
	Males.	Females.		Males.	Females.
1861	18·84	20·47	1882	16·91	13·57
1862	18·28	18·56	1883	15·52	12.95
1863	17·34	16·25	1884	15·49	13·18
1864	15·52	14·67	1885	16·47	13·39
1865	17·74	16·29	1886	16·49	13·72
1866	19·82	19·16	1887	17·14	14·18
1867	18·39	17·99	1888	16·80	13·91
1868	15·95	14.23	1889	19·19	16·20
1869	16·40	14·32	1890	17·59	14·44
1870	15·59	13·41	1891	17·74	14·63
1871	14·49	12·21	1892	14·99	12·15
1872	15·42	13·14	1893	15·69	12·35
1873	15·91	13·99	1894	14·60	11·47
1874	16·78	14·48	1895	14·58	11·74
1875	20·40	18·29	1896	14·73	11·77
1876	18·25	15·64	1897	14·22	11·34
1877	17·17	14·26	1898	17·57	13·99
1878	16·57	14·22	1899	15·48	12·43
1879	16·04	12·93	1900	14·34	11·11
1880	14·80	12·48	1901	14·90	11·48
1881	15·38	12·77	1902	15·13	11·66

B.

DEATH RATES IN VICTORIA PER 10,000 FROM INFLUENZA.

Age Group.	Males.				Females.			
	1870-2.	1880-2.	1890-2.	1900-2.	1870-2.	1880-2.	1890-2.	1900-2.
0—15 ...	0·69	·34	2·50	1·10	·52	·34	1·86	1·15
15—20 ...	...	·07	·64	·34	—	—	·92	·83
20—25 ...	...	...	1·20	·59	—	—	1·28	·69
25—35 ...	0·05	·07	1·50	·79	·07	·07	2·35	·89
35—45 ...	0·05	...	3·04	1·31	—	·08	4·11	1·86
45—55 ...	0·09	·24	5·12	3·20	·17	—	5·39	2·02
55—65 ...	0·67	·24	12·65	5·25	·39	·62	11·46	5·53
65 upwards ...	1·09	2·36	27·13	17·02	·84	3·18	35·22	16·02
All ages ...	0·33	·25	3·94	2·30	·28	·24	3·72	2·13

C.

DEATH RATES IN VICTORIA PER 10,000 FROM RESPIRATORY DISEASES.

Age Group.	Males.				Females.			
	1870-2.	1880-2.	1890-2.	1900-2.	1870-2.	1880-2.	1890-2.	1900-2.
0—15 ...	22·65	29·02	28·52	16·53	18·50	24·18	24·13	13·85
15—20 ...	3·45	3·30	2·92	2·70	1·88	2·02	3·52	2·34
20—25 ...	5·70	5·34	4·88	4·85	3·54	4·23	3·05	3·34
25—35 ...	4·69	8·31	6·85	5·94	4·51	5·72	5·65	3·75
35—45 ...	10·28	15·80	13·55	9·49	7·94	12·53	11·55	7·68
45—55 ...	20·43	26·59	25·18	18·04	7·87	13·63	17·01	11·80
55—65 ...	41·79	51·65	56·51	38·37	22·97	29·15	32·10	27·42
65 upwards ...	108·11	136·54	141·07	112·38	73·10	116·12	112·38	86·78
All ages ...	17·29	24·48	24·30	18·66	12·63	17·08	17·62	13·28

D.

AVERAGE YEARLY DEATH RATE PER 10,000 PERSONS DYING FROM TUBERCULAR DISEASES (PHTHISIS EXCEPTED) DURING THE YEARS 1870-2, 1880-2, 1890-2, 1900-2.

MALES.

Ages.	Death-rate per 10,000 persons during—			
	1870-2.	1880-2.	1890-2.	1900-2.
0—15	7·53	7·98	10·36	5·64
15—20	·64	·81	1·17	1·12
20—25	1·80	1·23	·89	1·77
25—35	·70	·66	·84	1·91
35—45	·77	·88	·77	1·39
45—55	·95	·85	·67	1·64
55—65	·88	1·07	·78	2·40
65 and over ...	1·09	2·36	·56	1·17
All ages	3·46	3·55	4·02	2·99

FEMALES.

