VITAL STATISTICS.

Law as to marriages in Victoria.

Marriages in Victoria can only be celebrated by a minister of religion whose name is registered in the office of the Government Statist, by the Government Statist, or the Assistant Government Statist, or by a duly appointed registrar of marriages. It is essential that every marriage be preceded by the parties making a declaration as to age and the absence of any legal impediment, and by three days' notice, except in cases of emergency, also that two witnesses be present at the ceremony; but there is no residential qualification. To be married by a minister, one of the parties must give him at least three days' written notice, or—in cases of emergency—a written permission obtained from any Justice, dispensing with such notice; and the marriage may then be solemnized according to the rites of the religious denomination to which the minister belongs. To be married by a Registrar of Marriages, the parties to the marriage must give written notice, which has to be posted in, and a copy thereof at the outer door of, his office at least three days before the marriage. This can only take place in his office, with open doors, and between the hours of 8 a.m. and 4 p.m. No fee is payable for the celebration of a marriage before a registrar. In the case of a minor (not being a widower or widow), wishing to marry, there must be obtained the written consent (*a*) of the father if he be within Victoria; if not (*b*) of a guardian appointed by him; if there be no such guardian (*c*) of the mother if within Victoria; if the parent be incapable of consenting, or if there be no such parent or guardian in Victoria (*d*) of a police magistrate, or a justice appointed for the purpose by the Chief Justice or a Judge of the Supreme Court. If the mother has been deserted by the father, or has obtained a protection order against him, or if, through divorce or judicial separation, she has become the guardian *de facto*, her consent is sufficient authority for the marriage. If the minor is a ward of the Neglected Children's or Reformatory Schools' Department, the Departmental Secretary's consent is the authority. In all cases a statement to the effect that the consent has been obtained must be made on the marriage certificates. 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 recognised religious denominations, is nominated by the recognised head of the denomination in Victoria, or, if there be no such head, then by at least two registered ministers; and unless he 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, or who makes a business of celebrating marriages for the purpose of profit or gain, irrespective of carrying out the ordinary duties of a minister; and the Government Statist may, at the request of the head of a denomination, cancel the registration of any minister of the same denomination 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. 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; and ministers are now practically prevented from entering into business relations with such agencies. No marriage shall be invalid by reason of its having been celebrated by an unqualified person if either of the parties shall have believed at the time that such person was qualified, or by reason of any formal defect or irregularity. Marriage with a deceased wife's sister has been legalised in Victoria since 1873; but there is no provision to validate the marriage of a woman with a deceased husband's brother.

Marriages of Jews and Quakers are exempted from the foregoing provisions, and are deemed legal and valid if celebrated according to their respective usages.

Registration.

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) over the officiating clergymen and registrars of marriages. Copies of 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 originals or certified copies 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 nearly 600 registration 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 registrar of marriages 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 a marriage), or of the informant (in case of a birth or death), and of the minister or registrar. One copy is retained by the registrar or minister; one is 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. Births must be registered within 60 days by the father or mother or the occupier of the house where the birth occurred, or by some person authorized by one of these. A person who fails in his duty to register within 60 days is liable to a penalty of £10, although he still may register within twelve months on payment of a fee of 5s. To insure registration of all births, parents and the occupiers of houses where births occur are required to, and doctors and nurses may, and are expected to, report cases to the registrars. After twelve months, registration can only be effected after proper legal authority has been obtained, and on payment of a fee of 10s. Deaths must, under a penalty of £10, be notified within seven days to the local registrar by the father or mother or the occupier of the house where the death occurred, or the doctor or nurse, and must be registered within twenty-one days by some person present at death or in attendance during the last illness, or in default of such persons by the occupier of the house where the death occurred, or by some person authorized by one of these. An exception is made in regard to sudden deaths, and deaths of boarded-out children under the age of 5 years, which should be at once reported to the Coroner, and can only be registered by him or on his authority. This exception does not apply to wards of the State or infants retained by or received into any approved public charitable institution. In addition to ordinary registration, every birth, or death under the age of 5, of an illegitimate child must be notified in writing by the occupier of the house where the event occurred within three days to the local registrar, if in any city, town, or borough, or within seven days to the local registrar or police officer in charge, if elsewhere, provided that if the mother is the occupier, the period for notification is extended to three weeks. Offenders against this provision are liable to imprisonment for six months, or to a penalty of £25. Illegitimate children may be legitimized within six months of the marriage of the parents on application to the Government Statist or to any Registrar of Births and Deaths, and on the payment of fees varying from 5s. to 12s. 6d. 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 fee for a search in the Official Records, or an extract of an entry, is 2s. 6d., and that for a certificate 7s. 6d. (except in cases occurring in the current quarter, when 5s. only is charged). For a search in the early church records, prior to 1st July, 1853, the fee is only 1s., or 2s. if a certificate is required.

MARRIAGES.

Marriages.

Marriages in 1910 numbered 10,240, which was the highest total recorded, and 1,031 above the average of the preceding five years. The marriages in Victoria in each of the last twenty years were as follows :—

MARRIAGES IN EACH YEAR, 1891 TO 1910.

Year.	No. of Marriages.	Year.	No. of Marriages.
1891 ...	8,780	1901 ...	8,406
1892 ...	7,723	1902 ...	8,477
1893 ...	7,004	1903 ...	7,605
1894 ...	7,029	1904 ...	8,210
1895 ...	7,181	1905 ...	8,774
1896 ...	7,625	1906 ...	8,930
1897 ...	7,568	1907 ...	9,575
1898 ...	7,620	1908 ...	9,334
1899 ...	8,140	1909 ...	9,431
1900 ...	8,308	1910 ...	10,240

Between 1891 and 1894, a period of commercial depression, a fall in the number of marriages amounting to 20 per cent. took place. A slight recovery occurred in 1895, and with three exceptions this was followed by varying increases in subsequent years. The substantial nature of this improvement is indicated by the fact that after allowing for the increase in population 8,628 more persons were married in the past five years than in the period 1901-5. As the tendency to marry is necessarily influenced by the view taken of present and future prospects, the relatively large number of marriages in each of the past five years is an indication of the general prosperity of that period.

Marriage rates.

The ordinary marriage rate—per 1,000 of the total population—like birth and death rates similarly estimated, is somewhat unreliable in comparatively newly settled countries like Australia, especially in earlier periods, but as it affords a ready and approximate comparison between years not widely separated, the figures relating to Victoria are shown in the following table for the last ten years :—

MARRIAGE RATES, 1901 TO 1910.

Year.	Marriage Rate.	Year.	Marriage Rate.
1901 ...	6.97	1906 ...	7.21
1902 ...	6.97	1907 ...	7.64
1903 ...	6.24	1908 ...	7.37
1904 ...	6.73	1909 ...	7.36
1905 ...	7.16	1910 ...	7.83

The marriage rate in 1910 was the highest experienced during the past twenty years. The increase over the rate for the previous year was 7 per cent., and was fairly evenly distributed over each of the principal divisions of the State.

Factors in marriage rates.

It has been frequently shown that the marriage rate is not so dependent upon the number of marriageable women as upon the number of marriageable men the community contains, and, to demonstrate this the following table is designed, 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 1854 to 1901 :—

PROPORTION OF MARRIAGES PER 1,000 OF POPULATION AND OF SINGLE MEN AND WOMEN, 1854 TO 1901.

Year of Census.	Exclusive of Chinese and Aborigines.						
	Enumerated Population.	Number Marriageable—		Marriages.	Proportion of Marriages per 1,000 of the—		
		Men (aged 20 and over).	Women (aged 15 and over).		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	163,048	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

NOTE.—The figures in this table relate to the twelve months of which the date of census is the middle.

Fluctuations in marriage rate.

It will be observed that, whilst the proportion of marriages to the population (marriage rate) and to the marriageable women fluctuated considerably, the proportion to the marriageable men was tolerably constant, the extremes being 57½ in 1881, and 42⅓ in 1861 and the usual range between the narrow limits of 52 and 55. This proportion steadily diminished from 57½ in 1881 to 55 in 1901; the latter rate was, however, higher than at any period prior to 1881. The proportion of marriages per 1,000 marriageable 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 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,

and 1 in 8 in 1861, to 1 in every 20 in 1891, and 1 in 25 in 1901 marrying within a year. The last rate is slightly less than that for England and Wales, where 1 in every 22 marriageable women entered wedlock within a year during the period 1900-2.

Marriage rate in age groups.

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 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 (Years.)	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 and upwards ..	10.5	9.1	9.1	4.9	4.2	2.4
15-45	..	..	..	55.9	58.7†	49.0

* 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 group in 1891 is due to the changes in the age constitution of women under 45 years of age.

In the last two periods, as compared with the first, there is every evidence of a tendency amongst men to defer marriage to a later period in life—the turning point being age group 30-35, for there is a marked decrease in the rates below and an increase in the rates above that age. In 1901, as compared with 1891, however, there is a considerable increase in the rate at every age period except 20-25 and over 50. In the case of marriageable women, there is, it will be observed, a fall between 1881 and 1891, and a greater

fall between 1891 and 1901 in the proportion marrying at each age group under 35, while there is a rapid decline from each census to the subsequent one in the proportions at ages over 35.

The ages of bridegrooms and brides who were married in 1910 are shown in combination for various groups in the following table:— Ages of bridegrooms and brides.

AGES OF BRIDEGROOMS AND BRIDES IN COMBINATION IN VICTORIA, 1910.

Ages of Bridegrooms.	Ages of Brides.																			Total Bridegrooms.
	15.	16.	17.	18.	19.	20.	21 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	
16	...	..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	.	...	...	1
17	...	2	1	3	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	9
18	1	1	6	4	7	3	5	1	...	...	.	...	...	...	...	...	.	...	...	28
19	...	3	12	21	25	12	16	1	1	...	...	...	...	...	...	...	...	...	...	91
20	...	4	12	33	37	28	58	6	1	...	...	...	...	...	...	...	...	...	...	179
21 to 25	2	16	66	161	267	292	1,402	351	52	11	3	1	...	...	...	...	...	...	...	2,624
25 to 30	1	10	32	81	131	186	1,423	1,273	256	50	10	2	...	...	...	...	...	...	...	3,455
30 to 35	...	3	12	16	46	60	437	684	379	84	13	2	5	...	...	...	...	...	...	1,741
35 to 40	1	...	2	6	11	19	161	271	220	168	47	15	...	...	...	...	...	...	...	921
40 to 45	...		..	1	5	4	52	116	129	112	70	17	9	...	...	...	...	...	...	515
45 to 50	..	..	1	1	1	2	28	45	47	78	59	40	16	1	1	...	...	.	..	320
50 to 55	...	.	...	...	1	1	4	11	32	37	21	26	14	3	1	...	...	...	..	151
55 to 60	...	...	...	...	...	...	1	5	4	14	17	16	10	10	1	..	...	...	...	78
60 to 65	...	...	...	...	...	...	1	4	2	8	6	6	6	6	7	3	2	...	...	51
65 to 70	...	...	..	...	...	...	1	1	3	1	6	6	4	6	4	10	...	...	...	42
70 to 75	...	..	..	...	...	...	...	...	1	...	1	...	3	5	2	6	1	...	...	19
75 to 80	...	...	..	1	...	...	...	...	...	1	...	...	2	2	...	1	...	1	2	10
80 and over	...	...	...	...	...	...	...	...	...	...	1	1	1	...	1	1	...	...	...	5
Total Brides	5	39	145	328	533	608	3,589	2,769	1,127	564	254	132	70	33	17	21	3	1	2	10,240

The ages of bridegrooms ranged from 16 to 99 years, and those of brides from 15 to over 80. Although age inequalities among contracting parties were relatively few, they were striking in degree. Thus a man between 75 and 80 married a girl of 18, while five women between 50 and 55 were married to men who were their juniors by 20 years. The great majority of the parties were, however, of suitable ages. Of every 1,000 men married during the year, 708 were older and 183 were younger than their brides, and 109 were of the same age as their partners.

Proportion of marriages at various ages.

The proportions of both sexes marrying in the various age groups are shown in the following table for the averages of the periods 1881-90 and 1905-9, also for the year 1910 :—

PROPORTION OF MALES AND FEMALES MARRYING AT DIFFERENT AGES, 1881-90, 1905-9, AND 1910.

Ages (Years).	Proportion per 1,000 of total.					
	Bridegrooms.			Brides.		
	1881–90.	1905–9.	1910.	1881–90.	1905–9.	1910.
Under 15	...	...	...	·15	·17	...
15 to 16	...	...	...	1·17	·96	·49
16 to 17	·03	·09	·10	6·53	4·83	3·81
17 to 18	·29	·41	·88	20·32	14·21	14·16
18 to 19	1·46	2·80	2·73	42·94	31·95	32·03
19 to 20	5·62	8·48	8·89	65·03	45·76	52·05
20 to 21	15·19	14·69	17·48	73·84	56·55	59·38
21 to 25	321·02	254·52	256·25	432·34	368·20	350·49
25 to 30	365·48	327·51	337·40	223·83	266·62	270·40
30 to 35	134·57	174·97	170·02	62·07	108·23	110·06
35 to 40	58·29	102·63	89·94	29·53	52·83	55·08
40 to 45	32·54	53·30	50·29	17·10	25·73	24·80
45 to 50	24·77	29·20	31·25	12·23	12·74	12·89
50 to 55	18·40	12·95	14·75	6·74	5·99	6.84
55 to 60	11·49	7·16	7·62	3·40	2·13	3·22
60 and over	10·85	11·29	12·40	2·78	3·10	4·30
Total	1,000·00	1,000·00	1,000·00	1,000·00	1,000·00	1,000·00

It will be observed that the age constitution of brides shows a very marked alteration in recent years. Of every 1,000 women who were married during 1910, 512 were under 25 years, and 270 were aged 25-30, as against 642 and 224 at corresponding ages in 1881-1890. As the fertility of married women is considerably less at older than at younger ages, it is evident that owing to the altered age distribution of wives the potential births to every 1,000 marriages in the year under review are fewer than to marriages contracted during 1881-1890.

Increased age at marriage.

A high proportion of re-marriages has the effect of increasing the average marrying age of bridegrooms and brides. This is readily seen by comparing for 1910 the mean age at marriage of bachelors 28.97—with that of divorced men and of widowers—41.89 and 46.65 respectively. The average age of spinsters marrying was 25.73, as against 34.15 for divorced women and 41.59 for widows. Although the ratio of re-marriages declined there was a rise in the

marrying ages of bridegrooms marrying brides under 45, and in the ages of such brides in the period 1880-1910.

MEAN AGES AT MARRIAGE.

Period.	Average Age of—	
	Brides under 45.	Bridegrooms of Brides under 45.
	years.	years.
1870–4	24·13	29·93
1880–4	23·83	28·61
1890–4	24·66	28·66
1900–4	25·44	29·70
1905	25·77	29·76
1906	25·97	29·90
1907	25·82	29·78
1908	25·85	29·77
1909	25·99	29·78
1910	25·88	29·58

During the last thirty-one years the mean marrying age of women at the reproductive period of life has increased by two years. In the five years 1906-10 the average age of brides under 45 years was 25.90 as against 25.44 in 1900-4, 24.66 in 1890-4, and 23.83 in 1880-4. For Victoria in 1910 the mean marrying age of all brides was 26.62, as compared with 26.69 in England and Wales and 26.40 in New Zealand in 1909. The mean ages of all bridegrooms in the same countries were 30.26, 28.88, and 30.11 years respectively. For women the mean age at marriage is somewhat similar in the three countries, but for men it is less by over a year in England and Wales than in Victoria and New Zealand.

Marriage rates in Australian States and New Zealand.

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 average rates for the whole period :—

MARRIAGE RATES IN THE AUSTRALIAN STATES AND NEW ZEALAND: 1906 TO 1910.

Year.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.	New Zealand.
1906 ..	7·21	7·63	6·73	7·05	8·70	7·74	7·43	8·48
1907 ..	7·64	7·84	7·58	7·94	8·02	7·91	7·78	8·91
1908 ..	7·37	7·97	7·22	7·84	7·50	7·74	7·64	8·82
1909 ..	7·36	8·21	7·96	8·30	7·54	8·13	7·86	8·33
1910 ..	7·83	8·81	8·05	9·21	7·75	7·98	8·37	8·30
Average	7·49	8·09	7·51	8·07	7·90	7·90	7·82	8·57

During the last five years marriage rates in all the Australian States, except Western Australia, have shown an improvement, which has been specially marked in South Australia and Queensland. By

comparison with 1900-4, the marriage rates in 1906-10 increased by 10 per cent. in Victoria and New South Wales, 19 per cent. in Queensland, 24 per cent. in South Australia, 4 per cent. in Tasmania, and 10 per cent. in the Commonwealth. All the States, except Tasmania, had higher rates in 1910 than in the previous year.

Marriage rates in various countries.

The average marriage rate in Australia—7.82—for the period 1906-10 was lower than in ten of the twenty-one countries shown in the following table for the latest five years for which this information is available:—

MARRIAGES PER 1,000 OF THE POPULATION IN VARIOUS COUNTRIES.

Country.	Marriage Rate.	Country.	Marriage Rate.
Bulgaria	10·08	Austria	7 71
Servia	9·85	Switzerland	7·69
Roumania	9·48	England and Wales ...	7·62
Ontario, Province of ...	9·30	Denmark	7·39
Hungary	8·90	Holland	7·30
Russia	8·50	Spain	6·92
Japan	8·26	Scotland	6·67
German Empire ...	8·07	Sweden	6·05
Belgium	7·95	Norway	5·97
France	7·88	Ireland	5·19
Italy	7·82		

Marriages to marriageable males in Australasia.

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 males, aged 21 and upwards, such as is contained in the following statement which gives the average of the three years 1900 to 1902:—

MARRIAGES PER 1,000 MARRIAGEABLE MALES IN AUSTRALASIA.

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 high marriage rates are generally regarded as evidence of prosperity in a community, low rates can hardly be considered as showing the reverse 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; they are ascribable rather to the fact that the ratio of marriageable women to men is small in both those States.

Prior to 1900 the marriages which were celebrated in urban and rural districts were compared with the populations of those districts respectively, but since the place where a marriage is solemnized is no guide as to domicile, the method has been abandoned, and a classification according to the usual residence of the parties adopted instead. The following table gives the 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 year 1910:— Marriage rates in districts.

USUAL RESIDENCE OF BRIDES AND BRIDEGROOMS DURING 1910.

Usual Residence of Bridegroom.	Usual Residence of Bride.				Total Bridegrooms.	Proportion of Bridegrooms per 1,000 of Population.
	Metropolitan.	Other Urban.	Rural.	Outside Victoria.		
In Victoria—						
Metropolitan Districts	4,028	181	294	61	4,564	7·8
Other Urban Districts	143	1,120	224	16	1,503	7·3
Rural Districts	489	346	2,774	33	3,642	7·1
Outside Victoria ..	218	78	121	114	531	..
Total Brides	4,878	1,725	3,413	224	10,240	..
Proportion of Brides per 1,000 of Population ..	8·4	8·3	6·7	..	..	..

Of the 417 men residing outside the State who married Victorian women, 189 were residents of New South Wales, 36 of Queensland, 38 of South Australia, 36 of Western Australia, 47 of Tasmania, 28 of New Zealand, 8 of the United Kingdom, 5 of South Africa, 2 of India, and 28 of other countries.

Compared with the average of the five years, 1900-4, the marriage rates of both sexes in 1910 showed a marked increase in the metropolitan and rural districts. The rates prevailing in each division of the State for the two periods are shown in the following statement:—

Period.		Marriage Rates in Victoria.		
		Metropolitan.	Urban.	Rural.
Males	1900–4	6·9	6·8	5·8
	1910	7·8	7·3	7·1
Females	1900–4	7·5	7·4	5·5
	1910	8·4	8·3	6·7

Variations in sex distribution in town and country are largely responsible for the differences between the male and female rates. For both sexes the marriage rates of persons residing in the rural division are considerably below those among residents in the remainder of the State. Migration of marriageable persons from the country to the metropolis accounts in a large measure for the low country rate.

Marrying age according to occupation.

In order to obtain information regarding the influence of occupation upon the marrying age, the following table has been constructed, based upon 33,156 marriages which took place during the four-year period 1907-10, in which definite occupations were given :—

AGE AT MARRIAGE ACCORDING TO OCCUPATION.

Occupation.	Number Married.	Average Age at Marriage.	Percentage Marrying at Age Group.			
			Under 25.	25 to 35.	35 to 45.	45 and over.
Hairdresser, Tobacconist	253	27·76	43·87	42·69	11·07	2·37
Ironworker, Foundry Employé, &c.	592	27·97	43·07	44·43	8·11	4·39
Carter, Driver, Carrier ...	1,572	28·17	43·38	42·56	9·61	4·45
Blacksmith	657	28·66	37·29	47·34	11·26	4·11
Salesman, Storeman ...	875	29·02	29·94	56·12	11·20	2·74
Baker, Grocer, Butcher, Fruiterer	2,115	29·04	33·71	50·69	11·35	4·25
Labourer	5,631	29·25	35·11	46·78	12·89	5·22
Bootmaker	601	29·38	39·10	43·76	9·65	7·49
Miner	1,936	29·41	35·85	45·35	13·74	5·06
Coachbuilder	266	29·56	31·95	47·74	16·17	4·14
Carpenter, Bricklayer, Mason, &c.	2,059	29·80	35·02	43·71	14·62	6·65
Mechanical Engineer, Fitter, Engine-driver ...	1,330	29·82	28·65	53·61	12·33	5·41
Printer, Stationer, Newsagent	544	29·87	29·96	50·55	14·16	5·33
Constable, Warder, Soldier	317	30·13	24·92	54·57	13·88	6·63
Tailor	586	30·21	27·99	52·56	11·94	7·51
Clerk	1,775	30·27	22·70	58·03	14·82	4·45
Railway, Tramway Employé	1,000	30·28	26·20	52·70	16·10	5·00
Cook, Steward, Waiter ...	253	30·48	32·02	45·06	15·02	7·90
School Teacher ...	274	31·52	16·42	62·77	13·14	7·67
Civil Servant	389	31·91	27·51	40·87	23·91	7·71
Market Gardener ...	424	32·00	20·28	53·07	17·22	9·43
Commercial Traveller, Agent	1,024	32·19	15·24	57·81	18·75	8·20
Farmer, Dairy-farmer, Grazier, &c.	6,598	32·23	15·65	56·11	21·07	7·17
Sailor, Mariner ...	307	32·54	27·04	45·60	18·89	8·47
Professional	958	32·63	13·67	59·08	17·85	9·40
Brewer, Cordial-maker, Hotel-keeper ...	335	33·12	20·00	44·78	22·39	12·83
Builder, Contractor ...	485	33·43	18·76	47·42	20·83	12·99

An inspection of the table shows that wage-earners marry at an earlier age than persons working on their own account and employers of labour. It should be remembered, however, that the average age of the persons in the community who belong to the two last mentioned classes is higher than that of the wage-earners. It is further shown that some wage-earners, such as ironworkers, foundry employés, &c., carters, drivers, carriers, &c., and labourers, who generally receive the highest wage of their occupations in comparatively early manhood, marry at an earlier age than those whose highest wage is reached at a later age, of whom clerks, civil servants, school teachers, carpenters, bricklayers, masons, &c., and railway employés may be taken as examples. This is emphasized by comparing the proportion of labourers marrying under 25 years of age, which was equal to 35.11 per cent., with that of school teachers (16.42), civil servants (27.51), and clerks (22.70) per cent. The group comprising farmers, dairy-farmers, graziers, &c., shows a late marrying age, and has, with two exceptions (professional and commercial travellers), the lowest proportion marrying at the earliest age division. The average age at marriage of this class is greater than that of hairdressers and tobacconists by 4.47 years; of ironworkers and foundry employés by 4.26; of carters, drivers, and carriers by 4.06; of blacksmiths by 3.57; of grocers, bakers, butchers, &c., by 3.19; of labourers by 2.98; of miners by 2.82; and of carpenters, bricklayers, masons, &c., by 2.43 years. The high marrying age of farmers, dairy-farmers, graziers, &c., accounts to some extent for the low marriage and birth rates in the rural division of the State.