Ages.	1870-2.	1880-2.	1890-2.	1900-2.
0—15	5·89	7·28	8·43	5·33
15—20	·82	1·30	1·27	1·95
20—25	·52	·69	1·23	2·09
25—35	·54	·41	·83	1·98
35—45	1·04	·70	·42	1·77
45—55	·17	·67	·34	1·01
55—65	·39	·62	·69	·71
65 and over ...	1·69	1·19	·64	·71
All ages	3·10	3·39	3·58	2·91

E.

DEATH RATES IN VICTORIA PER 10,000 LIVING AT DIFFERENT AGES FROM PHTHISIS, OTHER TUBERCULAR AND RESPIRATORY DISEASES, AND INFLUENZA.

Ages.	1870-2				1880-2				1890-2				1900-2			
	Phthisis.	Other Tubercular Diseases	Respiratory and Influenza.	Total.	Phthisis.	Other Tubercular Diseases	Respiratory and Influenza.	Total.	Phthisis.	Other Tubercular Diseases	Respiratory and Influenza.	Total.	Phthisis.	Other Tubercular Diseases	Respiratory and Influenza.	Total.
MALES.																
0—15	1·22	7·53	23·34	32·09	1·74	7·98	29·36	39·08	·90	10·36	31·02	42·28	·38	5·64	17·63	23·65
15—20	5·71	·64	3·05	9·40	6·88	·81	3·37	11·06	3·41	1·17	3·56	8·14	5·06	1·12	3·04	9·22
20—25	18·75	1·80	5·70	26·25	21·19	1·23	5·34	27·76	18·29	·89	6·08	25·26	14·35	1·77	5·44	21·56
25—35	22·21	·70	5·74	28·65	30·33	·66	8·38	39·37	23·70	·84	8·35	32·89	20·31	1·91	6·73	28·95
35—45	21·83	·77	10·33	32·93	25·11	·88	15·80	41·79	28·28	·77	16·59	45·64	22·07	1·39	10·80	34·26
45—55	22·24	·95	20·52	43·71	28·65	·85	26·83	56·33	31·17	·67	30·30	62·14	25·05	1·64	21·24	47·93
55—65	27·86	·88	42·46	71·20	31·41	1·07	51·89	84·37	36·48	·78	69·16	106·42	35·75	2·40	43·62	81·77
65 and over	19·56	1·09	109·20	129·85	18·08	2·36	138·90	159·34	25·40	·56	168·20	194·16	31·07	1·17	129·40	161·64
All ages	12·89	3·46	17·62	33·97	15·33	3·55	24·73	43·61	15·73	4·02	28·24	47·99	13·51	2·99	20·96	37·46
FEMALES.																
0—15	0·98	5·89	19·02	25·89	1·76	7·28	24·52	33·56	1·43	8·43	25·99	35·85	·93	5·33	15·00	21·26
15—20	12·37	·82	1·88	15·07	12·50	1·30	2·02	15·82	9·51	1·27	4·44	15·22	8·18	1·95	3·17	13·30
20—25	19·28	·52	3·54	23·34	21·00	·69	4·23	25·92	18·49	1·23	4·33	24·05	12·79	2·09	4·03	18·91
25—35	22·02	·54	4·58	27·14	26·56	·41	5·79	32·76	21·77	·88	8·00	30·65	18·15	1·98	4·64	24·77
35—45	21·65	1·04	7·94	30·63	24·06	·70	12·61	37·37	22·53	·42	15·66	38·61	17·74	1·77	9·54	29·05
45—55	19·60	·17	8·04	27·81	20·72	·67	13·63	35·02	16·13	·34	22·40	38·87	14·41	1·01	13·82	29·24
55—65	10·51	·39	23·36	34·26	14·26	·62	29·77	44·65	12·35	·69	43·56	56·60	12·52	·71	32·95	46·18
65 and over	12·61	1·69	73·94	88·24	13·12	1·19	119·30	133·61	8·25	·64	147·60	156·49	8·18	·71	102·80	111·69
All ages	10 62	3·10	12·91	26·63	12·75	3·39	17·32	33·46	11·51	3·58	21·34	36·43	9·72	2·91	15·41	28 04

F.