Birthplaces of persons married.

The birthplaces of persons married in the years 1907-10 show that only a small proportion—equivalent to 19 per 1,000 bridegrooms and 6 per 1,000 brides—were born in foreign countries, of whom Germany contributed nearly one fourth. Of every 1,000 men married, 869 were born in Australia, 63 in England and Wales, 16 in Scotland, 15 in Ireland, and 18 in other British Possessions. The corresponding proportions for women married were 931, 32, 8, 8 and 15 respectively.

Marriages in quarters.

The experience of the period 1881-1909 showed that the Autumn quarter was the most frequently selected season for marrying. In 1910, however, a preference for marrying in the Spring was very marked, 26.86 per cent. of the total marriages having taken place in that period, as compared with 25.50 in the Autumn, 25.27 in the Summer, and 22.37 in the Winter. Abounding prosperity, coincident with a prospective record harvest, probably accounted for the high marriage rate in the last three months of the year under review.

Former condition of persons married.

The proportion of re-marriages has shown during the last forty years a continuous decline, owing to the decreasing ratio of persons who have become widowed at the younger and probable marrying ages, and also to the later marrying age of bachelors and spinsters in

recent as compared with earlier periods. The following statement shows the percentages of persons in each conjugal condition, who married in the periods specified :—

CONJUGAL CONDITIONS OF PERSONS MARRYING, 1871-1910.

Conjugal Conditions.	Percentage of total Marriages.				
	1871-80.	1881-90.	1891-1900.	1901-5.	1910.
Bachelors and Spinsters	80·59	85·84	87·22	88·06	89·87
Bachelors and Widows	7·10	4·72	4·23	3·73	3·24
Widowers and Spinsters	7·75	6·17	6·07	5·94	4·93
Widowers and Widows	4·56	3·27	2·48	2·27	1·96

Of every 1,000 persons of each sex married in Victoria during last year, 69 were widowers and 52 were widows, as against 94 and 80 respectively during the decade 1881-90. As the proportion of widows in the population is nearly double that of widowers, and the numbers of widowed women and men married in 1910 were 532 and 705 respectively, it appears that the chances of the former re-marrying are only slightly more than one-third of the chances of the latter. Somewhat similar disparities exist between the probabilities of re-marriage of widows and widowers in England and Wales.

Divorced persons re-marrying.

The number of divorced persons re-married during 1910 was 131, which was above the average for the preceding four years. Of the 95,020 persons married during the last five years, divorced persons numbered 554, or 1 in every 172 persons, as compared with 1 in every 707 in England and Wales in 1909. The following are the numbers of divorced persons who have re-married in Victoria since 1905 :—

DIVORCED PERSONS RE-MARRYING, 1906 TO 1910.

Year.	Males.	Females.	Total.
1906	42	58	100
1907	52	57	109
1908	44	58	102
1909	49	63	112
1910	59	72	131

Marriages of minors

During the year 1910, the proportion of brides under 21 years of age in Victoria was the lowest of all the Australian States, and the proportion of bridegrooms under 21 was less than in any other State except Western Australia. The percentages for each State were as follows :—

	Percentage under 21 years of age.	
	Bridegrooms.	Brides.
Victoria ...	3.01	16.19
New South Wales ...	4.80	23.35
Queensland ...	3.36	23.30
South Australia ...	3.90	17.62
Western Australia ...	1.47	22.54
Tasmania ...	3.75	25.79

These ratios show that in Tasmania one-fourth, in Queensland, New South Wales, and Western Australia between one-fourth and one-fifth, and in South Australia and Victoria about one-sixth of the brides were under 21 years of age. The percentage of minors in Victoria in the year under review was about equal to the average of the previous ten years but below the mean of the decennium 1881-1890. In England and Wales in 1909 the percentage of bridegrooms under 21 years of age—3.98—was 32 per cent. greater, whilst that of brides—13.67—was about 16 per cent. less than in Victoria.

Marriages in religious denominations.

The numbers and proportions of marriages solemnized according to the rites of the principal religious denominations and those performed by registrars of marriages for the average of the period 1904-8, and for the year 1910, are shown in the following table :—

MARRIAGES IN VARIOUS DENOMINATIONS.

Denomination.	Annual Average, 1904-8.		1910.	
	Number.	Percentage of Total Marriages.	Number.	Percentage of Total Marriages.
Church of England	1,899	21·18	2,517	24·58
Roman Catholic Church... ...	1,387	15·49	1,721	16·81
Presbyterian Church	1,468	16·37	1,873	18·29
Methodist Church	1,382	15·42	1,569	15·32
Congregational Church	1,001	11·17	1,149	11·22
Baptist Church...	335	3·74	432	4·22
Lutheran Church	60	·67	81	·79
Independent Presbyterian Church	602	6·72	219	2·14
Free Christian Church	358	3·99	89	·87
Salvation Army	34	·38	43	·42
Jews	25	·28	37	·36
Other Sects	316	3·52	348	3·40
Registrars of Marriages... ...	98	1·07	162	1·58
Total	8,965	100·00	10,240	100·00

In 1910 there was a marked increase in the marriages solemnized according to the rites of the Church of England, the number being equal to 24.58 per cent. of the total marriages, as compared with 21.18 for the period 1904-8. Excepting the ratios for the Presbyterian and Methodist churches there were great disparities between the proportion of marriages celebrated according to the rites of each of the principal denominations and the proportionate number of adherents possessed by it in the community.

Civil marriages.

In 1910, 1.6 per cent. of the total marriages in Victoria were celebrated by lay registrars, as against 1 per cent. in the previous year and about 7 per cent. in the decade ended 1890. The decrease which occurred between the earlier period and 1909 was due to the competition of matrimonial agencies which sprang up about 1894, and the increase of 60 per cent. shown by the rate for 1910 over that for the previous year was probably due to the provisions of the *Marriage Act* 1909 permitting the removal from the list of registered clergymen of the names of those who were making a business of celebrating marriages. The proportion of civil marriages is less in Victoria than in any other State except Tasmania, and is only one-thirteenth of that in England and Wales. The percentages of civil marriages in the Australian States, New Zealand, and the United Kingdom were as follows:—

CIVIL MARRIAGES.

Country.	Year.	Civil Marriages—per cent. of total.
England and Wales	1909	20·5
New Zealand...	1910	16·8
Western Australia	1910	10·3
Scotland	1908	7·1
Queensland	1910	4·3
South Australia	1910	3·5
New South Wales	1910	2·0
Ireland	1909	1·8
Victoria	1910	1·6
Tasmania	1910	1·1

Marriages at matrimonial and advertising agencies.

The number of marriages solemnized at matrimonial and advertising agencies gradually rose from 1,409 in 1898 to 1,701 in 1900, and fell to 1,188 in 1902, but it increased again to 1,353 in 1903,

1,502 in 1904, 1,792 in 1905, 1,941 in 1906, and 2,140 in 1907. In the following year it fell to 2,004, and there was a further decrease to 1,782 in 1909. About 20 per cent. of the total marriages were performed in such agencies in 1900, 18 per cent. in 1903 and 1904, 20 per cent. in 1905, nearly 22 per cent. in 1906, 22 per cent. in 1907, over 21 per cent. in 1908, and nearly 19 per cent in 1909. As clergymen of the Congregational and Independent Presbyterian churches and of the Free Christian Church acted for such agencies in recent years the marriages in these denominations, as shown in a preceding table, are unduly numerous.

The clergymen who advertised prior to the passing of the Marriage Act of 1909 celebrated fewer marriages in 1910 than in the preceding year, although their marriages are still greatly out of proportion to their congregations. Such unions will, however, gradually diminish as the names of those ministers become less widely known.

BIRTHS.

The number of births registered in Victoria during the year 1910 was 31,437, of which 16,411 were of males and 15,026 of females. This was 112 below the number recorded for the preceding year, but 443 higher than the average of the period 1905-9. Still-births, which are excluded from both births and deaths, numbered 863, and corresponded to a ratio of 2.7 per 100 infants born alive in 1910. There were 109 male to every 100 female births in 1910, as against 105 to every 100 on the average of the preceding nineteen years. The figures for each year since 1890 are as follows:— Number of births.

BIRTHS IN VICTORIA, 1891 TO 1910.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1891 ..	19,598	18,907	38,505	1901 ..	15,876	15,132	31,008
1892 ..	19,405	18,426	37,831	1902 ..	15,583	14,878	30,461
1893 ..	18,823	17,729	36,552	1903 ..	15,115	14,454	29,569
1894 ..	17,501	16,757	34,258	1904 ..	15,313	14,450	29,763
1895 ..	17,372	16,334	33,706	1905 ..	15,523	14,584	30,107
1896 ..	16,460	15,718	32,178	1906 ..	15,716	15,128	30,844
1897 ..	16,013	15,297	31,310	1907 ..	15,989	15,380	31,369
1898 ..	15,435	14,737	30,172	1908 ..	16,073	15,028	31,101
1899 ..	15,785	15,223	31,008	1909 ..	16,092	15,457	31,549
1900 ..	15,834	14,945	30,779	1910 ..	16,411	15,026	31,437

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 recorded. In connexion with the decline in the number of births between 1891 and 1904 it must be borne in mind that during the intervening period Victoria suffered serious loss of population by emigration, principally to Western Australia. Since 1903, when the fewest births since 1884 were recorded, the numbers have shown an increase—the total for 1910 being 1,868 greater than that for 1903.

Birth rates.

In young communities, birth rates calculated per 1,000 of the population are to some extent unreliable and misleading. In the earlier periods when, owing to immigration, the population consists for the most part of men and women at the reproductive period of life, the rates are obviously high. As time proceeds, however, notwithstanding that immigration of reproductive adults may be maintained, the proportion of such adults to the total population must continuously diminish, and with it, of necessity, the birth rate. The following table shows the birth rates in Victoria from 1870 to 1910:—

BIRTH RATES IN VICTORIA PER 1,000 OF POPULATION, 1870 TO 1910.

Year.	Birth Rate.	Year.	Birth Rate.	Year.	Birth Rate.
1870 ..	38·07	1895 ..	28·46	1904 ..	24·42
1875 ..	33·94	1896 ..	27·19	1905 ..	24·57
1880 ..	30·75	1897 ..	26·49	1906 ..	24·91
1885 ..	31·33	1898 ..	25·51	1907 ..	25·03
1890 ..	33·60	1899 ..	26·14	1908 ..	24·56
1891 ..	33·57	1900 ..	25·79	1909 ..	24·62
1892 ..	32·51	1901 ..	25·72	1910 ..	24·20
1893 ..	31·18	1902 ..	25·05		
1894 ..	29·05	1903 ..	24·28		

The varying proportions and age distributions of married women at reproductive ages in the population at different periods account in a large measure for the reduction in the crude rate in the above table. The effect which these changes have had upon the ordinary or crude rate for the State is shown in page 479.

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.

BIRTH RATES IN THE AUSTRALIAN STATES AND NEW ZEALAND: FOR 1891 AND 1906 TO 1910.

Year.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania	Australia.	New Zealand.
1891 ..	33·57	34·50	36·35	33·92	34·85	33·37	34·23	29·01
1906 ..	24·91	27·04	26·31	23·54	30·02	29·52	26·35	27·08
1907 ..	25·03	27·14	26·87	23·82	29·24	29·68	26·44	27·30
1908 ..	24·56	26·77	26·71	24·59	28·90	30·36	26·20	27·45
1909 ..	24·62	27·55	27·24	25·48	28·68	29·90	26·61	27·29
1910 ..	24·20	28·07	27·31	26·38	27·89	29·87	26·73	26·17
Mean of 5 Years	24·66	27·31	26·89	24·76	28·95	29·87	26·39	27·06

For 1910 the birth rates in New South Wales and South Australia were much higher, and in Victoria and Western Australia they were lower than in the previous year. In Queensland the rate improved slightly, while in Tasmania it remained about the same as in that year. The births in Australia in the year under review numbered 116,894, and the deaths 45,628, thus showing a natural increase of 71,266 persons. The corresponding numbers for the previous year were 114,070, 44,205, and 69,865 respectively.

On the average of the past five years the birth rate in Victoria was lower than in any other State. It was also below the rates in all of the following countries excepting Ireland, Ontario and France, on the average of the latest five years for which this information is available:— Birth rates in various countries.

BIRTHS PER 1,000 OF POPULATION, IN VARIOUS COUNTRIES.

Country.	Births per 1,000 of population.	Country.	Births per 1,000 of population.
Russia (European) ...	48·6	Scotland	27·3
Bulgaria	42·8	Switzerland	27·3
Roumania	40·7	New South Wales ...	27·3
Servia	38·4	New Zealand ...	27·1
Hungary	36·2	Queensland	26·9
Austria	34·3	England and Wales ...	26·5
Spain	33·4	Norway	26·5
Prussia	33·0	Belgium	25·8
German Empire ...	32·9	Sweden	25·6
Italy	32·3	South Australia ...	24·8
Japan	31·4	Victoria	24·7
The Netherlands ...	30·0	Ireland	23·4
Tasmania	29·9	Ontario, Province of ...	23·3
Western Australia ...	28·9	France	20·1
Denmark	28·3		

An accurate view of the alteration in the fertility of wives is obtained by comparing the ratio of legitimate births to wives at reproductive ages, and allowing for the difference in their age dis- Corrected birth rates per 1,000 wives.

tribution at each period. The following table shows the distribution of married women in six five-year groups in the census years 1871, 1881, 1891 and 1901 :—

PROPORTION OF MARRIED WOMEN IN AGE GROUPS TO TOTAL BETWEEN 15 AND 45 IN THE CENSUS YEARS 1871-81-91-1901.

Census Year.	Proportion in each Age Group to Every 1,000 Married Women between 15 and 45.					
	15—20.	20—25.	25—30.	30—35.	35—40.	40—45.
1871 ..	20·3	130·4	211·4	230·7	233·2	174·0
1881 ..	17·3	159·5	204·6	206·0	209·7	202·9
1891 ..	13·5	156·9	275·2	244·1	172·1	138·2
1901 ..	8·1	99·0	198·3	249·6	249·2	195·8

An analysis of the age groups discloses the fact that there was a considerable falling off in 1901 as compared with previous census periods in the proportion of married women at the younger ages. To estimate the effect which the alteration in age distribution had on the birth rate, the proportion in each of the above groups was multiplied by the average natality rate for the group according to a standard table—the standard used for this purpose being the Swedish table of 1891. The sum of the products for each census year represented the number of births which would have occurred in that year per 1,000 married women between 15 and 45 had the fertility of these women remained unaltered, *i.e.*, the potential births. The year 1871 was used as a basis with which to compare the three subsequent census years, and corrections were applied to the actual births (per 1,000) occurring in those years, so as to make them conform to the age constitution in the first-mentioned year. The correction factors were obtained by taking the number of births per 1,000 married women aged 15-45 which would have occurred in 1871 had the standard natality rates prevailed, and dividing this number by the corresponding numbers of potential births for 1881, 1891, and 1901. The above method was applied to find what proportion of the alteration in the ratio of births to married women under 45 was due to causes other than varying age constitution. The last mentioned factor has been taken into account in the computation of the birth rates appearing in column 5 of the subjoined table :—

CORRECTED LEGITIMATE BIRTH RATES.

(1) Census Year.	(2) Married Women between 15 and 45 years of age.	(3) Legitimate Births.	(4) Legitimate Births per 1,000 Married Women 15-45.	(5) Corrected Legitimate Births per 1,000 Married Women 15-45.	(6) Factors for Correction of Rates in Column 4.
1871 ..	88,561	26,805	302·67	..	..
1881 ..	84,831	25,675	302·66	303·14	1·0016
1891 ..	120,700	35,853	297·04	281·98	0·9493
1901 ..	127,858	29,279	229·00	238·75	1·0426

An inspection of the ratios in column (5) shows that there was a fall of 7 per cent. in 1891 as compared with 1881, and a further serious decline of over 15 per cent. in 1901 as compared with 1891, which were not due to variations in the age distribution of the married women between 15 and 45 in the community.

Corrected legitimate birth rate for Victoria.

Legitimate birth rates (per 1,000 of the total population) for widely separated periods do not give a correct indication of the relative fertilities of those periods, unless the number of married women at reproductive ages, in proportion to the population and the age constitution of such women, have remained unchanged. In order to allow for the disturbance which may have been introduced through variations in these elements it is necessary that corrections be made in the crude rates. The factor to correct the result of changes in the proportion of married women between 15 and 45 is obtained by comparing the number of such women in the community at the period of observation with the number in a standard population. The method of obtaining the correcting factor for the disturbance due to the second element was explained in a previous paragraph.

The following table shows the crude legitimate birth rates in four census years, the corrections to be applied thereto for the reasons mentioned above, the amended birth rates, and the difference between these and the crude rates. The standard used in the computation of the correction factors was the Victorian population of 1871. Corrected birth rates per 1,000 of the population in the years 1881, 1891, and 1901 were as follows:—

CORRECTED LEGITIMATE BIRTH RATES PER 1,000 OF POPULATION.

Year.	Enumerated Population.	Legitimate Births.	Legitimate Births per 1,000 of population (crude rates).	Wives aged 15–45, per 1,000 of population.	Correction factors for variations in—		Corrected Birth Rates.	Difference between crude and corrected rates.
					Proportions of wives aged 15–45.	Age distribution of wives aged 15–45.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1871	731,528	26,805	36·64	121·1	..	..	..	..
1881	862,346	25,675	29·77	98·4	1·2307	1·0016	36·70	6·93
1891	1,140,405	35,853	31·44	105·8	1·1446	0·9493	34·16	2·72
1901	1,201,341	29,279	24·37	106·4	1·1382	1·0426	28·92	4·55

An inspection of the crude rates in the fourth column of the above table shows that legitimate births per 1,000 of population apparently declined by 6.87 in 1881, 5.20 in 1891, and 12.27 in 1901, as compared with the first census date. After making allowance for the disturbing elements known to exist, the apparent decline of 6.87 in 1881 is altered to an increase of .06 per 1,000, while the decline of 1891 is reduced from 5.20 to 2.48, and that of 1901 from 12.27 to 7.72 per 1,000 as compared with 1871. It will be noted that between 1891 and 1901 there was a reduction of over 15 per cent. in the rate due to other than normal causes.

Decline in the number of legitimate births.

The following table shows the legitimate births per 1,000 married women (not allowing for their differing age distribution) in each State and New Zealand in the two census years 1891 and 1901 :—

PROPORTION OF LEGITIMATE BIRTHS PER 1,000 MARRIED WOMEN UNDER 45 YEARS OF AGE.

State.	Proportion of Legitimate Births per 1,000 Married Women aged 15 to 45.		Decrease per cent.
	1891.	1901.	
Victoria	297·0	229·0	22·9
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 proportion of legitimate births to married women under 45 years of age in the different States, varying from 31 per cent. in Western Australia, 24 in South Australia, and 23 in Victoria, to about 20 in Queensland and Tasmania, and to nearly 12 per cent. in New Zealand. It must be borne in mind, however, that a considerable portion of the decline in Victoria was due to the altered age distribution of married women under 45 years of age, and it is probable that this cause was also responsible for a portion of the decrease in each of the other States and New Zealand.

The ratios of legitimate births to married women at reproductive ages in various European countries, the Australian States and New Zealand are given in a table published by the Registrar-General of England, of which the following is a copy :— Births to married women in various countries.

LEGITIMATE BIRTH RATES.

COUNTRY.	Proportion of Legitimate Births per 1,000 Wives aged 15-45 years.			Increase + or Decrease − per cent. in Fertility during 20 years.
	Approximate Periods.			
	1880-82.	1890-92.	1900-02.	
The Netherlands	347·5	338·8	314·6	−9·5
Norway	314·5	306·8	302·8	−3·7
Prussia	312·6	307·6	290·4	−7·1
Ireland	282·9	287·6	289·4	+2·3
German Empire	310·2	300·9	284·2	−8·4
Austria	281·4	292·4	283·7	+0·8
Scotland	311·5	296·4	271·8	−12·7
Italy	276·2	?	269·4	−2·5
Sweden	293·0	280·0	269·0	−8·2
Switzerland	284·1	274·0	265·9	−6·4
Denmark	287·1	278·1	259·1	−9·8
Spain	257·7	263·9	258·7	+0·4
Belgium	312·7	285·1	250·7	−19·8
England and Wales	286·0	263·8	235·5	−17·7
France	196·2	173·5	157·5	−19·7
Tasmania	?	311·0	256·4	?
Queensland	329·0	320·6	252·8	−23·2
Western Australia	323·9	338·8	246·4	−23·9
South Australia	326·5	307·5	235·0	−28·0
New South Wales	337·8	298·5	234·3	−30·6
Victoria	299·2	297·8	226·8	−24·2
New Zealand	322·1	277·5	243·2	−24·5

In commenting upon these figures the English Registrar-General says—"It appears that among European countries from which it has been possible to obtain returns, there were only two—Austria and Spain—in which the fertility of wives during the 20 years (1881-1901) showed a tendency to increase, and this also applied to Ireland. In all the remaining countries a decrease in human fertility had taken place in the period under review ranging from 2.5 to as much as 19.8 per cent."

Corrected birth rates (allowing for the varying proportion and age distribution of married women at reproductive ages in each community) were given for the undernoted countries and cities by Drs. Corrected Birth Rates in various communities.

Newsholme and Stevenson in the *Journal of the Royal Statistical Society* for March, 1906, in a paper on the "Decline in Human Fertility in the United Kingdom and other Countries":—

CORRECTED BIRTH RATES IN VARIOUS COUNTRIES AND CITIES.

Country or City.	Corrected Birth Rate per 1,000 of Population.		Percentage Decline in Corrected Birth Rate.
	1880 or 1881.	1901–4.	
Bavaria	45·49	40·37	11
Saxony	41·45	31·76	23
Belgium	40·76	31·01	24
German Empire	40·37	35·34	12
Norway	40·12	37·79	6
Prussia	39·87	35·72	10
Scotland	39·29	33·38	15
Austria	39·04	38·50	1
Denmark	38·92	33·12	15
New South Wales	38·80	26·47	32
Sweden	38·49	36·19	6
Italy	36·89	33·71	9
New Zealand	36·68	29·63	19
Victoria	36·02	27·04	25
Ireland	35·17	36·08	3 (increase)
Hamburg	34·98	25·40	27
Edinburgh	34·97	28·08	20
England and Wales ...	34·65	28·41	18
Berlin	33·11	21·89	34
Dublin	32·24	35·39	10 (increase)
London	32·21	26·83	17
France	25·06	21·63	14
Paris	23·27	16·65	28

The birth rates shown above allow for the differing ages and proportions of married women at child-bearing years in the countries compared, and they have therefore a higher statistical value than ordinary or crude rates. A very striking illustration of the necessity for a method which takes into account these important factors in each population is shown in the case of Ireland, which has one of the highest corrected birth rates in Europe, but has nearly the lowest rate when no allowance is made for the unfavorable age distribution and proportion of married women of child-bearing years in the community. The corrected rates show that (with the exception of Ireland and Dublin, whose rates had increased), all the countries and cities had a lower rate in 1901-4 than in 1880 or 1881. The greatest decline—34 per cent.—occurred in Berlin, followed by 32 per cent. in New South Wales, 28 in Paris, 27 in Hamburg, 25 in Victoria, 24 in Belgium, 23 in Saxony, 20 in Edinburgh, 19 in New Zealand, 18 in England, 17 in London, 15 in Scotland and Denmark, 14 in France, and the least decline—1 per cent.—in Austria.

Birthplaces of parents of legitimate children.

The birth records for 1910 show that the proportion of parents born in Australia has increased by comparison with the ratio for even such a recent period as 1903-5. Unless affected by immigration, a further increase in this proportion may be expected in future years. In the year under review, over 83 out of every 100 children were born to Australian parents, and nearly 98 out of every 100 to one or both parents born in Australia. Of the total fathers, 79.61 per cent. were born in Victoria; 87.54 in Australia; 1.39 in New Zealand; 5.70 in England and Wales; 1.40 in Scotland; 1.73 in Ireland; .30 in other British Possessions; and 1.94 per cent. in foreign countries. The corresponding percentages for mothers were: Victoria, 84.68; Australia, 93.35; New Zealand, 1.26; England and Wales, 2.97; Scotland, .67; Ireland, .86; other British Possessions, .20; and foreign countries, .69.

Chinese and half-caste Chinese births.

The births to Chinese parents numbered 75, and the Chinese half-caste births (fathers only Chinese) amounted to 235 during the seven years 1904-10.

Ages of parents of legitimate children.

The average ages of fathers and mothers of legitimate children whose births were recorded in 1910 were 34.53 and 30.31 years respectively, which were 4.95 and 4.43 years above the average ages of bridegrooms marrying brides under 45 years of age, and of such brides for the same period. The proportions of both parents in various age groups are shown in the following table for the year mentioned:—

PERCENTAGE OF PARENTS IN AGE GROUPS, 1910.

Father.		Mother.	
Age Group (Years).	Proportion per 100 Births.	Age Group (Years).	Proportion per 100 Births.
Under 20	·25	Under 20	2·74
20 to 25	9·08	20 to 25	20·07
25 to 30	23·05	25 to 30	29·04
30 to 35	23·50	30 to 35	23·59
35 to 40	19·95	35 to 40	16·88
40 to 45	14·00	40 to 45	7·60
45 to 50	7·23	45 and over ...	·68
50 and over	2·94		
Total ...	100·00	Total	100·00

It will be seen that on the experience of 1910, 49.11 per cent. of the mothers were between 20 and 30, and 40.47 per cent. between 30 and 40. The proportions of fathers at corresponding ages were 32.13 and 43.45 per cent. Of every 1,000 legitimate births, about 27 were due to mothers under 20 years, and nearly 7 to mothers aged 45 years and upwards.

Ages of mothers of first births.

The proportion of legitimate births recorded as first births was 26.22 per cent. in 1910, as compared with 26.20 in the previous year, 25.43 in 1908, 24.98 in 1907, 24.78 in 1906, and 21.87 per cent. in 1901, being equivalent to an increase of nearly 20 per cent. for the

period 1901-10. The percentages of mothers of first births at various ages are shown in the following table for the last five years :—

PERCENTAGE OF MOTHERS OF FIRST-BORN CHILDREN IN AGE GROUPS, 1906-1910.

Ages.	Percentage of Mothers in Age Groups.				
	1906.	1907.	1908.	1909.	1910.
Under 20	8·8	8·3	8·4	9·0	8·6
20 to 25	40·9	41·4	42·0	39·5	39·3
25 to 30	30·6	30·2	31·5	31·1	32·6
30 to 35	13·4	13·6	12·3	14·0	13·3
35 to 40	5·3	5·4	4·7	5·2	5·1
40 to 45	1·0	1.1	1·1	1·2	1·1
Total	100·0	100·0	100·0	100·0	100·0

The experience of the period 1906-10 shows that of every 100 mothers of first-born children, 8.6 were under 20 years of age, 49.2 were under 25, 80.4 were under 30, and only 1.1 were aged 40 to 45. These proportions are very similar to the ratios of brides in the same groups during the period dealt with, which show that 9.9 per cent. of the women marrying were under 20, 51.8 per cent. were under 25, 78.5 per cent. were under 30, and only 2.6 per cent. were aged 40 to 45.

Birth rates in town and 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, also the averages of the years 1901-5 and the rates for each of the last five years :—

BIRTH RATES IN METROPOLITAN, OTHER URBAN, AND RURAL DISTRICTS, 1875 TO 1910.

Year	Births per 1,000 of the Population.			
	Metropolitan District.	Other Urban Districts.	Rural Districts.	Victoria.
1875	33·63	38·62	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
1900	24·54	32·29	24·26	25·79
1901-5	24·03	32·14	23·46	24·81
1906	23·58	32·90	23·40	24·91
1907	23·97	32·70	23·36	25·03
1908	23·68	32·43	22·70	24·56
1909	23·75	32·09	22·65	24·62
1910	22·99	32·21	22·31	24·20

Since 1890 the birth rate in the metropolitan area has been considerably lower than in the urban districts, and only slightly higher than in the rural division of the State.

The birth rates in the seven principal country towns are shown in the following table for each of the five years, 1906 to 1910 :— Birth rates in seven principal country towns.

BIRTH RATES IN THE SEVEN PRINCIPAL COUNTRY TOWNS, 1906 TO 1910.

Year.	Births, per 1,000 of the Population.						
	Ballarat and Suburbs.	Bendigo and Suburbs.	Geelong and Suburbs.	Castlemaine and Suburbs.	Maryborough.	Warrnambool.	Stawell.
1906 ...	26·25	33·55	25·35	32·52	36·61	34·29	30·96
1907 ...	22·96	36·12	23·69	28·49	32·36	34·39	31·13
1908 ...	24·70	32·02	22·45	29·29	30·19	35·52	28·73
1909 ...	23·70	31·61	24·26	27·98	32·80	36·72	37·09
1910 ...	23·78	31·13	24·60	26·24	32·98	40·14	31·45
Average	24·28	32·89	24·07	28·90	32·99	36·21	31·87

On the average of the five years 1906-10, the birth rates in all of the above towns exceeded that of Melbourne and suburbs and, with the exception of Ballarat and Geelong, that of the State. The highest rate prevailed in Warrnambool, and the lowest in Geelong and suburbs.

The birth rates for 1910 in metropolitan municipalities (based upon the populations at the recent census), the rates for 1901 obtained by comparing births with population according to the census of that year, and the percentage increase or decrease in 1910 are shown in the following table :— Decrease in birth rates in the metropolis.

METROPOLITAN BIRTH RATES 1901 AND 1910.

Districts.	Births per 1,000 of the Population.		Per cent., increase + or decrease − in rate for 1910.
	1901.	1910.	
Oakleigh Borough	31·25	30·05	−3·8
Footscray City	28·21	29·48	+4·5
Northcote Town	24·40	25·70	+5·3
Richmond City	25·51	25·49	−0·1
Brunswick City	26·71	25·34	−5·1
Fitzroy City	22·58	23·13	+2·4
Collingwood City	26·46	22·45	−15·1
Preston Shire	26·76	21·41	−20·0
Williamstown Town	25·34	21·40	−15·5
Port Melbourne Town	25·26	20·87	−17·4
Prahran City	22·69	20·65	−9·0
Melbourne City	21·15	20·09	−5·0
Malvern City	21·98	19·84	−9·7
Kew Town	21·54	19·80	−8·1
Essendon City	23·77	19·75	−16·9
South Melbourne City	22·10	19·57	−11·4
Hawthorn City	22·67	18·84	−16·9
Brighton Town	22·39	18·72	−16·4
Coburg Borough	20·58	18·42	−10·5
Caulfield Town	18·72	18·02	−3·7
St. Kilda City...	18·59	17·36	−6·6
Camberwell Town	19·17	15·92	−16·9
Greater Melbourne :—			
Excluding Births in Institutions	23·03	21·07	−8·5
Including Births in Institutions	24·85	22·99	−7·5

For the metropolis as a whole the decrease in the birth rate for 1910 amounted to 7.5 per cent., and in 19 of the 22 municipalities there were reductions varying from 0.1 per cent. in Richmond to 16.9 per cent. in Camberwell, Hawthorn, and Essendon, and 20 per cent. in Preston Shire. In view of the fact that the past five years have been marked by great prosperity and high marriage rates, and that the conditions during the years immediately preceding 1901 were much less favorable, the decline in the metropolitan rate is very striking, and it is probable that when particulars of the ages and conjugal condition of the population at the recent census are available, the actual decline will be found to be greater than shown above. A few districts nearly maintained their rates, and Footscray, Northcote, and Fitzroy showed increases. The diminished rates in residential areas were chiefly responsible for the low rate in the whole metropolitan area. In Camberwell, St. Kilda, Caulfield, Coburg, Hawthorn, South Melbourne, Essendon, Kew and Malvern, the births in 1910, in proportion to the population were below the metropolitan average, and this accords with the results derived from the 1901 census, which showed that the number of births to married women of fertile ages in these areas in that year was proportionately less than the average for the whole metropolis.

Birth rates in capital cities and suburbs.

The next table shows the mean population, number of births, and birth rate in each Australasian capital city and suburbs during the year 1910:—

BIRTH RATES IN CAPITAL CITIES OF AUSTRALASIA.

Capital Cities and Suburbs.	Year 1910.		
	Mean Population.	Number of Births.	Births per 1,000 of the population.
Melbourne	581,500	13,367	22·99
Sydney	628,000	16,204	25·80
Brisbane	140,000	3,750	26·79
Adelaide	189,000	4,802	25·41
Perth	55,279	1,878	33·97
Hobart	38,884	1,151	29·60
Wellington	77,316	1,870	24·19

The average birth rate of the six capitals was 25.21 per 1,000 of the population, which was 8.8 per cent. lower than the rate—27.63—in the rest of Australia.

The birth rate of Melbourne for 1910 was lower than that of 27 of the 35 undermentioned cities. It was below that of any of the other State capitals :— Birth rates in cities.

BIRTH RATES IN CITIES, 1910.

City.	Births per 1,000 of population.	City.	Births per 1,000 of population.
Moscow	35·9	Wellington ...	24·2
Perth	34·0	London	23·6
Trieste	32·9	Amsterdam ...	23·6
Bucarest	30·7	Christiania ...	23·5
Hobart	29·6	Munich	23·4
Rotterdam ...	29·6	Milan	23·3
Dublin	28·3	Hamburg	23·2
Belfast	27·8	Stockholm ...	23·2
St. Petersburg ..	27·8	Venice	23·1
Rio de Janeiro ...	27·8	Melbourne ...	23·0
Breslau	27·5	Dresden	21·6
Brisbane	26·8	Berlin	21·5
Budapest	26·5	Vienna	19·9
Copenhagen ...	26·1	Edinburgh ...	19·6
Sydney	25·8	Prague	19·2
Adelaide	25·4	Paris	18·0
The Hague ...	25·4	Brussels	16·8
Glasgow	25·1		

The numbers of cases of twin and triplet births in Victoria in the past five years were as follows :— Twin and triplet births.

CASES OF TWINS AND TRIPLETS, 1906 TO 1910.

Year.	Cases of Twins.	Cases of Triplets.
1906	355	...
1907	330	7
1908	288	3
1909	314	6
1910	318	3

On the average of the five years 1 mother in every 96 gave birth to twins and 1 in every 8,140 was delivered of three children at a birth. These proportions were considerably higher than in the decennium ended 1900, when the ratios were 1 in every 103 and 1 in every 11,893 respectively.

Children legitimized under Legitimation Act.

Under a section of an Act passed in 1903, an illegitimate child, whose parents subsequently marry, may, provided there was no lawful impediment at the time of birth to the marriage of the parents, be legitimized if registered for that purpose within six months after marriage. Up to the end of 1910 advantage was taken of this section to legitimate 350 children, of whom 14 were registered in 1903, 19 in 1904, 34 in 1905, 43 in 1906, 58 in 1907, 60 in 1908, 51 in 1909, and 71 in 1910. In addition, there were 247 children legitimated in 1903 under another section, which provided that if parents were married before the passing of the Act, the child should be registered for that purpose within six months of the passing of the Act.

Illegitimate births and rates.

The number of illegitimate births registered in Victoria during the year 1910 was 1,759, which gives a proportion of 5·59 to every 100 births registered, being a ratio lower by over 5 per cent. than that of the previous year. This proportion was much lower than in New South Wales and Queensland, slightly higher than in Tasmania, and much higher than in either of the other two Australian States or New Zealand; it was also lower than in Scotland, but much higher than in the other portions of the United Kingdom. The following are the proportions of illegitimate births to every 100 children born in the Australian States and New Zealand, for the year 1910, and in the United Kingdom for 1909:—

ILLEGITIMATE BIRTH RATES.

Scotland	6·90	New Zealand	4·47
Queensland	6·37	South Australia ..	4·38
New South Wales ..	6·37	Western Australia ..	4·13
Victoria	5·59	England and Wales ..	4·10
Tasmania	5·33	Ireland	2·70

The higher percentage of illegitimate births to total births (5.66) in the past ten years, as compared with the ratio (5.51) in the preceding decennium was almost wholly due to the lower number of legitimate births. It is thus seen that the ratio of illegitimate births to total births is not a satisfactory indication of the degree of illegitimacy, as it does not take into account the relative proportions of married, unmarried, and widowed women of conceptive ages at different periods. A more satisfactory method of expressing the degree of illegitimacy in the community is to state the proportion of infants born out of wedlock to the unmarried and widowed women between 15 and 45 years of age. Such proportions for Victoria are shown in the subjoined table for the census years

1891 and 1901, when the conjugal condition of the population was known :—

ILLEGITIMATE BIRTHS PER 1,000 SINGLE WOMEN.

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

Although the proportion of illegitimate births to total births was higher in 1901 than in 1891, the ratio of infants born out of wedlock per 1,000 unmarried and widowed women fell from 14.49 in 1891 to 10.31 in 1901, which was equal to a decrease of 29 per cent. in the intercensal period.

Illegitimate births per 1,000 unmarried women in European countries.

The morality of the community, as indicated by the proportion of births to single and widowed women of reproductive ages, compares very favorably with that of nearly all of the following European countries, for which the English Registrar-General has published these particulars :—

ILLEGITIMATE BIRTHS PER 1,000 UNMARRIED WOMEN AGED 15-45 IN EUROPEAN COUNTRIES.

Country.	Illegitimate Births per 1,000 Unmarried Women aged 15–45.	
	1890–2.	1900–2.
German Empire	28·7	27·4
Sweden	22·9	24·3
Denmark	24·5	24·2
Prussia	25·1	23·7
Italy	...	19·4
France	17·7	19·1
Belgium	20·6	17·8
Norway	16·9	17·2
Spain	17·5	15·5
Scotland	17·1	13·4
Switzerland	10·0	9·8
England and Wales	10·5	8·5
The Netherlands	9·0	6·8
Ireland	3·9	3·8

In Victoria the illegitimate births—10.31—per 1,000 unmarried women aged 15-45 were fewer than in all of the above countries, except Ireland, The Netherlands, England and Wales, and Switzerland at the latest date for which this information is obtainable.

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. During the year 1910, in the metropolitan area, slightly more than 1 birth in every 11, in other urban districts 1 in 21, and in the rural districts only 1 in 42 was registered as illegitimate. The proportions in 1900-4 were 1 in 11, 1 in 18, and 1 in 38 respectively.

DEATHS.

Deaths.

The following return shows the number of deaths—males and females—also the quarters in which they were registered and the proportion per 1,000 of the population, during the years 1906 to 1910.

DEATHS IN EACH QUARTER, 1906 TO 1910.

Year.	Total Deaths.	Sex.		Quarter of Registration.				Death Rate per 1,000 of the Population.
		Males.	Females.	March.	June.	September	December.	
1906 ..	15,237	8,342	6,895	3,896	3,550	3,875	3,916	12·31
1907 ..	14,542	7,980	6,562	3,285	3,391	4,011	3,855	11·60
1908 ..	15,767	8,815	6,952	4,349	3,760	4,130	3,528	12·45
1909 ..	14,436	8,070	6,366	3,580	3,453	3,860	3,543	11·27
1910 ..	14,736	8,132	6,604	3,820	3,693	3,661	3,562	11·34
Average	14,944	8,268	6,676	3,786	3,569	3,908	3,681	11·79

The number of deaths in 1910 was 14,736, which was 196 below the average of the preceding five years. The seasonal mortality showed that the quarter ending 31st March was most fatal, the next being that ending 30th June, and the fourth quarter being least fatal. On the average of the previous five years the greatest number of deaths occurred in the September quarter, the second highest number in the first, and the lowest number in the fourth quarter. For every 100 female there were 124 male deaths during the past five years, although the sex proportions of the population were practically equal.

Death rates in Australian States and New Zealand.

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 1906 to 1910:—

DEATH RATES IN THE AUSTRALIAN STATES AND NEW ZEALAND: 1906 TO 1910.

Year.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.	New Zealand.
1906 ..	12·31	9·89	9·56	10·34	11·87	11·17	10·83	9·31
1907 ..	11·60	10·56	10·35	9·87	11·09	11·22	10·86	10·95
1908 ..	12·45	10·13	10·23	9·84	10·74	11·51	10·91	9·57
1909 ..	11·27	9·97	9·68	9·72	10·21	10·01	10·31	9·22
1910 ..	11·34	9·98	9·70	10·21	10·09	11·31	10·43	9·71
Average	11·79	10·11	9·90	10·00	10·80	11·04	10·67	9·75

The death rate in Victoria, taking the average of the five years, 1906-10, was higher than in any other State, but this result was due to the larger proportion of elderly persons, amongst whom the death rate is very high. In any comparison of crude death rates of the different States and New Zealand, it is necessary to bear in mind the proportion of persons aged (say) 60 years and upwards in each community. This was accurately known at the 1901 census when Victoria had 798 persons aged 60 years and over per 10,000 of the population, as compared with 558 in New South Wales, 482 in Queensland, 633 in South Australia, 326 in Western Australia, 608 in Tasmania, 623 in Australia, and 676 in New Zealand. Of the persons who died in 1910, 37.7 per cent. were aged 65 years and over in Victoria, 28.4 in New South Wales, 26.2 in Queensland, 31.2 in South Australia, 16.1 in Western Australia, 26.6 in Tasmania, 30.6 in Australia, and 34.3 in New Zealand. It will thus be seen that while Victoria had a higher crude death rate, it had concurrently a larger proportion of elderly persons in the population and a greater percentage of total deaths due to persons aged 65 years and upwards, than any other State or New Zealand.

Death rates in various countries.

The following were the maximum, minimum, and mean death rates per 1,000 of the population in various countries during the latest five years for which these particulars are available, also the averages of the 25 years ended 1901. In all the countries except Japan and Ontario, there has been a noticeable decrease, and in Austria, Hungary, England and Wales, Germany, Prussia, Spain, Denmark, The Netherlands, and Italy, there has been 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 :—

DEATH RATES IN VARIOUS COUNTRIES.

Country.	Five Years, 1905-1909.			Average of 25 Years.
	Max.	Min.	Mean.	1877-1901.
Province of Ontario (1904-8)	14·3	13·4	13·8	11·3*
Norway	14·8	13·5	14·1	16·4
Denmark	15·0	13·1	14·1	18·1
Sweden	15·6	13·7	14·6	16·8
The Netherlands ..	15·3	13·7	14·7	20·1
England and Wales ..	15·4	14·5	14·9	18·9
United Kingdom ..	15·6	14·8	15·3	18·8

* 1881-1901.

DEATH RATES IN VARIOUS COUNTRIES—*continued.*

Country.	Five Years, 1905–1909.			Average of 25 Years.
	Max.	Min.	Mean.	1877–1901.
United States (registration states)	16·5	15·0	15·8	..
Scotland	16·2	15·3	15·9	19·1
Belgium (1904–8) ..	16·9	15·7	16·4	19·9
Switzerland (1904–8) ..	17·9	16·2	17·1	20·3
Ireland	17·7	17·0	17·3	18·2
Prussia	19·6	17·0	18·4	23·5
Germany (1904–8) ..	19·8	18·0	18·7	23·9
France	20·2	19·0	19·6	21·8
Japan (1904–8) ..	22·0	19·8	21·0	20·5*
Italy	22·6	20·7	21·5	26·2
Austria (1904–8) ..	25·0	22·3	23·2	28·4
Spain	25·6	23·3	24·3	30·2
Hungary	27·8	24·8	25·5	31·8
Roumania	27·8	24·3	26.3	28·2*
Russia, European, 1900-4	32·1	29·8	30·9	33·9*

* 1881–1901.

Comparing this statement with the previous one, it will be noticed that the death rate in Victoria—the highest in Australasia for the reason previously stated—is considerably lower than in Norway and Denmark—the lowest in Europe. And although, owing to the fact that emigration from the older to the newer countries tends to raise the death rate in the former, and 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 considerably lighter in Australasia than in any country in Europe, except, perhaps, Norway, Sweden, and Denmark.

Usual residence of persons who died in hospitals.

The usual place of residence of those who died in hospitals throughout the State in 1910 shows that the number of extra-metropolitan residents who died in these institutions in Greater Melbourne was 216, of whom 170 were from rural districts, 23 were from urban areas, and 23 resided outside the State. The non-residents of large towns who died in hospitals situated therein numbered 396. Of that total, 376 lived in rural districts, 15 were from Melbourne and suburbs, and 5 were from outside Victoria. Only 3 persons who usually resided in Melbourne, and 3 from urban centres, died in hospitals situated in rural districts. From the above figures it is evident that the opportunities for hospital treatment in the metropolitan and urban centres are largely availed of by country residents, of whom 170 died in the metropolis, and 376 in other towns in the year under review.

Death rates among Metropolitan, Urban, and Rural residents.

The extent to which the metropolitan and urban death rates are increased by residents of country districts dying in hospitals situated in these centres was ascertained for the first time in 1909. A similar investigation for 1910 showed that when such deaths were distributed according to the usual residence of deceased the resulting death rates among residents in the Metropolitan, Urban, and Rural Districts of the State were 12.05, 15.41, and 8.82 per 1,000 of the population respectively, as compared with rates of 12.39, 17.19, and 7.76 when calculated according to the place of death. The metropolitan and urban death rates, based upon place of death, were therefore .34 and 1.78 per 1,000 higher, and the rural rate, similarly based, was 1.06 per 1,000 lower than the rates in these divisions based upon the usual residence of deceased. The figures for the last two years show that the mortality rate among country residents is very much lighter than that among residents of the metropolitan and urban centres, notwithstanding the migration of adults in the prime of life to Greater Melbourne. It would appear from the high death rate in towns outside Melbourne that many elderly persons following agricultural and pastoral pursuits leave the rural districts to live in these towns, where they subsequently die, and thus increase the urban mortality rate. Another element which tends to reduce the rural and increase the urban rate is the location in towns of benevolent asylums, in which many deaths occur of persons who formerly resided in the country districts. It is probable that an unfavorable age distribution of population in the urban division accounts in some measure for its high death rate. This, however, can only be ascertained, and its effect upon the mortality rate computed when the ages of the people at the 1911 census are known.

Death rates in principal country towns.

The death rates in the principal country towns for the years 1906 to 1910 are shown in the following table, also the average of the rates for that period:—

DEATH RATES IN PRINCIPAL COUNTRY TOWNS, 1906 TO 1910.

Year.	Deaths per 1,000 of the Population.						
	Ballarat and Suburbs.	Bendigo and Suburbs.	Geelong and Suburbs.	Castlemaine and Suburbs.	Maryborough.	Warrnambool.	Stawell.
1906 ...	17·48	19·46	14·26	19·46	17·61	13·23	16·15
1907 ...	15·65	17·86	13·21	18·99	16·94	15·15	16·23
1908 ...	16·96	17·23	13·79	15·29	19·06	16·57	15·27
1909 ...	16·75	17·94	13·20	14·76	17·15	13·73	16·18
1910 ...	16·64	16·83	13·22	17·45	14·18	14·71	16·36
Average of 5 years ...	16·70	17·86	13·54	17·19	16·99	14·68	16·04

On the average of the five years, 1906-10, the death rates in all of the above towns were higher than in Melbourne and suburbs, and, as might be expected, they were considerably higher than the rate for the State, on account of the deaths in hospitals situated in those centres. On the average of the five years under review, the lowest rate obtained in Geelong, followed by Warrnambool, Stawell, Ballarat, Maryborough, Castlemaine, and Bendigo, in that order.

Decrease in Metropolitan death rate.