Deaths from Phthisis in Victoria for the Years 1860-1902.

Year.	Deaths from Phthisis.		Year.	Deaths from Phthisis.	
	Total Number.	Number per 10,000 Persons Living.		Total Number.	Number per 10,000 Persons Living.
1860 ...	772	14·46	1898 ...	1,520	12·85
1865 ...	741	12·12	1899 ...	1,339	11·29
1870 ...	888	12·45	1900 ...	1,387	11·62
1875 ...	1,027	13·04	1901 ...	1,416	11·77
1880 ...	1,175	13·82	1902 ...	1,412	11·69
1885 ...	1,384	14·46			
1890 ...	1,631	14·58	Sum and Mean of 43 Years	49,579	13·15
1895 ...	1,567	13·23			

G.

Death Rates in Victoria from Phthisis at Different Ages at Five Census Periods, 1860-2, 1870-2, 1880-2, 1890-2, 1900-2.

MALES.

Ages.	Annual Mortality from Phthisis per 10,000 of the Population.				
	1860-2.	1870-2.	1880-2.	1890-2.	1900-2.
0—15	2·55	1·22	1·74	·90	·38
15—20	7·72	5·71	6·88	3·41	5·06
20—25	12·23	18·75	21·19	18·29	14·35
25—35	16·53	22·21	30·33	23·70	20·31
35—45	21·63	21·83	25·11	28·28	22·07
45—55	23·14	22·24	28·65	31·17	25·05
55—65	25·63	27·86	31·41	36·48	35·75
65 and upwards ...	23·20	19·56	18·08	25·40	31·07
All ages ...	13·33	12·89	15·33	15·73	13·51

FEMALES.

Ages.	1860-2.	1870-2.	1880-2.	1890-2.	1900-2.
0—15	3·70	·98	1·76	1·43	·93
15—20	14·07	12·37	12·50	9·51	8·18
20—25	18·95	19·28	21·00	18·49	12·79
25—35	24·76	22·02	26·56	21·77	18·15
35—45	25·62	21·65	24·06	22·53	17·74
45—55	25·01	19·60	20·72	16·13	14·41
55—65	22·59	10.51	14·26	12·35	12·52
65 and upwards ...	18·03	12·61	13.12	8·25	8·18
All ages ...	14·46	10·62	12·75	11·51	9·72

H.

AVERAGE YEARLY DEATH RATES IN VICTORIA FROM INFLUENZA AND RESPIRATORY DISEASES (COMBINED) PER 10,000 LIVING AT DIFFERENT AGES, DURING 1870-72, 1880-82, 1890-92, AND 1900-1902.

Age Group.	1870-72.	1880-82.	1890-92.	1900-02.
MALES.				
0—15	23·34	29·36	31·02	17·63
15—20	3·05	3·37	3·56	3·04
20—25	5·70	5·34	6·08	5·44
25—35	5·74	8·38	8·35	6·73
35—45	10·33	15·80	16·59	10·80
45—55	20·52	26·83	30·30	21·24
55—65	42·46	51·89	69·16	43·62
65 and upwards	109·20	138·90	168·20	129·40
All ages	17·62	24·73	28·24	20·96
FEMALES.				
0—15	19·02	24·52	25·99	15·00
15—20	1·88	2·02	4·44	3·17
20—25	3·54	4·23	4·33	4·03
25—35	4·58	5·79	8·00	4·64
35—45	7·94	12·61	15·66	9·54
45—55	8·04	13·63	22·40	13·82
55—65	23·36	29·77	43·56	32·95
65 and upwards	73·94	119·30	147·60	102·80
All ages	12·91	17·32	21·34	15·41