The deaths in Greater Melbourne during 1910 numbered 7,207, and represented a rate of 12.39 per 1,000 of the population. Excluding the deaths in hospitals and public institutions, which numbered 2,476, the rate was 8.13 for the same period. The mortality rate of the metropolitan area continues to show a marked decrease. The deaths in the period 1902-1910 were 13.24 per 1,000 of the population, as compared with 15.76 in the decennium 1892-1901. The reduction in the rate was equivalent to the saving of 12,065 lives in the past nine years. Many factors have contributed to this result, but it is probable that the introduction of the sewerage system, the notification of contagious diseases, the destruction of insanitary dwellings, the improvement in the conditions of labour, the increasing supervision of the manufacture and sale of articles of consumption, the smaller proportion of infants in the community, and the advance of medical science, have been mainly responsible for the decline. That the sanitary conditions of the metropolis have greatly improved is evidenced by a comparison of the death rates from typhoid fever, diphtheria, and tubercular diseases in the period 1902-10 with those of the preceding decennium. The following are the rates :—

Cause of Death.	Deaths per 1,000 of Population.		Total Decrease in 1902–10.
	1892–1901.	1902–1910.	
Pulmonary Tuberculosis ...	1·654	1·190	0·464
Other Tubercular Diseases ...	0·446	0·341	0·105
Typhoid Fever	0·293	0·105	0·188
Scarlet Fever	0·033	0·022	0·011
Measles	0·215	0·032	0·183
Diphtheria	0·187	0·092	0·095
Total	2·828	1·782	1·046

The figures show that the lower death rates from the six above-mentioned diseases in 1902-1910 accounted for over 41 per cent. of the total decline. It is impossible to state which municipalities have contributed most to this result, as their mortality rates from the diseases referred to are not available for the earlier period. A comparison, however, of the general death rates in each for the periods under review shows that all divisions of the metropolis have, in varying degrees, shared in the improvement. The death rates (based upon census populations) in each of the metropolitan municipalities for the nine-year period 1902-1910 and the decennium 1892-1901, and the percentage decrease in the intervening years, are shown in the following table:—

METROPOLITAN DEATH RATES, 1892-1901 AND 1902-1910.

Districts.	Deaths per 1,000 of the Population.		Percentage Decrease in the rate for 1902-1910.
	1892-1901.	1902-1910.	
Oakleigh Borough	16·88	11·75	30·4
Williamstown Town	12·93	11·20	13·4
Preston Shire...	11·30	10·99	2·7
Fitzroy City	13·12	10·79	17·8
Melbourne City	12·40	10·49	15·4
Brighton Town	11·41	9·91	13·1
Brunswick City	12·90	9·69	24·9
Collingwood City	13·59	9·50	30·1
Prahran City	12·36	9·43	23·7
Richmond City	12·83	9·38	26·9
Footscray City	13·05	9·36	28·3
St. Kilda City	11·03	9·26	16·0
Port Melbourne Town... ...	13·14	9·11	30·7
Coburg Borough	10·82	9·07	16·2
South Melbourne City	12·68	8·80	30·6
"Remainder of District" ...	13·13	8.71	33·7
Essendon City	11·06	8.42	23·9
Hawthorn City	11·21	8·41	25·0
Northcote Town	12·65	7·98	36·9
Kew Town	9·66	7.93	17·9
Camberwell Town	9·08	7·90	13·0
Malvern City	9·92	7·72	22·2
Caulfield Town	8·62	7·59	11·9
Greater Melbourne—			
Excluding Hospitals, &c. ...	12·39	9·41	24·1
Including Hospitals, &c. ...	15·76	13·24	16·0

The rates for municipalities do not include an allowance for the deaths of residents thereof in hospitals and other public institutions. The inclusion of these would on the average increase the rates for the later and earlier periods by 3.83 and 3.36 respectively. In the

years 1902-10, as compared with 1892-1901, a reduction of 36.9 per cent. occurred in the death rate for Northcote, of over 30 per cent. in the rates for Port Melbourne, South Melbourne, Oakleigh, and Collingwood, of 28 per cent. in the rate for Footscray, and of nearly 27 per cent. in that for Richmond. Hawthorn, Brunswick, Essendon, Prahran, and Malvern had rates lower by 25.0, 24.9, 23.9, 23.7, and 22.2 per cent. respectively than in the preceding decennium. The decreases for Caulfield, Camberwell and Kew were not so great, but they were probably as meritorious as in some of the above districts, having been based upon comparatively low rates in the earlier period.

Deaths in public institutions in Greater Melbourne.

During 1910 the deaths in public institutions in the State numbered 3,921, of which 2,476 occurred in the metropolitan area, and 1,445 in institutions outside the metropolis. As the total deaths in these areas during the same year were 14,736, 7,207, and 7,529 respectively, it follows that slightly more than 1 in every 4 deaths within the State, 1 in every 3 in Greater Melbourne, and 1 in every 5 in extra-metropolitan districts, occurred in public institutions. In England and Wales 1 in every 5 deaths took place in public institutions during 1909.

DEATHS IN PUBLIC INSTITUTIONS IN GREATER MELBOURNE, 1910.

Institution.	No. of Deaths.	Institution.	No. of Deaths.
Hospitals—		Other Public Institutions—	
Melbourne	728	Victorian Homes for Aged and Infirm	70
Alfred	227	Benevolent Asylum ...	144
St. Vincent's	173	Convent of the Little Sisters of the Poor	54
Homœopathic	62	Old Colonists' Home ...	6
Austin	205	Foundling Hospital and Infants Home	30
Children's	351	Foundling Hospital, Broadmeadows	8
Women's	100	Metropolitan Lunatic Asylum	111
Infectious Diseases' ..	60	Yarra Bend Lunatic Asylum...	83
Queen Victoria	8	Receiving Depôt	26
Eye and Ear	6	Protestant Refuge	4
Williamstown	15	Other Institutions	5
Total Hospitals ...	1,935	Total Hospitals and other Institutions	2,476

The next table shows the numbers of deaths and births, and the death rates in the Australasian Capital Cities; also the numerical and centesimal excess of births over deaths in each during 1910:— Deaths and births in Australasian capitals.

DEATHS AND BIRTHS IN CAPITAL CITIES, 1910.

Capital City with Suburbs.	Number of Deaths.	Deaths per 1,000 of Population.	Number of Births.	Excess of Births over Deaths.	
				Numerical.	Centesimal.
Melbourne ...	7,207	12·39	13,367	6,160	85
Sydney	6,365	10·14	16,204	9,839	155
Brisbane	1,592	11·37	3,750	2,158	136
Adelaide	2,290	12·12	4,802	2,512	110
Perth	709	12·83	1,878	1,169	165
Hobart	565	14·53	1,151	586	104
Wellington ...	692	8·95	1,870	1,178	170

The deaths in the Capital Cities of the six States numbered 18,728, or 41 per cent. of the total deaths in Australia, during the year 1910. The centesimal excess of births over deaths for each city shows that for every 100 deaths there were 270 births in Wellington, 265 in Perth, 255 in Sydney, 236 in Brisbane, 210 in Adelaide, 204 in Hobart, and 185 in Melbourne, giving an average of 222 for the metropolitan cities of Australasia.

In 1910 the death rate of Melbourne—12.39—was higher than that of Sydney, Brisbane, Adelaide, and Wellington, but it was lower than the rate in 30 of the 33 undermentioned cities:— Death rates in various cities.

DEATHS PER 1,000 OF POPULATION IN VARIOUS CITIES, 1910.

City.	Death Rate.	City.	Death Rate.
Moscow	26·9	Vienna	15·8
Bucarest	25·6	Glasgow	15·1
Rio de Janeiro	24·3	Chicago	15·1
St. Petersburg	24·1	Turin	14·9
Trieste	22·9	Berlin	14·7
Dublin	19·9	Stockholm	14·6
Budapest	19·3	Copenhagen	14·2
Breslau	19·1	Hamburg	14·2
Venice	19·0	Edinburgh	14·0
Belfast	18·6	Dresden	13·8
Prague	18·4	Brussels	13·6
Boston	17·2	London	12·7
Milan	17·1	The Hague	12·5
Philadelphia	16·8	Amsterdam	12·2
Paris	16·7	Rotterdam	12·2
New York	16·0	Christiania	11·9
Munich	15·9		

In 1910 the death rate of the metropolitan cities of Australia was 11.5 per 1,000 of their combined populations, which was below the proportionate mortality of all of the above cities.

Index of mortality, 1910.

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 been pointed out in former editions of this work. This applies particularly to a comparison of newly-settled communities—such as the Australian States—with one another, and with the old-established communities 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, concurrently with a smaller proportion of young and middle-aged adults, at the most vigorous period of life. Considerable disparity exists between the proportions of the population at certain ages in the different States, and this accounts in a large measure for the inequalities in their ordinary death rates. When the age distribution of the people is taken into consideration, as is done in computing an "index of mortality," the results approximate much more closely than the ordinary death rates for the Australian States. The Victorian "index of mortality," has been computed by applying the ascertained death rates in the age groups specified below to a population whose age distribution corresponds with that of Sweden in 1890, this standard having been accepted by a Conference of European Statisticians. The result for the year 1910 is shown in the following table:—

INDEX OF MORTALITY FOR VICTORIA IN 1910.

Age.	Standard Population per 1,000. (Sweden, 1890.)	Death rate per 1,000 at each age in Victoria in 1910.	Index of Mortality for Victoria, 1910.
0–1	25·5	80·87	2·06
1–20	398·0	2·78	1·11
20–40	269·6	4·26	1·15
40–60	192·3	13·55	2·61
60 and over	114·6	60·21	6·90
Total	1000·0	11·34	13·83

In 1910 the "index of mortality" for all ages was 13.83 as against 13.59 in 1909, 15.30 in 1908, and 15.63 in 1901. For each age group except the first the death rates (col. 3) and the resulting ratios (col. 4) have been practically the same for the past two years.

Death rates at various ages.

A reliable estimate of the improvement in the health of the community is obtained by comparing the death rates for each age group at different periods. Such rates for Victoria are given in the subjoined table for the decennial periods 1881-1890, and 1891-1900, and for the three years 1900-1902. For later periods than 1900-1902 the rates will not be available until the age distribution of the people at the 1911 census is known :—

DEATH RATES AT CERTAIN AGE GROUPS IN VICTORIA.

Age Groups.	Deaths per 1,000 at each Age.		
	1881-1890.	1891-1900.	1900-1902.
Males.			
Under 5	44.79	39·29	34·07
5 to 10	4·06	3·36	2·70
10 to 15	2·65	2·20	2·10
15 to 20	4·03	3·28	3·11
20 to 25	6·35	4·79	4·90
25 to 35	7.72	6·60	6·25
35 to 45	11·23	9·03	8·81
45 to 55	19·28	15·32	15·34
55 to 65	33·25	32·90	29·86
65 to 75	61·13	62·99	61·57
75 and upwards	137·18	145·05	141·59
All ages	16·55	15·47	14·80
Females.			
Under 5	39·46	34·09	29·10
5 to 10	3·92	3·12	2·63
10 to 15	2·56	2·06	1·92
15 to 20	4·17	3·43	2·92
20 to 25	5·81	4·81	4·10
25 to 35	7·90	6·89	6·00
35 to 45	10·93	8·68	8·32
45 to 55	14·84	12·12	11·48
55 to 65	23·49	23·64	21·49
65 to 75	50·32	45·87	45·07
75 and upwards	129·00	124·33	122·77
All ages	13·56	12·36	11·43

Excepting the male death rates for the age groups, 20-25 and 45-55, a lower mortality was experienced for both sexes at each group during 1900-1902 than in the ten years 1891-1900, and a still more favorable death rate for all age groups up to 65, than in the ten years 1881-1890. The rates, other than those for very old ages, are comparable, and point to continuously improving hygienic conditions, and consequently to a general improvement in the health of people in later years.

Death rates at different ages in Europe and Australasia.

Interesting information in regard to death rates in various countries for males and females at eleven age groups, and in regard to corrected death rates for all ages based upon the age distribution of the people in England and Wales at the 1901 census, is given in the English Registrar-General's Report for 1908, from which the two following tables are copied :—

DEATH RATES AT CERTAIN AGES IN EUROPEAN COUNTRIES AND AUSTRALASIA.

Countries arranged in order of their corrected Death Rates at all Ages—Persons.	Deaths per 1,000 Living											
	All Ages.	Under 5 years.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 years and upwards.
MALES.												
Russia, European (1896-8)	29·80	144·25	12·88	5·37	5·59	7·45	8·14	11·18	18·44	32·31	65·66	116·59
Spain (1900–02)	27·37	109·85	8·49	4·03	6·93	10·07	9·07	11·76	18·04	35·07	80·43	210·22
Hungary (1899–01)	24·96	98·40	11·13	4·90	5·98	8·55	7·61	10·78	17·80	34·00	70·69	169·05
Austria (1899–01)	23·86	93·95	6·88	3·52	4·89	7·47	7·85	11·10	18·68	34·54	72·53	170·53
Bulgaria (1899–01)	20·89	80·45	12·74	5·94	6·67	10·15	8·67	10·55	16·06	23·87	41·35	85·58
Italy (1900–02)	20·09	76·86	5·98	3·15	4·68	6·73	6·73	8·44	13·59	26·99	65·56	177·30
Prussia (1899–01)	21·03	79·84	4·94	2·69	4·19	5·74	6·13	10·38	18·32	33·28	69·47	164·11
German Empire (1901)	20·78	80·33	4·47	2·59	4·06	5·57	6·16	10·10	17·69	32·49	67·56	161·97
Finland (1899–01)	19·98	68·02	11·18	5·24	5·45	7·48	7·34	9·27	14·30	27·96	64·28	152·00
Scotland (1900–02)	18·56	52·13	4·34	2·82	4·64	6·14	7·55	11·68	19·50	37·95	71·61	159·22
France (1900–02)	18·56	51·74	4·69	3·00	5·08	8·10	8·19	11·56	17·54	31·50	69·50	183·78
England and Wales (1900–02)	18·37	58·29	4·06	2·28	3·49	4·77	6·38	10·94	18·67	34·80	70·25	158·18
Switzerland (1899–01)	17·57	50·62	3·80	2·39	3·90	5·75	6·58	10·40	18·83	34·30	70·79	160·83
Belgium (1899–01)	17·80	59·39	4·02	2·19	3·72	5·64	6·17	9·14	16·37	30·11	66·52	162·40
Ireland (1900–02)	16·25	39·36	3·90	2·86	4·83	7·19	8·96	10·62	15·63	29·52	63·07	169·19
Western Australia (1900–02)	17·80	53·81	2·47	2·00	3·66	7·24	7·54	10·93	17·82	32·03	65·07	169·16
The Netherlands (1898–00)	16·03	55·43	3·59	2·28	3·96	5·82	5·70	7·60	12·92	25·40	59·15	142·15
Sweden (1899–01)	14·45	40·30	5·62	3·52	4·96	6·93	6·91	8·28	12·42	21·95	48·98	134·95
Denmark (1900–02)	14·41	42·13	3·67	2·52	3·55	5·34	5·52	8·10	13·54	24·71	55·43	148·53
Queensland (1900–02)	14·88	31·84	2·21	2·11	5·24	8·55	8·95	10·83	16·49	29·31	61·97	132·06
New South Wales (1900–02)	13·79	34·23	2·18	2·02	3·46	4·76	5·62	8·86	14·71	27·86	60·82	151·02
Victoria (1900–02)	13·99	34·01	2·69	2·10	3·11	4·90	6·27	8·82	15·38	29·88	61·58	141·57
South Australia (1900–02)	12·33	32·18	2·81	1·85	2·90	4·21	5·24	7·61	11·96	24·76	54·71	122·31
Tasmania (1900–02)	11·55	26·50	1·71	2·34	2·66	4·11	4·23	7·36	11·27	23·32	52·52	156·07
New Zealand (1900–02)	11·12	25·02	2·35	1·72	2·89	3·90	4·55	6·88	11·94	22·04	51·34	137·86

Death Rates at Certain Ages in European Countries and Australasia—*continued.*

Countries arranged in order of their corrected Death Rates at all Ages—Persons.	Deaths per 1,000 Living.											
	All Ages.	Under 5 years.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 years and upwards.
FEMALES.												
Russia, European (1896–8)	27·49	125·05	12·61	5·48	6·04	7·74	8·81	11·10	16·07	32·54	66·52	116·88
Spain (1900–02)	25·74	98·29	8·70	4·60	7·31	8·70	9·38	10·60	13·99	30·02	76·36	211·06
Hungary (1899–01)	24·79	85·84	11·40	6·25	7·73	9·42	9·75	11·36	15·86	34·11	74·36	172·10
Austria (1899–01)	22·42	79·59	7·43	4·33	5·57	7·46	8·66	10·62	14·96	31·18	72·51	165·83
Bulgaria (1899–01)	20·96	73·19	12·31	6·60	7·58	11·04	11·53	12·61	14·18	22·12	43·75	93·80
Italy (1900–02)	20·36	72·93	6·55	3·76	5·43	6·92	7·77	8·87	11·24	24·13	65·72	182·17
Prussia (1899–01)	18·45	68·08	5·06	2·94	3·71	4·76	6·23	8·11	11·79	25·37	62·16	156·19
German Empire (1901)	18·34	68·07	4·58	2·75	3·72	4·86	6·43	8·24	11·73	25·13	60·60	154·67
Finland (1899–01)	18·32	59·44	10·97	5·93	5·95	6·69	7·37	8·78	10·74	21·54	56·07	141·87
Scotland (1900–02)	16·73	43·91	4·77	3·23	4·69	5·59	7·25	10·04	15·56	30·47	60·17	142·78
France (1900–02)	16·51	43·55	4·81	3·55	5·27	6·88	7·75	9·08	12·72	24·35	58·81	163·58
England and Wales (1900–02)	16·04	48·76	4·16	2·40	3·21	3·94	5·44	8·84	14·26	27·45	59·03	143·48
Switzerland (1899–01)	16·20	41·50	3·87	2·71	4·45	5·62	6·61	8·46	12·80	28·32	68·85	160·35
Belgium (1899–01)	15·82	50·11	4·14	2·49	4·08	5·49	6·24	7·76	11·25	22·70	54·98	149·89
Ireland (1900–02)	16·90	35·01	4·82	3·92	5·99	6·65	8·58	10·81	14·98	29·65	67·15	168·01
Western Australia (1900–02)	14·00	42·38	2·03	2·05	3·42	6·18	6·88	9·29	10·44	21·56	41·18	126·17
The Netherlands (1898–00)	14·81	47·01	3·59	2·52	3·71	4·42	5·86	7·82	10·29	21·69	52·22	139·31
Sweden (1899–01)	13·36	34·58	5·75	4·21	5·24	6·00	6·52	7·51	9·78	17·35	42·71	126·30
Denmark (1900–02)	12·90	34·21	3·69	3·25	4·21	4·52	5·53	7·09	10·05	18·74	46·36	133·97
Queensland (1900–02)	11·80	27·69	1·92	1·76	2·55	3·75	5·83	8·32	10·98	20·60	47·81	117·25
New South Wales (1900–02)	12·44	30·58	2·01	1·69	2·51	3·84	5·48	7·58	10·43	20·15	46·49	155·21
Victoria (1900–02)	12·22	29·06	2·63	1·92	2·92	4·10	6·00	8·33	11·46	21·50	44·64	122·82
South Australia (1900–02)	11·16	27·25	2·03	1·62	3·47	4·16	5·30	7·35	9·34	17·03	43·33	118·06
Tasmania (1900–02)	11·33	22·13	2·30	1·62	3·97	4·78	4·86	7·74	9·13	18·28	51·52	136·03
New Zealand (1900–02)	10·51	21·36	1·93	1·80	2·97	3·74	4·74	6·56	10·11	18·95	43·48	122·87

The low mortality rate at each age in Australia, by comparison with the rates prevailing in European countries, evidences the healthy climate and the favorable social and industrial conditions of the Commonwealth. A striking feature of Australian and Victorian mortalities is the light rate among infants and children of school age. The foregoing tables show that for Victoria the corrected death rate for each sex for all ages is lower than that for any of the European countries mentioned. The rate for each sex is lower in Victoria than in England for all age groups, except 20-25 and 25-35 for females, and 25-35 for males. The superiority of the Victorian over the English rate is very pronounced for the age groups 0-5 and 5-10, but is less marked for the next ten years of life; for the age period 20-35 the difference between the Victorian and English rates is small, and is in favour of the latter, but for ten-year age periods after 35 the death rates for both sexes in Victoria are lighter than in England.

Death rates of aged people.

The death rate among persons aged 60 years and upwards in the Commonwealth, is of interest, in view of recent legislation relating to old-age pensions, and the following table has been constructed, showing, in age groups, the rates for the Australian States and New Zealand on the average of the years 1900-2 :—

DEATH RATES OF PERSONS AGED 60 YEARS AND UPWARDS.

Ages at Death.	Deaths per 1,000 of the Population in Age Groups in							
	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.	New Zealand.
60 to 65	30·1	29·8	29·8	25·3	32·1	25·2	29·3	24·3
65 to 70	43·9	45·4	47·7	41·1	51·4	41·0	44·5	39·9
70 to 75	69·5	71·7	72·1	58·9	67·8	66·2	68·9	64·4
75 to 80	104·5	105·8	124·4	88·8	127·4	106·0	101·8	97·8
80 & over	181·7	195·2		162·4	186·8	199·1	185·0	182·0
60 & over	62·2	58·9	52·1	54·5	56·6	65·1	58·4	49·2

The experience of the three years, 1900-2, shows that of every 1,000 persons aged 60 years and upwards in Australia, 58.4 died within a year, a rate lower than that of Tasmania, Victoria, or New South Wales, but higher than that of each of the other States and New Zealand. As the average age of persons over 60 years tends to increase in young countries, it may be expected that the rates will become higher, until the normal, or settled conditions of older countries are reached.

Infantile mortality in 1910 and previous years.

The mortality of children under one year in proportion to births has been considerably less in recent than in earlier periods, but the necessity for reducing the risks to infant health and life, particularly amongst illegitimate children, is still apparent. Of every 100 infants

born in the five years 1906-10, 8.00 died within a year, as against 11.11 in 1891-1900. The reduction in the rate represents a saving during the last five years of 4,855 infant lives. The deaths of infants in 1910 numbered 2,418, and as there were 31,437 births, it follows that of every 100 infants born, approximately, 7.69 died within twelve months.

Infantile mortality in Melbourne and country.

The prejudicial effect of city surroundings on infant life is evidenced by the fact that the mortality rate in the metropolitan area exceeded that in the remainder of the State by 41 per cent. in 1910, and by 33 per cent. in the period 1905-9. That the difference in favour of infants in less densely populated centres is not confined to Victoria is indicated by the experience in England, where the rate is about 30 per cent. higher in Urban Areas than in the Rural Districts. The following table shows the infantile mortality rates in Melbourne and suburbs, and in the remainder of the State, and the difference in favour of the latter during the years 1873-1910:—

INFANTILE DEATH RATES IN MELBOURNE AND SUBURBS, AND IN THE REMAINDER OF THE STATE, 1873-1910.

Period.	Melbourne and Suburbs—Deaths per 100 Births.	Remainder of State—Deaths per 100 Births.	Excess per cent. of Melbourne over Country Rate.
1873-80	16·85	10·16	66
1881-90	17·14	9·50	80
1891-1900	13·36	9·60	39
1901	12·41	8·89	39
1902	12·74	9·55	33
1903	12·43	9·42	32
1904	9·27	6·81	36
1905	9·48	7·57	25
1906	11·35	7·92	43
1907	8·57	6·34	35
1908	9·83	7·72	27
1909	8·39	6·20	35
1910	9·23	6·55	41

Infantile death rates in various cities.

In 1910 the proportion of deaths of infants under one year per 100 births was 9.23 in Melbourne, as compared with 8.20 in Sydney, 8.37 in Brisbane, 7.81 in Adelaide, 8.89 in Perth, 11.73 in Hobart

and 8.45 in Wellington. The rates in Australasian capitals and 25 other cities in 1910 are shown in the following table:—

INFANTILE DEATH RATES IN VARIOUS CITIES, 1910.

City.	Deaths under 1 Year per 100 Births.	City.	Deaths under 1 Year per 100 Births.
Moscow	29·7	Copenhagen	11·8
St. Petersburg ...	26·2	Hobart	11·7
Trieste	19·0	Milan	11·3
Breslau	18·8	Edinburgh	11·1
Vienna	17·6	London	10·3
Munich	16·6	Rotterdam	9·4
Rio de Janeiro ...	16·6	The Hague	9·3
Prague	16·4	Stockholm	9·2
Berlin	15·7	Melbourne	9·2
Hamburg	14·9	Perth	8·9
Budapest	14·8	Wellington	8·4
Belfast	14·3	Brisbane	8·4
Dublin	14·2	Christiania	8·3
Dresden	12·9	Sydney	8·2
Glasgow	12·1	Amsterdam	7·8
Paris	11·8	Adelaide	7·8

Infantile death rates in metropolitan districts.

If the deaths of infants in districts of Greater Melbourne during the five years 1906-10 be compared with the births in the same districts and deaths under one year and births occurring in hospitals be excluded, some remarkable differences will be found to exist in the various metropolitan divisions:—

INFANTILE DEATH RATES IN METROPOLITAN DISTRICTS, 1906-10.

Districts.	Total in five Years, 1906-10.		Deaths under 1 year per 100 births, 1906-10.
	Births.	Deaths under 1 year.	
Fitzroy City	3,687	419	11·36
Brunswick City	3,645	353	9·68
Port Melbourne Town	1,562	150	9·60
Williamstown Town	1,641	157	9·57
Melbourne City	10,072	936	9·29
Footscray City	2,975	270	9·08
Collingwood City	3,986	361	9·06
South Melbourne City	4,585	411	8·96
Richmond City	4,776	382	8·00
Prahran City	4,662	341	7·31
St. Kilda City	2,041	143	7·01
Essendon City	2,159	150	6·95
Caulfield Town	1,236	78	6·31
Malvern City	1,416	88	6·21
Hawthorn City	2,297	141	6·14
Northcote Town	2,039	118	5·79
Camberwell Town	940	47	5·00
Kew Town	955	41	4·29

It is noticeable that the seven centres having the lowest infantile death rates are mainly residential areas, and are not so thickly populated as the other principal metropolitan districts which have higher mortality ratios. Kew had slightly over one-third, Camberwell and Northcote had about one-half, and Hawthorn, Malvern and Caulfield had slightly more than one-half the rate experienced in Fitzroy, which had the highest infantile death rate and the largest number of persons to the acre of any district in the metropolis.

Deaths of infants at different ages.

Of the total mortality of infants under 1 year, two-fifths occurred in the first month and nearly three-fifths in the first three months of life. The annual deaths at ages under 1 month, from 1 to 3 months, from 3 to 6 months, and from 6 to 12 months, during the ten years ended with 1900, and the period 1906 to 1910, are shown in the following table, together with the percentage of deaths at each of those age-periods and the proportion of deaths to each 100 births. It will be noticed that in the last five years the mortality of infants per 100 births at each age period, was below the average of the ten years ended with 1900:—

DEATHS OF INFANTS AT DIFFERENT AGES, 1891-1900 AND 1906-10.

Ages.	Average Annual Deaths of Infants under 1 year of Age.					
	Ten Years—1891-1900.			Five Years—1906-10.		
	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	591	42·1	3·68
1 to 3 months	355	17·3	2·07	235	16·7	1·46
3 to 6 „	445	21·7	2·59	251	17·9	1·56
6 to 12 „	600	29·3	3·50	327	23·3	2·04
Total ..	2,050	100·0	11·95	1,404	100·0	8·74
Girls.						
Under 1 month	488	28·7	2·98	430	39·3	2·83
1 to 3 months	301	17·7	1·84	184	16·8	1·21
3 to 6 „	385	22·6	2·35	215	19·7	1·41
6 to 12 „	528	31·0	3·23	264	24·2	1·74
Total ..	1,702	100·0	10·40	1,093	100·0	7·19

In the period 1906-10, the births of boys were in the proportion of over 105 to every 100 girls, but as the mortality among the former was greater than among the latter at each age group, more especially under 1 month, the proportion alive at the end of the year was reduced to slightly less than 104 boys to 100 girls. The death rate of infants under 1 month remained fairly constant in both periods, but a large decrease is shown for each of the three remaining

age groups in 1906-10 as compared with 1891-1900 that for the age group 6 to 12 months amounting to 43 per cent. This may be attributed chiefly to the improved milk supply and the consequent lighter mortality from digestive and diarrhœal diseases.

Probable mortality of infants.

The experience of the years 1906-10 shows that of every 20,000 newly-born boys and girls in equal numbers, 874 boys and 719 girls died within twelve months, and 9,126 of the former and 9,281 of the latter, or 18,407 of mixed sexes were living at the end of the year. The corresponding numbers surviving the first year in earlier periods were 17,765 in the ten years 1891-1900 and 17,468 in 1881-1890. It is thus seen that of every 20,000 births comprising equal numbers of each sex there were 642 more survivors in 1906-10 than in 1891-1900, and 939 more than in 1881-1890.

Infantile death rates from certain causes.

Although the infantile death rate in Victoria has fluctuated considerably in recent years, it shows on the whole a tendency to decrease. This tendency was much more marked in the period 1906-10 than in the five preceding years. The rate for last year—7.69 deaths per 100 births—was nearly 31 per cent. below that for the decennium 1891-1900. Any investigation of this subject would be incomplete unless the diseases which have proved fatal to infant life in different years were ascertained, and their incidence in each period compared. This method reveals the causes of high mortalities, and, when a fairly early period is selected for comparison with recent years, it shows in what direction the improvement is tending. A detailed comparison of the mortalities from each disease would be less useful than one giving the main preventable and non-preventable causes of death, grouped under certain headings, such as is shown in the following table for the periods 1891-3, and 1901-8, and for the years 1909 and 1910.

INFANTILE DEATH RATES FROM CERTAIN CAUSES, 1891-3, 1901-8, 1909 AND 1910.

Causes of Death.	Deaths under 1 year per 1,000 Births in—			
	1891-3.	1901-8.	1909.	1910.
Diarrhœal Diseases, all forms	29·66	25·42	18·48	24·40
Wasting Diseases (Marasmus, Atrophy, &c.)	22·24	12·95	11·76	11·99
Prematurity	13·13	15·36	13·44	13·58
Bronchitis, Broncho-pneumonia, Pneumonia	11·37	8·70	6·85	4·90
Convulsions	6·83	3·31	2·16	2·39
Congenital Defects and Malformations ...	3·45	5·00	3·65	4·99
Violence	3·16	2·66	1·93	1·53
Whooping Cough	2·60	2·57	3·23	1·46
Other causes	24·49	15·36	9·85	11·68
Total all causes	116·93	91·33	71·35	76·92

The most striking feature of the infantile mortality figures is the marked tendency towards lower death rates from digestive and wasting diseases, and from complaints from the respiratory system. Of every 1,000 infants born 33 died from diarrhœal and wasting diseases in 1909-10, as against 38 in 1901-8, and 52 in 1891-3—a decrease of over 36 per cent. in 18 years. In 1909-10 acute bronchitis, broncho-pneumonia and pneumonia were responsible for 6 deaths per 1,000 births, as compared with 11 in 1891-3—a decline of over 45 per cent. between the two periods. A further examination of the foregoing table shows that the death rates from certain causes, which may be regarded as of a non-preventable nature, such as prematurity, congenital defects and malformations were responsible over the whole period for one-fifth of the total infantile mortality. Of the deaths from preventable causes about 1 in every 3 is due to diarrhœal diseases, which are specially prevalent and fatal in hot weather, when milk food, the chief diet of children, undergoes rapid changes and consequently becomes dangerous to infant life. The influence of the seasons on the mortality amongst children under 1 year is vividly shown by the deaths in certain months. The Victorian experience shows a high death rate in December, January, February, and March co-existent with a heavy mortality rate from diarrhœal diseases, and a low rate in the remaining eight months, concurrently with a very low rate from these complaints. On the average of the last ten years, of every 1,000 children born nearly 25 died from diarrhœal diseases within a year, a proportion which shows the necessity for preventive measures in this direction. The rate attributable to diarrhœal complaints in Victoria is equal to that in England and Wales, but the proportionate mortality from bronchitis, broncho-pneumonia and pneumonia is three times as high in the latter country as in the former.

Infantile deaths in seasons from certain causes.

The influence of temperature on infantile mortality from the chief digestive and respiratory diseases is specially noticeable, whilst on deaths from other causes, particularly those of a developmental character, very little influence is apparent. The deaths in Melbourne and suburbs from the two former classes of complaint in each of the quarters of the past six-year period are shown in the following statement :—

Cause of Death.	Deaths during 1905-10 in the Quarter ended—			
	March.	June.	September.	December.
Diarrhœal Diseases	1,111	411	145	510
Bronchitis, Broncho-pneumonia, Pneumonia	96	141	322	48

The experience of the period 1905-10 shows that the first three months of the year furnish a greater infantile mortality from diarrhœal complaints than the remaining nine months, and that the deaths of infants in the September quarter from bronchitis, broncho-pneumonia and pneumonia are more numerous than in the other three quarters combined.

Legitimate and illegitimate infantile death rates.

On the average of the past seven years, 1 in every 5 illegitimate infants died within a year, as against 1 in every 14 legitimate children. It is thus seen that the chance of an illegitimate child dying before the age of 1 year is nearly three times that of the legitimate infant. In the year 1910 the mortality rate for legitimate infants—6.89 per 100 births—was higher than in the preceding year. The children born out of wedlock during the same period numbered 1,759, and the deaths of illegitimate infants were 374, which corresponded to a rate of 21.26 per 100 births. In England and Wales, in 1909, the corresponding mortality rates for legitimate and illegitimate infants were 10.43 and 21.12 respectively. With the view of ascertaining the chief reasons for the marked disproportion in the mortality rates of the two classes, the following table has been constructed, showing the deaths in Victoria from certain causes per 1,000 legitimate and illegitimate births on the average of the years 1904-8 and for the year 1910.

DEATH RATES OF LEGITIMATE AND ILLEGITIMATE INFANTS FROM CERTAIN CAUSES 1904-8 AND 1910.

Cause of Death.	Deaths under 1 year per 1,000 Births.			
	Legitimate.		Illegitimate.	
	1904–8.	1910.	1904–8.	1910.
Diarrhœal Diseases	19·8	21·1	72·6	80·1
Prematurity, Congenital Defects, Marasmus, &c.	30·3	28·7	52·1	62·0
Bronchitis, Broncho-pneumonia, Pneumonia	6·9	4·7	18·6	10·8
Other causes	18·3	14·4	58·7	59·7
Total all causes	75·3	68·9	202·0	212·6

The rates for 1910 show that of every 1,000 children born out of wedlock 80.1 died from diarrhœal diseases within a year as compared with 21.1 deaths per 1,000 legitimate infants from the same cause. For 1904-8 the corresponding rates were 72.6 and 19.8 respectively. Owing to a larger proportion of the former children being deprived of breast food a higher mortality from these diseases might be expected among them than among legitimate infants, but the striking differences in the death rates from this cause and from the chief respiratory diseases would indicate considerable neglect in the rearing of illegitimate infants.

Infantile mortality in Australasia.

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:—

INFANTILE MORTALITY IN AUSTRALASIA.

Period.	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
1906	9·29	7·45	7·47	7·59	11·00	9·09	6·21
1907	7·26	8·86	7·76	6·59	9·77	8·28	8·88
1908	8·61	7·58	7·07	6·97	8·46	7·52	6·79
1909	7·13	7·43	7·19	6·13	7·80	6·49	6·16
1910	7·69	7·46	6·31	7·06	7·80	10·22	6·77
Average 1906–10	8·00	7·76	7·16	6·87	8·97	8·32	6·96

Decrease in infantile mortality in Australasia.

On the average of the last five years the lowest infantile death rate prevailed in South Australia, followed by that in New Zealand, Queensland, New South Wales, Victoria, and Tasmania, in that order, and the highest in Western Australia. Although the rates show considerable variations in the States during any one year, and in different years in the same State, it is noticeable that the pronounced improvement which commenced in all the divisions of the Commonwealth in 1904 has continued with slight variations up to the latest year excepting in Tasmania. Compared with the infantile death rate in 1891-1900, the rate for 1910 showed a percentage decline

of nearly 31 in Victoria, 33 in New South Wales and South Australia, 39 in Queensland, and 46 in Western Australia. This reduction in infantile mortality rates in five of the States in 1910 was equivalent to a saving of 4,277 infant lives, of which 1,075 were in Victoria.

Infantile mortality in various countries.

The following table shows the infantile death rates of various foreign countries on the average of the latest five years for which this information is available, and of the Australian States and New Zealand on the average of the years 1906-10:—

INFANTILE MORTALITY IN VARIOUS COUNTRIES.

Country.	Deaths under 1 year per 100 Births.	Country.	Deaths under 1 year per 100 Births.
Russia (European) ...	25·6	England and Wales ...	12·1
Austria...	21·2	The Netherlands ...	11·9
Hungary	21·1	Scotland	11·7
German Empire	18·8	Denmark	11·4
Prussia...	17·6	Ireland	9·4
Spain	17·0	Western Australia ...	9·0
Italy	15·9	Tasmania	8·3
Bulgaria	15·6	Sweden	8·3
Japan	15·3	Victoria	8·0
Servia	15·0	New South Wales ...	7·8
Belgium	14·6	Norway	7·4
France	13·9	Queensland	7·2
Switzerland	12·5	New Zealand	7·0
United Kingdom ...	12·4	South Australia ...	6·9
Ontario, Province of ...	12·2		

Of all the countries for which information is available Russia has the highest and South Australia, New Zealand and Queensland have the lowest infantile mortality. In the former 1 in every 4, and in the three latter only about 1 in every 14 infants dies within its first year.

Deaths of children under 5.

In 1910 the deaths of male children under 5 years of age numbered 1,755, and the deaths of female chidren under that age numbered 1,373—the former being in the proportion of 21.58 per cent., and the latter of 20.79 per cent., to the total number of deaths of the respective sexes at all ages. These proportions are below the averages of the previous nine years. Comparing the averages of the three decades ended with 1900, and the deaths during each of the ten subsequent years, it will be seen that a marked falling off took

place, from period to period, in the mortality of children relatively to that of persons of all ages. The following table shows the annual number of such deaths in the State at each year of age, and their proportion to the deaths at all ages in the periods mentioned.

MORTALITY OF CHILDREN UNDER FIVE YEARS.

Period.	Years of Age at Death.					Total under 5 Years.	
	0.	1.	2.	3.	4.	Number.	Proportion Per 100 Deaths at all Ages.
Males.							
1871-1880.. ..	1,783	508	206	148	119	2,764	39·41
1881-1890.. ..	2,158	464	161	114	92	2,989	34·28
1891-1900.. ..	2,050	432	143	93	76	2,794	30·05
1901	1,788	317	90	77	58	2,330	25·79
1902	1,793	345	106	67	37	2,348	25·65
1903	1,694	271	100	76	47	2,188	25·36
1904	1,299	192	85	55	50	1,681	21·03
1905	1,446	210	73	69	39	1,837	22·20
1906	1,563	255	82	38	32	1,970	23·62
1907	1,286	193	72	53	32	1,636	20·50
1908	1,497	246	81	58	38	1,920	21·78
1909	1,302	232	72	46	42	1,694	20·99
1910	1,374	224	69	51	37	1,755	21·58
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
1901	1,404	308	100	61	48	1,921	28·11
1902	1,515	285	110	52	51	2,013	28·65
1903	1,452	267	103	67	51	1,940	27·84
1904	1,020	169	79	49	56	1,373	21·45
1905	1,062	183	79	52	40	1,416	22·11
1906	1,303	235	80	51	31	1,700	24·65
1907	990	167	59	44	21	1,281	19·52
1908	1,180	200	68	36	28	1,512	21·75
1909	949	169	76	49	41	1,284	20·17
1910	1,044	188	58	46	37	1,373	20·79

Proportion of infants surviving their fifth year.

The increasing proportion of infants who survive their fifth year shows that the conditions affecting child life have materially improved in the past thirty years, and that the improvement has been very pronounced since 1900. The increasing ratio of survivors is marked at each year of age, but is especially noticeable between ages 1 and 5 during the ten years 1901-10. In this period also a low death rate between 1 and 5 years was coincident with a low mortality in the first year of life, while in the decades 1881-1890 and 1891-1900 the high rates which prevailed under 1 year were associated with high mortality rates for each of the four following years. It would thus appear that the effects of illness in the first year of life, as indicated by a high death rate, are conducive to a high mortality in each of

the four succeeding years. The results disclosed agree with the conclusions of the Medical Officer of the Local Government Board (England), who stated in his 1909-10 report that "the countries having high infant mortalities continue in general to suffer somewhat excessively throughout the first twenty years of human life, and that countries having low infantile mortalities continue to have relatively low death rates in the first twenty years of life, though the superiority is not so great at the later as at the earlier ages." The following table gives the numbers of survivors at each year of age from 1 to 5 inclusive per 10,000 male and 10,000 female infants born in Victoria taking the averages of the decennia 1881-1890, 1891-1900, and 1901-10.

SURVIVORS AT EACH YEAR OF AGE, 1 TO 5 INCLUSIVE, PER 10,000 MALES AND 10,000 FEMALES BORN 1881-1890, 1891-1900, AND 1901-10.

Age.	Survivors at each year of age 1 to 5 inclusive per 10,000 Births of—					
	Males.			Females.		
	1881-1890.	1891-1900.	1901-1910.	1881-1890.	1891-1900.	1901-1910.
1 year	8,652	8,805	9,044	8,816	8,960	9,202
2 years ...	8,351	8,540	8,868	8,529	8,713	9,044
3 "	8,252	8,459	8,808	8,430	8,629	8,983
4 "	8,180	8,396	8,765	8,361	8,577	8,945
5 "	8,121	8,349	8,734	8,305	8,534	8,913

According to the experience of the period 1901-10 of every 10,000 boys and 10,000 girls born in Victoria, 9,044 of the former and 9,202 of the latter may be expected to survive the first year of life, 8,868 boys and 9,044 girls will be alive at the end of the second year, 8,808 and 8,983 at the end of the third year, 8,765 and 8,945 at the end of the fourth year, and 8,734 and 8,913 at the end of the fifth year. Combining the two sexes in equal numbers, the average number of survivors is 8,824 per 10,000 births—a proportion very much larger than either of those deduced from the mortalities in the decennia 1891-1900 and 1881-1890, when the corresponding averages were 8,441 and 8,213 respectively. Of every 10,000 infants born in Victoria there are, on the average, 5,122 boys and 4,878 girls—being in the ratio of 105 of the former to every 100 of the latter. According to the mortality experienced in the period 1901-10 these will be reduced at the end of five years to 4,473 boys and 4,348 girls, and the ratio of the sexes will be altered to 103 males for every 100 females. Thus, two-fifths of the excess of males over females at birth is neutralized in the first five years by the heavier mortality among boys, especially in their first year of life.

The ages of males and females who died in 1910 and in the two preceding years are shown in the following table:— Ages at Death.

AGES AT DEATH IN VICTORIA, 1908-10.

Ages.	1908.			1909.			1910.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Under 1 ..	1,497	1,180	2,677	1,302	949	2,251	1,374	1,044	2,418
1 to 2	246	200	446	232	169	401	224	188	412
2 „ 3	81	68	149	72	76	148	69	58	127
3 „ 4	58	36	94	46	49	95	51	46	97
4 „ 5	38	28	66	42	41	83	37	37	74
5 „ 10	150	149	299	111	108	219	128	116	244
10 „ 15	125	89	214	108	75	183	102	96	198
15 „ 20	196	208	404	178	173	351	164	169	333
20 „ 25	231	223	454	167	210	377	191	219	410
25 „ 30	223	229	452	201	244	445	204	247	451
30 „ 35	215	253	468	199	216	415	202	244	446
35 „ 40	306	262	568	257	283	540	253	268	521
40 „ 45	414	293	707	326	293	619	345	249	594
45 „ 50	457	361	818	460	319	779	466	298	764
50 „ 55	426	282	708	438	241	679	425	298	723
55 „ 60	349	264	613	385	237	622	386	273	659
60 „ 65	445	339	784	410	313	723	413	298	711
65 „ 70	618	499	1,117	588	473	1,061	538	427	965
70 „ 75	767	586	1,353	722	573	1,295	682	564	1,246
75 „ 80	913	643	1,556	882	633	1,515	867	637	1,504
80 „ 85	651	439	1,090	608	385	993	631	469	1,100
85 „ 90	309	232	541	255	219	474	282	238	520
90 „ 95	73	68	141	66	70	136	77	94	171
95 ..	3	7	10	4	4	8	5	5	10
96 ..	9	9	18	1	2	3	3	4	7
97 ..	4	1	5	5	2	7	2	4	6
98 ..	6	1	7	1	4	5	2	5	7
99 ..	2	2	4	1	1	2	2	3	5
100 ..	3	..	3	1	3	4	1	3	4
101 ..	..	..	..	1	1	2	3	..	3
102 ..	..	1	1	..	..	..	..	1	1
105 ..	..	..	..	..	..	..	..	1	1
107 ..	..	..	..	..	..	..	2	..	2
108 ..	..	..	..	..	..	..	1	..	1
110 ..	..	..	..	1	..	1	..	..	..
113 ..	..	..	..	..	..	..	..	1	1
Total ..	8,815	6,952	15,767	8,070	6,366	14,436	8,132	6,604	14,736

Of the 44,939 persons who died in Victoria during the last three years 5,294 were aged 80 years and upwards, and 24—thirteen males and eleven females—had attained or passed the age of 100 years. The highest age recorded in 1908-10 was that of a woman whose years were given as 113. To every 100 female deaths there were 123 male deaths in 1910, as against 127 in each of the two preceding years.

Altered classification of causes of deaths.

In accordance with the decision of the Conference of Statisticians held in Melbourne in 1906, the causes of death were arranged for the first time in 1907 according to The International Classification of Causes of Death. This differs so materially in some respects from the mortality lists previously used in Victoria that comparisons of deaths and death rates from certain causes in the years 1907 to 1910 with those of earlier years are impossible. This applies even to some causes which appear to be similarly grouped, but are actually of a non-comparable character owing to their limitations in 1907-10 differing from those of earlier periods. In any comparison of mortalities from detailed causes it is therefore necessary to bear in mind the minor diseases excluded from or included in the assigned causes in the years compared. This precaution is especially necessary in comparing certain mortalities of the digestive, nervous, and respiratory systems.

Death rate from certain diseases.

With regard to the selection of the primary cause of death when two or more associated diseases are stated, there is no material difference between the International method and that previously followed in Victoria, except in a few minor nervous and respiratory complaints of persons dying in Hospitals for the Insane. Many important causes of death are practically unaffected by the new classification referred to in the preceding paragraph, and consequently retain their comparative character. Amongst these are cancer, tubercular diseases, typhoid fever, whooping cough, measles, influenza, scarlet fever, meningitis and encephalitis, diabetes, appendicitis, urinary, liver and puerperal diseases, suicide, old age, &c. In many other instances, as where death is due to diarrhœa and enteritis, diphtheria and croup, hydatids, accidental violence, homicide, &c., re-arrangements of the mortalities have been made which allow comparisons to be instituted with previous years. The health of the community, as reflected in the death rates from the chief diseases arranged on a comparative basis, is shown in the following table for the period 1890-2 and for the last five years :—

DEATHS PER MILLION FROM CERTAIN CAUSES.

Cause of Death.	Deaths per Million of the Population.					
	1890-2.	1906.	1907.	1908.	1909.	1910.
Typhoid Fever	369	132	71	137	103	107
Scarlet Fever	34	3	2	17	33	22
Measles	2	6	33	16	3	25
Whooping Cough	129	201	103	54	132	50
Diphtheria and Croup	552	48	79	88	69	86
Influenza	381	198	221	131	86	92
Hydatids	51	23	34	21	26	17
Cancer	584	755	796	794	802	832

DEATHS PER MILLION FROM CERTAIN CAUSES—*continued.*

Cause of Death.	Deaths per Million of the Population.					
	1890–2.	1906.	1907.	1908.	1909.	1910.
Phthisis	1,365	988	958	955	848	830
Other Tubercular Diseases	379	273	209	200	192	176
Syphilis	39	50	63	56	44	51
Diabetes	38	85	110	98	102	106
Anæmia, Chlorosis, Leucæmia	28	60	45	85	90	80
Meningitis and Encephalitis	113	145	161	164	152	116
Locomotor Ataxia and other diseases of Spinal Cord	43	50	65	80	75	64
Congestion and Hæmorrhage of the Brain	344	404	463	467	415	439
Epilepsy	74	43	32	43	39	25
Convulsions	353	90	87	88	63	81
Heart Disease (including Endocarditis and Pericarditis)	950	1,177	1,254	1,381	1,491	1,394
Acute and Chronic Bronchitis	691	477	343	374	321	288
Pneumonia and Broncho-pneumonia	853	884	780	918	768	658
Pleurisy	96	86	46	46	41	38
Congestion of Lungs and Pulmonary Apoplexy	140	50	54	69	66	49
Asthma and Pulmonary Emphysema	70	66	43	56	60	60
Enteritis, Gastro-enteritis, and Diarrhœal Diseases	1,342	943	718	1,061	756	918
Hernia, Intestinal Obstruction	124	131	125	100	122	120
Diseases of the Stomach (Cancer excepted)	175	108	101	113	86	89
Cirrhosis and other diseases of the Liver (Cancer excepted)	329	175	165	163	149	156
Biliary Calculi	11	33	28	22	31	32
Appendicitis and Abscess of the Iliac Fossa	..	96	66	80	74	83
Simple Peritonitis (non-puerperal)	106	61	52	48	41	34
Acute and Chronic Nephritis, Uræmia, Bright's Disease	294	551	596	614	518	499
Diseases of the Bladder and Prostate	86	127	107	88	91	89
Calculi of the Urinary System	8	10	6	8	6	5
Old Age	631	928	982	1,111	988	982
Suicide	109	90	95	92	92	101
Accidental Violence	811	535	568	647	498	528
Homicide	34	16	17	15	12	31

The most striking features of the mortality of 1910, as compared with the previous year were the large increase in the deaths of infants from diarrhœa and enteritis, and the great reduction in deaths at all ages from respiratory diseases. The ages at death show that the increased general death rate was wholly due to heavier mortalities at the extremes of life in the year under review, when 167 more infants and 204 more octogenarians died than in 1909. Scarlet fever, whooping cough, phthisis, other tubercular diseases, anæmia, meningitis, epilepsy, heart disease, and complaints of the respiratory and urinary systems, furnished lower rates, and typhoid fever, measles, diphtheria, cancer, appendicitis, diarrhœal diseases, suicide, accidental violence and homicide were responsible for higher rates than in the previous year. These and other comparable causes of death are fully dealt with in subsequent paragraphs.

Vaccinations.

The efficacy of vaccination in minimizing the risk of infection from small-pox is recognised by Victorian legislation, which requires parents to have their children vaccinated. The proportion of successful vaccinations to every 100 births for the average of the period 1876-1899, and for each year since, is shown in the following table:—

SUCCESSFUL VACCINATIONS PER 100 BIRTHS.

Period.	Vaccinations per 100 births.	Period.	Vaccinations per
1876–1899 ...	72	1905 ...	67
1900 ...	67	1906 ...	67
1901 ...	62	1907 ...	67
1902 ...	53	1908 ..	67
1903 ...	71	1909 ...	68
1904 ..	69	1910 ..	69

During the past five years about two-thirds of the children born were vaccinated. This was slightly higher than the proportion in 1901-5, but lower than the ratio—72 per cent.—in the period 1876-1899. Allowing for deaths of unvaccinated infants in each year since 1875, it is probable that about one in every five of the Victorian born population under 35 years of age has not been vaccinated.

Small-pox.

Persons suffering from small-pox have arrived at Victorian ports on many occasions, but as they were at once quarantined, the disease never spread among the people of the State. In 1910 three oversea arrivals—1 male and 2 females—died from small-pox in the Victorian quarantine station. Since 1853 only 28 deaths have occurred from this cause, and of that number only 5 have taken place in the twenty-six years ended 1910. Statistics of European countries reveal a very marked decline in the mortality from small-pox in recent years. The deaths per million of the population in various countries are shown in the following table for the average of the latest three years for which these particulars are available:—

DEATHS FROM SMALL-POX PER MILLION OF POPULATION IN VARIOUS COUNTRIES.

Country.	Period.	Deaths per Million of the Population.	Country.	Period.	Deaths per Million of the Population.
Ceylon	1907–9	34·2	Victoria ...	1908–10	·8
Japan	1906–8	31·2	Scotland ...	1906–8	·6
Italy	1907–9	17·3	England and Wales	1907–9	·4
Belgium ...	1906–8	6·2	The Netherlands...	1907–9	·4
Hungary ...	1907–9	5·9	United Kingdom...	1906–8	·4
Norway... ...	1906–8	2·7	New South Wales	1908–10	·2
Switzerland ...	1906–8	2·3	Denmark ...	1906–8	·1
United States of America ...	1907–9	1·8	Ireland	1907–9	·1
Ontario, Province of	1906–8	1·5	Sweden ...	1906–8	·1
Western Australia	1908–10	1·2	Roumania ...	1907–9	·1
Austria... ...	1906–8	1·1	New Zealand ..	1907–9	No Deaths.
German Empire ...	1906–8	·9	South Australia ...	1908–10	
Prussia	1907–9	·9	Queensland ...	1908–10	
			Tasmania ...	1908–10	

Typhoid fever, which is really a preventable disease and is most fatal between 15 and 50 years of age, was responsible in 1910 for 139 deaths, which represented a mortality rate of 107 per million of population, as against 103 in 1909, 137 in 1908, 71 in 1907, 132 in 1906, and 369 in 1890-2. The rate for the last year was slightly below the average of the preceding four years, and 71 per cent. lower than that for the period 1890-2. For Greater Melbourne also a rapidly diminishing death rate from this cause is shown in recent years, the ratio for 1906-10 having been less than one-third of that for the decennium 1891-1900. In regard to the prevalence of typhoid fever in different divisions of the State it is notable that the reported cases in the metropolitan area furnish a lower "attack rate" than those in the remainder of the State on the average of the last five years. Comparing the deaths in Greater Melbourne from typhoid fever with the cases reported in the five years 1906-10, the fatality rate was less than 1 in every 10 cases, which was only two-thirds of the fatality experienced in London in the period 1904-8. The typhoid mortality rate on the average of the past three years was lower in Victoria than in any other Australian State except South Australia. The deaths from typhoid fever per 100,000 of the population in various countries for the latest three-year period for which this information is available are shown in the following table:— Typhoid fever.

DEATH RATES FROM TYPHOID FEVER IN VARIOUS COUNTRIES.

Country	Period.	Deaths per 100,000 of Population.	Country.	Period.	Deaths per 100,000 of Population.
Spain	1907-9	31·2	Japan	1906-8	12·3
Ontario, Province of	1906-8	31·1	Belgium ...	1906-8	11·7
Hungary ...	1907-9	27·0	Victoria ...	1908-10	11·5
Italy	1907-9	27·0	South Australia...	1908-10	8·3
United States of America ...	1907-9	25·6	Ireland ...	1907-9	7·7
Western Australia	1908-10	25·4	Scotland ...	1906-8	7·3
Roumania ...	1907-9	22·4	New Zealand ...	1907-9	6·7
Tasmania ...	1908-10	20·8	England and Wales	1907-9	6·7
New South Wales	1908-10	18·2	The Netherlands	1907-9	6·1
Queensland ...	1908-10	17·2	Prussia ...	1907-9	5·3
Austria... ...	1906-8	14·9	German Empire...	1906-8	5·1
Servia	1906-8	14·3	Switzerland ...	1906-8	4·5
			Norway ...	1906-8	4·1

The mortality from scarlet fever was comparatively heavy in the last three years. The deaths referred to this cause in 1910 numbered 28, and corresponded to a rate of 22 per million of the population, as compared with 33 in the previous year, 17 in 1908, 2 in 1907, 3 in 1906, and 34 in 1890-2. The ratio of deaths to notified cases in Greater Melbourne during the period 1906-10 was 15 in every 1,000, as compared with a fatality rate of 26 per 1,000 in London for the period 1904-8. Death rates from scarlet fever are considerably lower in the Australian States than in European countries. The Scarlet fever.

deaths from this disease, per 100,000 of the population, in various countries on the average of the latest three years for which this information is available are given in the subjoined table:—

DEATH RATES FROM SCARLET FEVER IN VARIOUS COUNTRIES.

Country.	Period.	Deaths per 100,000 of Population.	Country.	Period.	Deaths per 100,000 of Population.
Servia	1906-8	151·8	Sweden ...	1906-8	5·3
Roumania ...	1907-9	73·9	Ontario, Province of	1906-8	4·9
Hungary ...	1907-9	57·7	The Netherlands	1907-9	4·3
Austria... ...	1906-8	42·5	Switzerland ...	1906-8	4·2
Prussia	1907-9	21·9	New Zealand ...	1907-9	3·9
German Empire ...	1906-8	17·2	Norway ...	1906-8	3·2
Belgium ...	1906-8	13·2	Victoria ...	1908-10	2·4
United States of America ...	1907-9	11·6	Ireland ...	1907-9	2·3
Spain	1907-9	10·6	New South Wales	1908-10	1·9
Italy	1907-9	8·9	Tasmania ...	1908-10	·9
England and Wales	1907-9	8·7	Western Australia	1908-10	·5
United Kingdom	1906-8	8·1	South Australia	1908-10	·2
Scotland ...	1906-8	5·9	Japan	1906-8	·2
			Queensland ...	1908-10	·1

Measles.

The mortality from measles has varied very considerably from period to period, although there have been only two severe epidemic outbreaks during the past nineteen years, and these did not extend beyond the years—1893 and 1898—in which they occurred. In 1910 there were 32 deaths attributed to this cause, representing a rate of 25 per million of the population, as compared with rates of 3 in the previous year, 16 in 1908, 33 in 1907, and 6 in 1906. The deaths from measles per 100,000 of the population in different countries for the latest three years for which this information is available, are shown in the next table:—

DEATH RATES FROM MEASLES IN VARIOUS COUNTRIES.

Country.	Period.	Deaths per 100,000 of Population.	Country.	Period.	Deaths per 100 000 of Population.
Hungary ...	1907-9	41·7	United States ...	1907-9	10·2
Spain	1907-9	36·6	Sweden ...	1906-8	7·0
Scotland ...	1906-8	35·6	Norway ...	1906-8	6·7
Belgium ...	1906-8	33·6	New Zealand ...	1907-9	5·1
England and Wales	1907-9	31·4	Ontario, Province of	1906-8	5·0
Italy	1907-9	30·3	Japan	1906-8	4·9
Austria... ...	1906-8	28·5	Western Australia	1908-10	4·6
United Kingdom	1906-8	28·0	Queensland ...	1908-10	3·4
The Netherlands...	1907-9	23·2	New South Wales	1908-10	2·6
Roumania ...	1907-9	18·7	Victoria ...	1908-10	1·5
Prussia... ...	1907-9	18·0	South Australia	1908-10	1·2
Ireland... ...	1907-9	14·4	Tasmania ...	1908-10	1·1
Switzerland ...	1906-8	13·3			

The average rate of the last three years in Victoria was greatly below that experienced in European and other countries, being less than one-twentieth of the rate in England and one-seventh of that in the United States.

Whooping cough.

There were 65 deaths referred to whooping cough in 1910, which equalled a rate of 50 per million of the population at all ages, as compared with rates of 132 in the previous year, 54 in 1908, 103 in 1907, and 201 in 1906, when the mortality was exceptionally heavy. The infantile death rate is more affected than the general rate by this ailment, as it is practically confined to children. In the year under review 46, or nearly 71 per cent., of the deaths were of infants under 1 year, and all were of children less than five years of age. The incidence of this disease is generally about 20 per cent. higher among girls than boys, but in the year under review it was nearly equal for both sexes. The deaths from whooping cough per 100,000 of the population for various countries, during the latest three-year period for which this information is available, are given in the following table:—

DEATHS FROM WHOOPING COUGH PER 100,000 OF POPULATION IN DIFFERENT COUNTRIES.

Country.	Period.	Deaths per 100,000 of Population.	Country.	Period.	Deaths per 100,000 of Population.
Servia	1906–8	179·9	Sweden ...	1906–8	15·4
Scotland ...	1906–8	41·8	Tasmania ...	1908–10	15·2
Austria... ...	1906–8	39·3	Switzerland ...	1906–8	14·9
Hungary ...	1907–9	35·6	New Zealand ...	1907–9	13·8
Belgium ...	1906–8	34·2	Norway ...	1906–8	13·1
United Kingdom	1906–8	28·0	United States ...	1907–9	10·9
England and Wales	1907–9	25·7	Ontario, Province of	1906–8	10·5
German Empire ...	1906–8	25·4	Queensland ...	1908–10	9·2
Prussia	1907–9	25·3	Western Australia	1908–10	8·9
Roumania ...	1907–9	22·4	Victoria ...	1908–10	7·8
Ireland	1907–9	22·3	Japan	1906–8	7·2
Spain	1907–9	19·8	South Australia ..	1908–10	6·6
The Netherlands	1907–9	19·4	New South Wales	1908–10	5·1
Italy	1907–9	16·5			

On the average of the past three years the mortality rate from whooping cough in Victoria was less than one-third of that in England and Wales, and in the German Empire. It was also below that in any other Australian State except South Australia and New South Wales.

Diphtheria and croup.

On the average of the past five years the mortality rate from diphtheria and croup was considerably less than in earlier periods. For 1910 the number of deaths was 112, which equalled a rate of 86 per million of the population, being about one-sixth of the proportion —552—for 1890-2. Like measles, scarlet fever, and whooping cough, it is an ailment chiefly affecting children. Of the 112 deaths attributed

to this disease in the latest year, 102 were of children under 10 years of age of whom 61 had not completed their fifth year. The incidence of the malady is light in the first year of life, as compared with the subsequent four years, and is about equal for both sexes. The fatality rate of diphtheria, *i.e.*, the proportion of deaths to the cases in Greater Melbourne notified to the Board of Health, shows that 51 in every 1,000 ended fatally in 1906-10, as against 90 in every 1,000 in London in the period 1904-8. Prior to the employment of the anti-toxin treatment of diphtheria the fatality rate in Melbourne was five times that experienced in the past five years. The deaths from diphtheria and croup per 100,000 of the population for various countries during the latest three-year period for which this information is available are given in the following table:—

DEATH RATES FROM DIPHTHERIA AND CROUP IN VARIOUS COUNTRIES.

Country.	Period.	Deaths per 100,000 of Population.	Country.	Period.	Deaths per 100,000 of Population.
Servia	1906–8	41·6	England and Wales	1907–9	15·6*
Hungary ..	1907–9	41·1	Switzerland ...	1906–8	15·2
Western Australia	1908–10	30·3	Scotland ...	1906–8	15·1*
Austria	1906–8	28·9	New South Wales	1908–10	10·8
Prussia... ...	1907–9	24·9	Japan	1906–8	9·2
German Empire ...	1906–8	23·4	Queensland ...	1908–10	8·5
United States ...	1907–9	22·5	Victoria ...	1908–10	8·1
Norway ...	1906–8	22·3	Ireland ...	1907–9	8·0*
Spain	1907–9	19·9	Tasmania ...	1908–10	7·4
Ontario, Province of	1906–8	18·8	South Australia	1908–10	6·1
Italy	1907–9	16·9	The Netherlands	1907–9	6·1*
Sweden... ...	1906–8	16·3	New Zealand ...	1907–9	5·4
Belgium ...	1906–8	16·1*	Roumania ..	1907–9	5·1

* Excluding croup.

Hydatids.

The deaths attributed to hydatids in 1910 numbered 22, being equivalent to a rate of 17 per million of the population, as compared with rates of 26 in the preceding year, 21 in 1908, 34 in 1907, 23 in 1906, and 51 in 1890-2. Of the 150 persons who died from this disease in the last five years 78 were males and 72 females; only 1 was under 5 years of age. In 1910, 76 per cent. of the fully defined cases were of the liver and 24 per cent. were of the lungs. Hospital returns for the latest five years show that 531 cases of hydatids were treated therein and that 1 in every 11 ended fatally.

Anæmia, chlorosis, leucæmia.

Anæmia, chlorosis, and leucæmia were responsible for 104 deaths in 1910, which corresponded to a rate of 80 per million of the population. This was above the average rate of the preceding four years —70—and 29 per cent. higher than the death rate experienced from these causes in England and Wales in 1909.

The death rate from diabetes has shown a varying increase in recent periods, and on the average of the past five years it was the heaviest ever experienced in the State. In the year under review—1910—there were attributed to this cause 62 male and 76 female deaths, representing a rate of 106 per million of the population, which was 11 above the average of the previous five years, and slightly higher than the rate for England and Wales in 1909. The deaths from diabetes per 10,000 of each sex in nine age groups for the periods 1890-2, 1900-2, and 1907-9, are shown in the following table:— Diabetes.

DEATHS FROM DIABETES IN VICTORIA PER 10,000 OF EACH SEX LIVING.

Age Groups.	Deaths per 10,000 of each Sex Living.					
	Males			Females.		
	1890–2.	1900–2.	1907–9.	1890–2.	1900–2.	1907–9.
0–10	·02	·09	·15	·02	·05	·15
10–20	·17	·24	·25	·14	·26	·15
20–30	·29	·17	·19	·14	·36	·46
30–40	·21	·32	·66	·30	·51	·47
40–50	·58	·49	1·40	·49	·42	·53
50–60	1·18	1·38	1·98	1·31	1·42	3·42
60–70	1·49	2·67	4·09	2·49	3·19	8·44
70–80	2·87	4·36	4·67	1·88	5·01	11·33
80 and over ..	1·65	4·11	4·61	4·44	3·54	5·00
All Ages ...	·40	·56	·88	·36	·60	1·19

Among males under 30 years of age the mortality rate from diabetes was fairly stationary and low at each period, but the rates for succeeding ten-year age groups showed substantial increases between 1890-2 and 1907-9. Between the same periods the rates among females increased at each age group. Omitting the age group 0-10, at which the deaths are few and the rates susceptible to slight influences, the greatest increase occurred at ages 70-80, and the next heaviest increase at ages 60-70.

The deaths from influenza in 1910 numbered 119, corresponding to a rate of 92 per million of the population, which was 38 per cent. below the average of the previous five years. Although this disease has varied in form in different periods it has always proved much more fatal to elderly people than to those of middle or young ages. More than one-half of the deaths in 1910 were of persons aged 60 years and upwards. The age incidence of the disease at various Influenza.

periods is shown in the next table, which gives the average yearly proportion of deaths from influenza per 10,000 of each sex in age groups during the years adjoining four census dates, and shows that during the two periods 1890-2 and 1900-2 the proportion of deaths resulting from the disease was eleven times as great as in the two preceding ones:—

DEATHS FROM INFLUENZA IN VICTORIA PER 10,000 OF EACH SEX LIVING.

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

The average yearly proportion of deaths from influenza and respiratory diseases (combined) per 10,000 males and females respectively living at different ages at four census periods, is shown in the following table:—

DEATH RATES FROM INFLUENZA AND RESPIRATORY DISEASES (COMBINED).

Age Group (Years).	1870-2.	1880-2.	1890-2.	1900-2.
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

Excepting the age group 15-20 during 1890-2 and 1900-2 the proportion of deaths of males from influenza and respiratory diseases combined was greater in every instance at each census period than that for females. The mortality rates showed a considerable decrease for both sexes at the last period, as compared with the two preceding ones, such decrease amounting to 26 per cent. in male, and 28 per cent. in female rates.

Respiratory diseases.

In 1910 the deaths from respiratory diseases numbered 1,532, which represented a rate of 1,180 per million of the population, as compared with 1,316 in 1909, 1,531 in 1908, 1,343 in 1907, 1,622 in 1906, and 2,029 in 1890-2. Of the deaths from complaints of this nature in the year under review, 74 were referred to acute bronchitis, 300 to chronic bronchitis, 299 to broncho-pneumonia, 556 to pneumonia, and 50 to pleurisy. These five diseases accounted for over 83 per cent. of the total respiratory mortality. The seasonal incidence of the maladies showed much greater uniformity than in previous years. Complaints of this nature are much more fatal at the extremes of life than at middle ages, and among males than females. This is shown in the next table, which gives the death rates in age groups for each sex at four census periods, when the age and sex constitution of the population were accurately known.

DEATHS FROM RESPIRATORY DISEASES PER 10,000 OF EACH SEX LIVING.

Age Group (Years).	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 ...	3·05	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 ...	5·69	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 and 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

An examination of the above table shows that the proportion of males dying from diseases of the respiratory system exceeded that of females at each period. The average mortality per 10,000 of each sex for the four census periods was 21.18 deaths for males and 15.15 for females, and in each age group (except 15-20 in 1890-2), the mortality rate of males was heavier than that of females. There was a considerable decrease in 1900-2 as compared with 1890-2, not only in the proportionate mortality of each sex, but also in the rate for nearly every age group.

Diseases of the digestive system.

In 1910 there were 1,911 deaths from digestive ailments (excluding hydatids), representing a proportion of 1,371 per million of the population, which was slightly below the average of the preceding five years, and lower by 41 per cent. than the rate—2,331—experienced in 1890-2. The prevalence of infantile diarrhœa in the summer months has an important bearing upon the general death rate from digestive diseases. The large reduction in the general mortality rate from complaints of this character in 1904-7 was coincident with a comparatively light mortality amongst infants, and the increases in 1908 and 1910 were associated with high infantile death rates from diarrhœal diseases. Victorian experience shows that more than half of the mortality from digestive maladies has been ascribed to diseases of a diarrhœal nature. In 1910 diarrhœal complaints were responsible for 1,193 deaths, equivalent to 918 per million, which was 32 per cent. below the ratio—1,342—for 1890-2. In 1906, 1907, 1908, and 1909, the rates per million were 943, 718, 1,061, and 756 respectively. The age incidence of this disease is heaviest at the extremes of life. Of the 1,193 deaths in the year under review, 930, or 78 per cent., were of children under 2 years of age. The seasonal influence on the mortality is more strongly marked among infants than aged people, as is evidenced by the fact that 52 per cent. of the deaths of children under 2 years from diarrhœa and enteritis occurred in the three months ending in March, as compared with 44 per cent. of the deaths at other ages.

Appendicitis.

Of the total deaths attributed to diseases of the digestive system in 1910 about 1 in every 18 was due to appendicitis. The experience of the five years 1906-10 shows that this disease is more fatal to males than females, and that the incidence of mortality is greatest between ages 15 and 35. The deaths numbered 108 in 1910, 95 in 1909, 101 in 1908, 82 in 1907, and 118 in 1906, and corresponded to rates of 83, 74, 80, 66, and 96 per million of the population respectively, as against 64 in England and Wales in 1909. Hospital records show that the fatality rate has steadily diminished. During 1910 there were 935 cases treated, and 46, or nearly 5 per cent., ended fatally as compared with 7 per cent. on the average of the preceding five years.

Diseases of urinary system.

A very marked alteration in the crude mortality rates from diseases of the urinary system has taken place in recent years. Excepting urinary calculi, all the important diseases constituting this group exhibit higher rates, which are now in excess of the proportions in England and Wales. In the year under review—1910—815 deaths were attributed to these diseases, which corresponded to a ratio of 628 per million of the population, as against 408 in 1890-2, or to an increase of 54 per cent. in the intervening years. Bright's disease, uræmia, and nephritis were responsible for 648 deaths, or over 79 per cent., complaints of the bladder for 74 deaths, or 9 per cent., and ailments of the prostate for 41 deaths, or 5 per cent. of the total referred to maladies of the urinary system, which furnish a male death rate nearly double that of the female rate. The deaths

per 10,000 of each sex in age groups for the periods 1890-2, 1900-2, and 1907-9 are shown in the following table:—

DEATH RATES FROM DISEASES OF URINARY SYSTEM.

Age Group.	Deaths per 10,000 of each Sex Living.					
	Males.			Females.		
	1890-2.	1900-2.	1907-9.	1890-2.	1900-2.	1907-9.
0-10	1·16	·93	·75	·97	·59	·69
10-20	·43	·45	·62	·58	·82	·57
20-30	1·45	1·83	1·79	1·82	1·59	1·52
30-40	3·05	3·55	2·92	4·72	4·21	3·37
40-50	7·36	8·12	9·66	6·63	7·26	9·37
50-60	11·90	17·43	18·10	5·91	11·36	14·53
60-70	27·42	39·62	39·03	9·62	21·49	21·44
70-80	58·98	80·68	84·50	14·62	27·70	44·67
80 and over	74·07	128·48	165·32	22·21	27·15	46·67
All Ages ..	5·25	8·05	8·97	2·84	4·28	5·29

For each age group over 30-40 the mortality rates for both sexes from diseases of the urinary system were considerably higher in 1907-9 than in 1890-2.

Deaths from phthisis at various ages.

During the decennium ended 1910, 12,528 persons—7,042 males and 5,486 females—died from pulmonary tuberculosis. The ages and sexes of those who died in the decade mentioned and in 1910 are shown in the following table:—

DEATHS FROM PULMONARY TUBERCULOSIS AT VARIOUS AGES.

Ages.	Males.		Females.	
	1901 to 1910.	Year 1910.	1901 to 1910.	Year 1910.
0-10 ...	66	4	86	8
10-15 ...	50	3	142	7
15-20 ...	323	28	551	50
20-25 ...	579	53	777	64
25-30 ...	742	68	863	90
30-35 ...	761	62	767	70
35-40 ...	854	58	731	58
40-45 ...	775	71	478	35
45-50 ...	674	81	353	36
50-55 ...	531	58	195	19
55-60 ...	423	26	170	17
60-65 ...	397	33	128	9
65-70 ...	431	22	124	10
70 and over	436	31	121	7
Total ...	7,042	598	5,486	480

The experience of the past decade shows that for ages under 30 the female deaths from pulmonary tuberculosis were 37 per cent. in excess of those of males. In 1909 and 1910 the deaths at quinquennial age groups were, with a few exceptions, below the yearly averages of the decennial period, but it cannot be definitely stated at which ages the greatest reduction has taken place until the ages of the people at the recent census are known.

Phthisis.

The deaths from phthisis in 1910 numbered 1,078, and equalled a rate of 830 per million of the population, as compared with rates of 848 in 1909, 955 in 1908, 958 in 1907, 988 in 1906, and 1,365 in 1890-2. The improvement in the death rate from this cause since 1890-2 was equivalent to the saving of 685 lives during 1910. The rates are more fully shown in the following table, which gives the mortality per 10,000 of the population of each sex, in age groups, at five census periods.

DEATH RATES IN VICTORIA FROM PHTHISIS IN AGE GROUPS AT FIVE CENSUS PERIODS, 1860-2, 1870-2, 1880-2, 1890-2, 1900-2.

Ages (Years).	Annual Mortality from Phthisis per 10,000 of each Sex Living.				
	1860–2.	1870–2.	1880–2.	1890–2.	1900–2.
Males.					
0 to 15	2·55	1·22	1·74	·90	·38
15 " 20	7·72	5·71	6·88	5·41	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

DEATH RATES IN VICTORIA FROM PHTHISIS IN AGE GROUPS AT FIVE CENSUS PERIODS, 1860-2, 1870-2, 1880-2, 1890-2, 1900-2—*continued.*

Ages (Years).	Annual Mortality from Phthisis per 10,000 of each Sex Living.				
	1860-2.	1870-2.	1880-2.	1890-2.	1900-2.
Females.					
0 to 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

It will be seen that the male death rates from phthisis were greater at the latest four census periods than those of females; but the proportion of deaths of females under 20 years of age was nearly twice as great as that of males at each period, whilst the death rates of males, aged 45 years and upwards, were considerably greater than those of females at all periods except the first. The figures for 1900-2, show that there was a decline in the rates at every age group (excepting 65 and upwards amongst males, and 55-65 amongst females) as compared with those for 1890-2.

Pulmonary tuberculosis in various countries.

Death rates from pulmonary tuberculosis, per 10,000 of the population, in various countries, for the latest year for which this information is available, and in the Australian States for 1910, are given in the following table:—

DEATH RATES FROM PULMONARY TUBERCULOSIS IN VARIOUS COUNTRIES.

Country.	Year.	Deaths per 10,000 of Population.	Country	Year.	Deaths per 10,000 of Population.
Servia	1908	31·2	The Netherlands	1909	12·3
Austria ...	1908	30·2	Ontario, Province of	1908	11·3
Norway ...	1908	18·8	England and Wales	1909	10·8
Ireland	1909	18·4	Belgium ...	1908	10·1
Switzerland ...	1908	17·3	Victoria ...	1910	8·3
Prussia	1909	15·5	South Australia ..	1910	7·7
Japan	1908	15·5	Western Australia	1910	7·2
German Empire ...	1908	15·2	Tasmania ...	1910	6·9
United States ...	1909	14·4	New South Wales	1910	6·2
Scotland ...	1908	12·6	New Zealand ...	1909	6·1
Spain	1909	12·4	Queensland ...	1910	5·0

It appears that the deaths attributable to pulmonary tuberculosis are more numerous in proportion to population in Victoria than in the other States and New Zealand, but are less numerous than in the other countries.

Tubercular death rates in Melbourne, Ballarat, and Bendigo.

The local distribution of tuberculous mortality shows that certain urban centres—particularly that of Bendigo and suburbs—furnish considerably higher death rates than the rural portions of the State. The tubercular death rate amongst miners is very considerably in excess of that among farmers and graziers, and as mining occupations predominate in Bendigo and suburbs, and farming and grazing occupations in the rural districts, the distribution of callings accounts in a large measure for the disparity in the mortality rates from this cause in those divisions of the State. The rates show that during the past ten years 9 more persons in every 10,000 of the population died each year from tubercular diseases in Bendigo than in Melbourne and suburbs, or Ballarat. The rates in these localities from phthisis and other tubercular diseases are shown in the following table for the decennium 1891-1900 and for each of the last ten years:—

DEATH RATES FROM TUBERCULAR DISEASES IN MELBOURNE, BALLARAT, AND BENDIGO, 1891-1910.

Period.	Deaths per 10,000 of the Population.								
	Phthisis.			Other Tubercular Diseases.			All Tubercular Diseases		
	Melbourne and Suburbs.	Ballarat and Suburbs.	Bendigo and Suburbs.	Melbourne and Suburbs.	Ballarat and Suburbs.	Bendigo and Suburbs.	Melbourne and Suburbs.	Ballarat and Suburbs.	Bendigo and Suburbs.
1891-1900 ..	16·7	17·1	24·1	4·7	3·5	4·0	21·4	20·6	28·1
1901 ..	15·5	16·0	22·0	4·4	3·4	6·6	19·9	19·4	28·6
1902 ..	14·3	15·6	27·0	3·9	4·6	4·2	18·2	20·2	31·2
1903 ..	14·0	16·4	20·4	4·2	3·3	3·5	18·2	19·7	23·9
1904 ..	13·5	17·1	22·3	4·4	5·3	5·2	17·9	22·4	27·5
1905 ..	12·2	11·5	21·8	3·9	3·2	3·9	16·1	14·7	25·7
1906 ..	11·5	13·2	21·7	3·9	2·3	2·5	15·4	15·5	24·2
1907 ..	11·6	10·5	20·2	3·4	1·8	2·0	15·0	12·3	22·2
1908 ..	11·5	13·3	18·4	2·6	2·1	1·3	14·1	15·4	19·7
1909 ..	9·7	9·4	22·9	2·6	1·9	3·2	12·3	11·3	26·1
1910 ..	9·7	11·0	22·8	2·4	2·5	1·1	12·1	13·5	23·9
Average of 1901–10..	12·3	13·4	21·9	3·6	3·0	3·4	15·9	16·4	25·3

During the period embraced in the above table a steadily diminishing rate from all tuberculous diseases is shown for Greater Melbourne. In the last ten years the Ballarat rate has varied from 22.4 to 11.3, and has shown on the whole a substantial decline, the rate for 1910 having been 7.1 per 10,000 below the average rate of the decade 1891-1900. The tubercular rate for Bendigo in 1910 was 1.6 lower than the average rate of the preceding nine years and 4.2 below that of the decennium ended 1900.

Ages and residence of tubercular patients.

Particulars of cases of pulmonary tuberculosis occurring in the State were investigated for the first time in 1911. The cases dealt with were those reported to the Board of Health during the two and a half years ended 30th June, 1911, numbering 3,198. Valuable information was obtained from them regarding the prevalence of the disease in various areas, the incidence of attack at different ages for each sex and the time which elapsed from the commencement of the disease to the date on which a medical practitioner was consulted. These and other phases of the disease, including the probability of recovering therefrom, are dealt with in subsequent paragraphs. The persons reported during the two and a half years referred to as suffering from pulmonary tuberculosis are arranged in the subjoined table according to sex, age, and usual place of residence:—

AGE AND RESIDENCE OF REPORTED TUBERCULAR PATIENTS, 1909 TO 30TH JUNE, 1911.

SEX.	AGES—YEARS.														Total all Ages.
	0–10	10–15	15–20	20–25	25–30	30–35	35–40	40–45	45–50	50–55	55–60	60–65	65–70	70 and over.	
GREATER MELBOURNE.															
Males ..	12	17	98	114	130	108	105	98	99	56	45	30	11	14	937
Females .	12	22	134	211	170	140	110	68	37	29	16	7	10	9	975
Total ..	24	39	232	325	300	248	215	166	136	85	61	37	21	23	1,912
BENDIGO AND SUBURBS.															
Males ..	1	3	10	10	14	14	36	32	40	23	12	13	13	8	229
Females..	3	1	16	23	19	16	8	10	10	3	2	4	1	2	118
Total ..	4	4	26	33	33	30	44	42	50	26	14	17	14	10	347
BALLARAT AND SUBURBS.															
Males ..	2	1	3	7	13	6	6	11	12	8	5	4	1	2	81
Females..	1	2	9	7	11	6	9	4	6	..	..	..	..	1	56
Total ..	3	3	12	14	24	12	15	15	18	8	5	4	1	3	137
GEELONG AND SUBURBS.															
Males ..	..	1	1	5	3	5	4	..	4	1	..	1	..	1	26
Females..	..	1	4	10	11	3	4	4	3	3	1	1	..	..	45
Total ..	..	2	5	15	14	8	8	4	7	4	1	2	..	1	71
REST OF THE STATE.															
Males ..	5	6	26	51	60	50	30	41	44	32	24	19	11	7	406
Females..	2	8	35	58	66	42	46	17	17	14	7	4	6	3	325
Total ..	7	14	61	109	126	92	76	58	61	46	31	23	17	10	731
VICTORIA.															
Males ..	20	28	138	187	220	183	181	182	199	120	86	67	36	32	1,679
Females..	18	34	198	309	277	207	177	103	73	49	26	16	17	15	1,519
Total ..	38	62	336	496	497	390	358	285	272	169	112	83	53	47	3,198

An examination of the ages of the persons in the above areas shows that an undue proportion of the males and females affected in early life resided in the metropolis. During the two and a half years, ended June, 1911, there were 545 males and 784 females, aged 15-30, reported, for the whole State, as suffering from pulmonary tuberculosis, of whom 342 of the former and 515 of the latter were residents of Melbourne. These proportions point to unfavorable conditions in city as compared with country life. An analysis of the figures for Bendigo shows that the incidence of the disease among females was somewhat heavier at most age groups than that for the metropolitan area, while among males it was considerably heavier, especially at older ages. The result for males corresponds with the mortality from phthisis in Bendigo, where many miners, past middle life, suffering from chronic respiratory diseases, subsequently die from tuberculosis.

Frequency of phthisis.

For the whole State the reports show that 46 per cent. of the male, and 69 per cent. of the female cases were of persons under 35 years of age. The frequency of the disease is greater among females than males at each age between 15 and 35, particularly at ages 15-20 and 20-25. It is about the same for each sex at 35-40, but at older ages the susceptibility of men greatly exceeds that of women, especially at 55-65, when a man's chance of attack is fully three times that for a woman. The numbers of males and females in the State are nearly equal, but the numbers of each sex differ slightly at early ages, and considerably at age groups after 20. When allowances are made for such discrepancies the relative ratios of female to male cases—the latter being taken as 100 at each age group—are as follows. The figures, with a few exceptions, are based on the age constitution of the people at the 1901 census:—

RATIO OF FEMALE TO MALE REPORTED CASES OF PHTHISIS.

SEX.	AGES—YEARS.												
	Under 10.	10-15.	15-20.	20-25.	25-30.	30-35.	35-40.	40-45.	45-50.	50-55.	55-60.	60-65.	65 and over.
Males ..	100	100	100	100	100	100	100	100	100	100	100	100	100
Females	93	123	142	145	108	109	97	63	41	47	31	26	61

Duration of phthisis before diagnosis.

Particulars regarding the time which elapsed between the beginning of pulmonary tuberculosis and the date at which a medical practitioner was consulted, show that of the total patients about 1

in every 8 received advice within three months, and slightly less than 1 in every 3 within six months, while about one-half were medically advised within twelve months of the commencement of the disease. It should, however, be borne in mind that the course of the disease is very irregular, as some cases are not so far advanced in two years as others are in six months. This probably accounts, in some measure, for the fact that about one-half of the people who develop phthisis suffer, in some degree, from it for at least one year before receiving medical attention. It is highly probable that if a physician's advice were obtained at an early stage of the disease in a larger proportion of cases the ratio of recoveries would be greater.

Frequency of phthisis in various areas.

The proportion of the residents of any large area which is affected by pulmonary tuberculosis represents fairly closely the degree of infection of that centre. Such proportions have been computed for five divisions of the State on the experience of the two and a half years, ended June, 1911. During that period 1,912 residents of Greater Melbourne, 137 of Ballarat and suburbs, 347 of Bendigo and suburbs, 71 of Geelong and suburbs, and 731 of the "rest of the State" contracted the disease. Comparing these numbers with the respective populations it is found that of every 10,000 persons 13.1 in the Metropolitan area, 11.6 in Ballarat, 31.6 in Bendigo, 10.2 in Geelong, and 4.9 in the rest of the State contracted tuberculosis of the lungs each year. The rate of Bendigo was higher than that of any other area. It was nearly two and a half times that of Melbourne, and more than six times the rate for country districts. The low rate existing in the latter division does not, however, fully represent the degree of infection therein. This is evidenced by the figures in a subsequent table, which show that in this area the attack rate was lower than the death rate, while in each of the other areas it was higher. The annual notifications of cases of pulmonary tuberculosis and the annual deaths therefrom per 10,000 of the population of each of the five divisions referred to and of the whole State are compared in the following table:—

ANNUAL REPORT RATE OF AND DEATH RATE FROM PHTHISIS.

—	Per 10,000 of the Population of—					
	Melbourne.	Ballarat.	Bendigo.	Geelong.	Rest of the State	The Whole State.
Cases Notified ..	13·1	11·6	31·6	10·2	4·9	9·8
Deaths	9·5	9·9	21·8	7·2	6·1	8·3

The report rate exceeded the death rate by 38 per cent. in the Metropolis, by 17 per cent. in Ballarat, by 45 per cent. in Bendigo, by 42 per cent. in Geelong, and by 18 per cent. in the whole State. From the deficiency in the report or notification rate for the "rest of the State" it would appear that numerous cases occurring therein have not been reported to the Board of Health, or that many residents of the metropolis and of the three other large cities referred to, who contract phthisis, leave these areas and reside in country districts, where some of them subsequently die from the disease. The latter is true to some extent, but it accounts for only a portion of the discrepancy mentioned. If all cases occurring in the rural areas were notified, it is probable that the report rate would slightly exceed the death rate.

In a previous paragraph it was stated that the attack rate of tuberculosis for a large area represented the degree of infection of that centre. This may be taken as true when applied to the metropolis as a whole, but it cannot be accepted as correct for each of its parts, as the place of residence of a large proportion of the people differs from their place of work or business. For the two and a half years ended June, 1911, the cases reported annually per 10,000 of the population of the principal metropolitan municipalities were as follows:—

NOTIFIED TUBERCULAR CASES PER 10,000 OF POPULATION OF METROPOLITAN MUNICIPALITIES.

Municipality.	Cases per 10,000 of the Population.	Municipality.	Cases per 10,000 of the Population.
Preston Shire ...	20·2	Richmond City ...	12·1
Port Melbourne Town	18·7	Brighton Town ...	10·4
Melbourne City ...	18·1	Hawthorn City ...	10·3
Fitzroy City ...	17·3	Northcote Town ...	10·0
Brunswick City ...	17·1	Essendon City ...	9·8
Coburg Shire ...	15·4	Kew Town ...	9·8
South Melbourne City	15·2	Footscray City ...	9·2
Camberwell Town ...	14·0	St. Kilda City ...	6·7
Prahran City ...	13·4	Malvern City ...	6·6
Collingwood City ...	12·5	Caulfield Town ...	5·2
Williamstown Town...	12·2		

Probability of recovering from phthisis.

The tabulation of particulars of cases of pulmonary tuberculosis reported during two and a half years has furnished data which, in conjunction with the known incidence of tubercular mortality, enable a fairly reliable estimate to be made of the probability of recovering from the disease. In arriving at such an estimate allowances must be made for some old standing cases, which were probably reported prior to 1909, as well as for the deficiency in the notifications for rural areas and certain other disturbing elements of a less important character. Adopting the records of reported cases and the deaths as the basis, and taking into account the disturbing factors mentioned above, a calculation shows that, of the individuals who contract tuberculosis of the lungs in a form sufficiently serious to require medical attention, about 1 in every 6 recovers.

Death rates from phthisis in various occupations in England and Wales.

The occupational incidence of pulmonary tuberculosis in Victoria has not yet been thoroughly investigated, but it is intended to examine the statistical data relating to this important subject after the numbers and ages of persons in different occupations at the 1911 census are known. It has long been recognised that the conditions of occupation have a marked effect upon the mortality rate from tuberculosis, and recent research has confirmed the view that in certain trades, particularly those in which industrial dusts are present in a marked degree, the incidence of the disease is very heavy. In Victoria this is clearly shown by the high tubercular death rate among quartz miners in Bendigo, which, on the average of the past four years, was about five times as heavy as that among males aged 21 years and upwards in the whole community. The significance of this high rate will be apparent when it is pointed out that among coal miners in England and Wales the death rate from the disease was at the 1901 census period only about one-half of that among occupied males. English experience shows that the mortality rate from phthisis among tool, file, and saw makers was four times, and the rate among brush and broom makers, and hair and bristle workers, nearly four times that among farmers and farm labourers. In the United States the death rate from the disease among marble and stone cutters was about four times as heavy as that prevailing in the two agricultural occupations referred to. Interesting data, bearing upon the inter-relation of occupation and mortalities from certain diseases in England and Wales are given in Part II., Supplement to the Sixty-fifth Annual Report of the English Registrar-General. The figures show, for England and Wales, in 1900-2, the numbers and ages of males in over 100 occupations who died from phthisis, and the years lived by males at various age groups in each industry. From those data were computed in this office the death rates from

phthisis for all ages—15 and upwards—and for seven sub-divisional age groups in 78 of the principal occupations. The results are shown in the following table:—

MALE DEATH RATES (PER 10,000) FROM PHTHISIS IN VARIOUS OCCUPATIONS IN ENGLAND AND WALES, 1900-2.

Occupation.	Deaths from Phthisis per 10,000 Males at each Age.							
	15 years and upwards.	15–20.	20–25.	25–35.	35–45.	45–55.	55–65.	65 years and upwards.
Hawker	55·12	8·27	25·36	56·93	87·91	87·76	59·93	14·65
General labourer	50·84	10·59	31·84	49·59	76·23	80·57	46·87	15·49
Hotel servant	44·43	7·96	21·53	54·17	96·07	95·79	55·96	59·52
Tool, scissors, file, saw, needle maker	37·57	1·69	15·68	29·43	59·05	71·27	52·56	19·74
Musician, music teacher	37·20	7·25	26·04	33·84	42·88	54·54	46·78	8·45
Dock, wharf labourer	36·18	3·62	16·33	31·16	48·54	55·73	29·09	16·71
Brush, broom maker, hair, bristle worker	35·79	7·53	25·89	38·82	48·65	62·17	21·95	27·55
Chimney sweep	35·45	8·87	19·34	16·88	53·16	46·32	44·05	8·73
Printer	33·07	10·34	34·07	36·47	48·49	42·74	34·18	15·97
Innkeeper, publican, spirit, wine, beer dealer	32·59	5·09	16·47	38·39	43·54	29·47	19·63	10·41
Hatter	32·42	6·10	34·71	36·98	41·08	47·57	21·71	..
Bookbinder	32·12	4·75	37·94	33·91	47·01	38·10	32·88	20·02
Seaman, &c., merchant service	31·35	8·52	29·72	36·51	35·54	37·99	25·08	11·07
Shoemaker	29·99	10·12	29·04	31·77	42·37	41·83	25·74	15·89
Wood turner, cooper	28·79	6·26	15·38	28·88	37·91	55·15	29·61	13·55
Brewer	28·02	6·07	11·83	21·06	40·60	48·68	37·07	11·83
Hairdresser	27·22	7·29	25·03	29·83	41·19	44·09	26·55	17·99
Potter; earthenware, &c., manufacture	27·18	6·17	13·44	20·03	37·92	71·35	43·70	9·73
Tailor	26·85	7·64	20·78	25·95	39·97	41·55	26·46	11·98
Glass manufacture	26·64	5·65	18·12	28·76	45·57	48·73	29·72	..
Saddler, harness maker	25·23	6·35	28·38	25·75	34·89	35·58	22·36	6·02
Law clerk	25·02	7·47	18·37	28·85	33·27	39·04	36·98	6·57
Coach, cab, omnibus service, groom	24·11	4·68	12·19	22·16	35·83	39·53	27·52	9·81
Stationery manufacture, stationer, news agent	24·09	9·79	23·95	28·21	29·96	32·89	17·69	6·81
Tanner, currier, furrier, skinner	23·97	8·40	19·17	19·94	30·91	35·80	33·65	20·09
Tramway service	23·89	7·34	20·93	28·80	26·67	24·66	20·12	..
Cabinetmaker, &c.	23·75	6·94	16·52	21·80	37·95	38·29	27·14	18·64
Stone, slate quarrier	23·00	5·35	17·15	15·05	21·17	43·02	41·65	32·54
Watch, clock maker	22·76	11·57	18·89	27·24	22·34	35·62	16·96	12·08
Plumber, painter, glazier	22·61	4·72	14·23	21·80	29·83	38·27	29·90	11·33
Lock, key, gasfittings maker; gas fitter	22·46	4·91	10·81	21·57	27·88	46·06	33·46	4·39
Copper, tin, zinc, lead, brass, &c., manufacture	22·46	6·22	18·31	23·78	32·30	36·75	24·13	14·82
Paperhanger, plasterer, white washer	22·27	4·06	10·56	12·21	39·76	36·17	40·05	15·30
Commercial clerk, insurance service	21·56	7·41	23·89	25·47	30·45	28·77	19·85	8·13
Draper, linen draper, mercer	21·45	6·17	21·97	26·55	26·39	26·15	26·58	13·47
Bricklayer, mason, builder	21·25	2·36	8·70	14·45	32·04	39·12	28·50	14·05
Cotton manufacture	21·04	8·20	16·53	20·15	28·86	36·56	27·55	21·34
Textile dyer, bleacher, printer, finisher	21·03	5·71	18·77	19·53	29·77	35·17	21·39	13·18
All textile manufactures	20·85	7·38	18·58	20·08	26·99	33·64	26·22	16·52
Commercial traveller	20·64	..	13·50	17·64	23·93	28·63	24·79	10·19
All building trades	20·31	4·13	11·77	17·08	29·54	34·87	26·51	13·69
Railway official, clerk	20·24	9·10	27·71	23·96	19·22	23·88	21·60	9·13
All metal workers	20·14	5·21	14·90	20·13	27·66	32·72	25·65	15·34
Nail, anchor, chain, other iron and steel manufacture	20·14	5·03	11·83	20·10	27·51	35·19	22·05	19·80
All occupied males	19·80	5·45	15·52	20·32	27·43	30·40	21·60	11·05
Wool, worsted manufacture	19·67	6·88	23·82	18·11	22·48	28·37	22·70	18·58
Watch, clock, scientific instrument maker; jeweller	19·49	6·09	14·74	20·42	25·32	34·59	27·84	14·58

MALE DEATH RATES (PER 10,000) FROM PHTHISIS IN VARIOUS OCCUPATIONS IN ENGLAND AND WALES, 1900-2—*continued.*

Occupation.	Deaths from Phthisis per 10,000 Males at each Age.							
	15 years and upwards.	15–20.	20–25.	25–35.	35–45.	45–55.	55–65	65 years and upwards.
Domestic coachman, groom ..	19·16	4·61	13·25	21·72	24·91	30·22	20·72	10·29
Carman, carrier	18·19	4·87	10·47	17·86	29·09	29·72	19·38	14·73
Artist, engraver, sculptor, architect	18·12	7·92	18·27	21·23	17·40	22·15	14·47	15·25
Engine, machine, boiler maker; fitter	18·08	6·05	17·27	18·16	23·20	26·59	24·00	14·55
All shopkeepers	17·61	5·44	17·02	20·62	22·85	22·75	17·69	8·06
Civil servants (officers and clerks), including retired	17·40	12·93	23·64	19·61	22·80	15·12	9·05	9·95
Domestic, indoor male servant ..	17·20	3·79	15·25	20·84	31·01	32·82	12·55	28·01
Baker	17·04	3·48	14·83	18·25	24·06	27·64	18·83	10·18
Chemist, druggist	16·99	6·72	19·10	22·11	15·28	21·67	13·01	7·72
Blacksmith, striker	16·59	2·63	9·22	17·76	22·75	24·42	24·21	11·80
Butcher	16·55	2·11	6·18	20·01	28·75	29·77	17·53	8·30
Carpenter, joiner	16·25	4·07	12·55	15·87	21·25	25·71	21·93	13·55
Wheelwright	15·64	4·59	11·74	16·48	22·73	18·79	21·26	9·28
Paper manufacture	15·27	5·41	12·89	19·54	21·30	17·75	18·58	10·19
Miller; cereal food manufacturer ..	15·08	1·41	8·24	8·56	24·05	21·57	20·51	21·77
Ironmonger	14·49	4·40	17·09	20·48	17·99	9·59	17·34	3·84
Coach, carriage, railway coach, &c., maker	14·35	5·30	9·06	14·86	19·40	22·35	13·17	18·94
Shipbuilding	14·14	5·06	12·26	14·85	20·06	19·48	12·54	6·88
Schoolmaster, teacher	14·06	9·06	20·22	15·62	12·58	11·30	16·34	14·41
Railway guard, porter, pointsman, &c.	13·98	7·33	12·58	14·25	16·56	16·08	16·72	14·27
Grocer, &c.	13·63	5·01	15·77	17·58	16·89	15·24	12·35	7·74
Platelayer, railway labourer; navvy, &c.	11·82	2·16	10·56	8·82	13·40	17·89	14·80	6·78
Barrister and solicitor	11·43	..	..	11·03	13·21	14·42	10·38	2·33
Coal miner	10·06	4·09	10·08	9·14	10·52	14·73	18·43	16·33
Gardener, nurseryman, seedsman	9·90	3·69	9·08	11·29	10·99	13·15	11·82	5·59
Farmer, grazier, farmer's son ..	9·34	5·97	9·66	10·21	9·80	10·99	8·63	8·37
Farm labourer, farm servant ..	9·20	3·03	10·23	10·81	11·91	13·29	10·43	6·06
Railway engine driver, stoker ..	8·89	7·80	9·74	6·73	10·95	11·32	6·87	15·91
Brick, plain tile, terra cotta maker	8·84	4·89	10·54	9·28	8·93	14·34	8·37	1·86
Physician, surgeon (occupied and retired)	8·75	..	..	6·60	10·75	14·56	4·14	3·73
Clergyman, priest, minister ..	7·23	..	..	7·72	6·77	7·12	8·40	6·86

The death rates for the two age groups 15-20 and 65 years and upwards are in many instances based upon somewhat limited data, and are, consequently, less reliable than those for the other five groups, and for the whole working period of life, which are based upon much larger numbers, and may, therefore, be considered as giving a fair indication of the probable future experience. A general analysis of the table shows that in England and Wales in the three-year period 1900-2 the mortality rates from phthisis among occupied males aged 15 and upwards (column 1) ranged from 55.12 per 10,000 for hawkers, 50.84 for general labourers, 44.43 for hotel servants, 37.57 for tool, scissors, saw, needle-makers, to 9.34 for farmers and graziers, 9.20 for farm labourers, 8.89 for railway engine-drivers and stokers, 8.75 for physicians and surgeons, and 7.23 for clergymen. A striking feature of the figures is the great disparity between the rate—50.84—for general labourers, who chiefly reside

in cities and large towns, and the rate—9.20—for farm labourers, who reside in rural districts. As the latter are almost wholly, and the former are mainly, engaged in outdoor work, it would appear that the city environment is responsible for a large portion of the excess of the mortality from pulmonary tuberculosis. On the other hand, the death rate from phthisis varies so considerably among males who are engaged in skilled occupations of diverse natures but are subject to similar home surroundings, that the differences can only be accounted for by the conditions under which their respective trades are carried on. A close examination of the foregoing table shows that in occupations where trade dusts are very prevalent the tubercular death rate is heavy at all periods of active adult life. Tool, scissors, saw, and needle makers are seriously affected by the prevalence of metallic dusts; wood-turners, coopers, and cabinetmakers are subject to wood fibre dusts; persons engaged in glass manufacture, and stone and slate quarriers, are exposed to mineral dusts; bootmakers, hatters, saddlers, and harness makers are affected by organic and fibre dusts, and cab, coach, omnibus, and tramway men are exposed to road dusts; in each of these occupations the tubercular mortality rate is high. With the view of showing more clearly the differences between the death rate from phthisis in many of the occupations in the foregoing table, the respective rates at each of five age periods have been compared with those for farm labourers, the death rate for the last mentioned class having been taken as 100 at each age group. The resulting figures, which have merely a comparative value, and do not indicate actual death rates, are given below.

COMPARATIVE TUBERCULAR MORTALITY FIGURES FOR CERTAIN OCCUPATIONS (RATES FOR FARM LABOURERS TAKEN AS 100 AT EACH AGE GROUP).

Occupation.	Age Groups.				
	20–25.	25–35.	35–45.	45–55.	55–65.
Farm labourer, farm servant	100	100	100	100	100
General labourer	311	459	640	606	449
Tool, scissors, saw, needle makers	153	272	496	536	504
Brush, broom maker, hair, bristle worker ..	253	359	408	468	210
Printer	333	338	408	322	328
Innkeeper, publican; spirit, wine, beer dealer	161	355	366	222	188
Shoemaker	284	294	356	315	247
Wood turner, cooper	150	267	318	415	284
Tailor	203	240	336	313	254
Glass manufacture	177	266	383	367	285
Saddler, harness maker	277	238	293	268	214
Coach, cab, omnibus service, groom ..	119	205	301	297	264
Tramway service	205	266	224	186	193
Cabinetmaker, &c.	161	202	319	288	260
Stone, slate quarrier	168	139	178	324	399
Draper, linen draper, mercer	215	246	222	197	255
All textile manufactures	182	186	227	253	251
All building trades	115	158	248	262	254
All metal workers	146	186	232	246	246
All shopkeepers	166	191	192	171	170
Coal miner	99	85	88	111	177
Farmer, grazier, &c.	94	95	82	83	83

According to the experience of England and Wales in 1900-2 the relative ratios of deaths in each year from phthisis out of a given number of persons aged 35-45 in each occupation will be as follows:—Farm labourers, 100; general labourers, 640; tool, scissors, and other instrument makers, 496; brush and broom makers, hair and bristle workers, and printers, 408; hotelkeepers, 366; shoemakers, 356; wood-turners and coopers, 318; tailors, 336; persons engaged in glass manufacture, 383; textile workers, 227; metal workers, 232; coal-miners, 88; and farmers and graziers, 82. Adopting a similar comparison for the age period 45-55 the following will be the number of deaths:—Farm labourers, 100; tool, scissors, and other instrument makers, 536; stone and slate quarriers, 324; coach, cab, and omnibus drivers, and grooms, 297; all building trades, 262; coal-miners, 111; and farmers and graziers, 83. An examination of the comparative figures in the above table and of the actual mortality rates in the preceding one shows that the occupations in which occur the highest death rates from phthisis are mainly those which are distinguished by the prevalence of dusts—especially metallic and mineral dusts. In some occupations other factors have probably had an important influence. General labourers may, through lack of constant employment, be reduced to straitened circumstances, and so be unable to obtain sufficient nourishment. In this class also are included many persons who were at some period of their lives engaged in unhealthy occupations. In the case of hotelkeepers there may be impairment of constitution due to the risks attaching to the trade. In some of the other occupations also there may be contributing causes of a special nature, but allowing for such causes it is evident that the prevalence of dust is highly deleterious, and that any measures which may be taken for the prevention of pulmonary tuberculosis should include provision for reducing, as far as possible, the dusts prevalent in many trades and in the streets.

Tubercular diseases (phthisis excepted).

In 1910 there were in Victoria 229 deaths from tubercular diseases (excluding phthisis), which corresponded to a rate of 176 per million, as compared with rates of 192 in the previous year, 200 in 1908, 209 in 1907, 273 in 1906, and 379 in 1890-2. The death rates in

various age groups are shown in the following table for four census periods:—

DEATH RATES FROM TUBERCULAR DISEASES (PHTHISIS EXCEPTED) IN AGE GROUPS DURING THE YEARS 1870-2, 1880-2, 1890-2, 1900-2.

Ages (Years).	Deaths per 10,000 of each Sex Living.			
	1870-2.	1880-2.	1890-2.	1900-2.
Males.				
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.				
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	·88	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

It will be noticed that the proportion of persons under fifteen years of age dying from tubercular diseases (excluding phthisis), during 1900-2, as compared with 1890-2, showed a decline of 45 per cent. for males, and of nearly 37 per cent. for females. As reductions of 58 and 35 per cent. for males and females respectively occurred also in the proportions of deaths of persons of the same age from phthisis, there is evidence of a gratifying decrease in the mortality rates from all tubercular diseases amongst children in the last decennial period.

The experience of recent years shows that the tubercular death rate in Victoria is but slightly affected by the arrival from beyond Australia of persons suffering from tubercular diseases. In 1910 less than one-half per cent. of the persons who died were born outside and resident less than one year in Australia, and one per cent. had resided in the continent for a shorter period than five years.

Cancer. Deaths from cancer in 1910 numbered 1,081, and represented a death rate of 832 per million of the whole population as compared with rates of 802 in the previous year, 794 in 1908, 796 in 1907, and 755 in 1906. Cancer rates, computed in relation to the general population in earlier and later periods, are not fairly comparable, owing to the changed age distribution of the people. A more accurate mortality rate is obtained by comparing the deaths with

the persons of the same sex living in age groups, and this has been done for the census periods 1880-2, 1890-2, and 1900-2, when the numbers of the people in age groups were accurately known:—

DEATH RATES FROM CANCER IN AGE GROUPS DURING THE YEARS 1880-2, 1890-2, 1900-2.

Age Group (Years).	Deaths from Cancer per 10,000 of each Sex Living.		
	1880–2.	1890–2.	1900–2.
Males.			
Under 5	·29	·18	·30
5 to 10	·24	·10	·42
10 „ 15	·18	·11	·20
15 „ 20	·07	·17	·22
20 „ 25	·25	·32	·33
25 „ 35	·80	·81	1·26
35 „ 45	4·12	4·29	3·69
45 „ 55	10·16	14·83	14·14
55 „ 65	22·01	31·92	36·00
65 „ 75	34·55	52·75	59·04
75 and over	45·12	58·56	74·04
All ages	4·29	6·16	7·52
Females.			
Under 5	·12	·09	·26
5 to 10	·12	·10	·04
10 „ 15	·06	·06	—
15 „ 20	·26	·12	·28
20 „ 25	·39	·22	·23
25 „ 35	2·65	1·68	1·61
35 „ 45	7·32	7·43	6·05
45 „ 55	15·07	18·00	18·13
55 „ 65	29·35	31·79	33·05
65 „ 75	32·68	53·96	51·18
75 and over	27·56	49·55	62·70
All ages	4·27	5·57	6·64

Deaths from cancer occurred at every age, but the rates in the foregoing table show that it is essentially a disease of later life, increasing rapidly in the groups past middle age, and reaching a maximum mortality rate in the oldest age group. A comparison of the rates for females under 25 years of age at the three census periods shows that there was no increase in mortality at the two later periods, whilst the rates for males and females aged 25 to 45 showed an appreciable decrease in 1900-2 as compared with 1890-2. In the age groups over 55 a marked increase was shown at the

later periods, but, probably a superior diagnosis of the disease, and a higher average age of persons within these groups—particularly that of 75 and upwards—would account in a large measure for the higher rates in the years 1890-2 and 1900-2 as compared with 1880-2.

Deaths from cancer at various ages.

The ages of those who died from cancer in 1910, and the yearly average at the same ages for the period 1901-9 are shown in the following table:—

DEATHS FROM CANCER AT VARIOUS AGE GROUPS.

Age Groups.	Males.		Females.	
	Yearly Average, 1901-9.	1910.	Yearly Average, 1901-9.	1910.
0-15 ...	5	8	3	3
15-25 ...	5	4	4	6
25-35 ...	9	8	14	9
35-45 ...	34	32	58	62
45-55 ...	75	116	88	104
55-65 ...	104	129	101	110
65-75 ...	161	150	120	134
75-85 ..	79	101	58	79
85 and over	12	16	9	10
Total ...	484	564	455	517

In the decennium ended 1910, 96 per cent. of those who died from cancer were over 34 years of age. As compared with the yearly average of the period 1901-9 there was an increase of 15 per cent. in the number of deaths in 1910, which was distributed wholly among the age groups over 45. The ages of the people at the last census are not yet available for the purpose of ascertaining the age incidence of the disease for the past decade, but the yearly figures for that period indicate that there has been no increase up to middle life, and that a large portion of the increase in the crude rate for all ages is due to the altered age constitution of the people. For the past ten years the average age of males who died from cancer was 62.7, and that of females 59.8 years. These ages were greater by 20.1 and 25.6 years respectively than the average ages of males and females who died from phthisis in the same decennial period.

The following table shows the seat of cancer in persons who died from this disease in 1910:— Seat of cancer.

SEAT OF CANCER, 1910.

Seat of Disease.	Males.	Females.	Total.
Cancer of the buccal cavity (mouth, &c.) ..	89	20	109
,, the stomach and liver	272	187	459
,, the peritoneum, the intestines, and the rectum	62	56	118
,, the female genital organs ...	...	94	94
,, the breast	...	77	77
,, the skin	35	14	49
,, other and unspecified organs ...	106	69	175
Total Deaths	564	517	1,081

Two-fifths of the persons who died from cancer were affected in the stomach and liver. Of the total females dying from the disease one-third were affected in the genital organs and the breast.

Deaths from cancer per 10,000 of the population in various countries, for the latest year for which this information is available, are given in the following table:— Death rates from cancer in various countries.

DEATH RATES FROM CANCER IN VARIOUS COUNTRIES.

Country.	Year.	Deaths per 10,000 of Population.	Country.	Year.	Deaths per 10,000 of Population.
Switzerland ...	1908	13·1	South Australia ...	1910	7·6
The Netherlands ...	1908	10·3	New Zealand ...	1909	7·3
Norway	1908	9·7	New South Wales	1910	7·0
Scotland	1908	9·6	Queensland ...	1910	6·6
England and Wales	1909	9·5	Tasmania ...	1910	6·5
German Empire ...	1908	8·3	Belgium	1908	6·4
Victoria	1910	8·3	Italy	1909	6·4
Ireland	1909	8·0	Ontario, Province of	1908	6·1
Austria	1908	7·7	Western Australia	1910	4·9
United States ...	1909	7·7			

Victoria showed a lower death rate from cancer than five of the above countries, but a higher one than the other Australian States. The higher rate in Victoria, as compared with the other States, is chiefly due to the larger proportion of elderly people in the community amongst whom the mortality is greatest.

Deaths are not attributed to senile decay or old age unless the deceased had attained an age of 65 years or over. During the year 1910, 696 male and 580 female deaths were ascribed to this cause. Senile decay.

The deaths at these ages from all causes during the year numbered 5,554—3,098 males and 2,456 females. It is thus seen that 22.5 per cent. of the male and 23.6 per cent. of the female deaths for ages 65 years and upwards were ascribed to senile decay. The death rates of elderly persons in several age groups have been computed for the average of the three years 1900-2, when the numbers of persons within those divisions were accurately known. These show that of every 100 persons in the respective groups, there died within a year, from all causes, 4.39 aged 65 to 70, 6.95 aged 70 to 75, 10.45 aged 75 to 80, and 18.17 aged 80 and upwards.

Accidental violence.

Death rates from accidental violence have been lower in later than in earlier periods, a result that is chiefly due to the lighter mortality rate from accidental drowning. In 1910 there were 494 male and 192 female deaths attributed to accidents and negligence, which represented a rate of 528 per million of the population. This proportion was below the average of the previous five years and about 35 per cent. below the rate—811—for 1890-2. The greatest reduction occurred in the death rate from drowning, which was 102 per million in 1910, as against 200 in 1890-2. Of the deaths ascribed to drowning, 110 were those of males, and 23 of females. Fractures and other accidental injuries accounted for 277 male and 63 female deaths, and furnished a death rate of 262 per million as against 329 in 1890-2. Mortality rates from accidental violence are considerably heavier in the country than in Greater Melbourne, the rates per million for the year 1910 having been 570 and 476 respectively. In the year under review 3 male and 4 female deaths occurred through the administration of anæsthetics by medical practitioners. The number of instances in which anæsthetics were administered in the same period is not available for the purpose of computing a fatality rate. Of the 7 persons who died from this cause only one was over 50 years of age.

Suicide.

During the year 1910, 101 males and 30 females took their own lives. The deaths represented a rate of 101 per million of the population as compared with rates of 92 in 1909 and 1908, 95 in 1907, 90 in 1906, and 109 in 1890-2. The rate in the year under review was below that for Australia—111—in the same year, and was about equal to that for England and Wales—100—in 1909. A much lower rate from suicide obtains among females than among males, the rate for the former being less than one-third of that for the latter in 1910.

Homicide.

The deaths ascribed to homicide in 1910 numbered 40, of which 17 were of males and 23 of females. These represented a rate of 31 per million of the population, which was the highest during the past five years, and nearly equal to the proportion in 1890-2; it was also nearly four times the rate—8 per million—which prevailed in England and Wales in 1909. Of the deaths referred to homicide in 1910, 7 were of illegitimate children.

Deaths of married women in childbed.

The experience of the period 1906-10 shows that the death rate of women in childbed varies considerably at different ages, and is less between 20 and 25 years than at younger or older age periods. The number of married mothers, the deaths in childbed, and the death rates for various age groups, are shown for the five years 1906-10 in the following table:—

DEATH RATES OF MARRIED MOTHERS IN CHILDBED IN AGE GROUPS, 1906-1910.

Age Group,	Married Mothers.		
	Confinements.	Deaths.	Deaths per 1,000 Confinements.
Under 20 years	3,864	13	3·36
20 to 25 "	29,375	82	2·79
25 " 30 "	41,009	145	3·53
30 " 35 "	34,441	182	5·28
35 " 40 "	25,402	163	6·42
40 " 45 "	10,470	79	7.55

A rapidly increasing death rate is shown for each succeeding age group beyond 20-25, the rate for 40-45 being nearly three times that for 20-25. During the last five years the number of deaths per 1,000 married women in first confinements was 4.92, as against an average of 4.44 for subsequent ones.

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. The proportion of deaths of child-bearing women fell decade by decade from 64 per 10,000 in 1871-80 to 54 in 1901-1910. The proportions which prevailed in the last ten years, and the averages of previous periods back to 1871 are shown in the following table:—

DEATHS OF MOTHERS (MARRIED AND SINGLE) TO EVERY 10,000 CHILDREN BORN ALIVE.

Period.	Number of Mothers who Died Annually of—			Deaths of Mother to every 10,000 Children Born Alive.
	Puerperal Diseases or Accidents. (Excluding Septicæmia.)	Puerperal Septicæmia.	Total.	
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
1903 ..	136	53	189	63·92
1904 ..	113	46	159	53·42
1905 ..	119	53	172	57·13
1906 ..	115	51	166	53·82
1907 ..	119	43	162	51·64
1908 ..	80	48	128	41·16
1909 ..	97	36	133	42·16
1910 ..	94	54	148	47·08

Deaths in childbed from septic diseases.

The proportion per 1,000 births of deaths in childbirth from septic diseases was 1.72 in 1910, 1.14 in 1909, 1.54 in 1908, 1.37 in 1907, 1.65 in 1906, and 1.93 in 1901-5. In England and Wales for 1909 the proportion was 1.48.

Natural Increase.

Natural increase per 1,000 of population in Australasia.

The natural increase, *i.e.*, the excess of births over deaths, per 1,000 of the population, in the various Australian States and New Zealand for each of the years 1906 to 1910, and also for the mean of that period, is shown in the following table:—

Natural Increase per 1,000 of the Population, Australian States and New Zealand.

Year.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.	New Zealand.
1906	12·60	17·15	16·75	13·20	18·15	18·35	15·52	17·77
1907	13·43	16·58	16·52	13·95	18·15	18·46	15·58	16·35
1908	12·11	16·64	16·48	14·75	18·16	18·85	15·29	17·88
1909	13·35	17·58	17·55	15·76	18·47	19·89	16·30	18·07
1910	12.86	18·09	17·61	16·17	17·80	18·56	16·30	16·46
Mean	12·87	17·21	16·98	14·77	18·15	18·82	15·80	17·31

The mean natural increase in the Australian States for the period 1906-10, viz., 15.80 per 1,000 of population, is probably greater than that which will prevail when the age constitution of the people becomes similar to that of old settled countries. At present the proportion of elderly people is smaller than in these countries, and, partly as a consequence of this, the death rate is lower. It has been shown in a previous paragraph that the Victorian death rates at nearly all periods of life are below those of England and Wales. The Australian annual rate of increase due to excess of births over deaths —15.80—would enable a population to double itself in 44 years, whilst at the Victorian rate of 12.87 per 1,000 of population a period of 54 years would be required.

The rate of natural increase in Australia for 1906-10 is higher than in Japan and all European countries, except Bulgaria and Russia, on the average of the latest five years for which this information is available. The rates for various countries are given below:— Natural increase per 1,000 of population in various countries.

NATURAL INCREASE PER 1,000 OF THE POPULATION IN VARIOUS COUNTRIES.

Country.	Natural Increase per 1,000 of Population.	Country.	Natural Increase per 1,000 of Population.
Bulgaria	20·4	Victoria	12·9
Tasmania	18·8	Norway	12·5
Western Australia ...	18·1	England and Wales ...	11·6
Russia (European) ...	17·7	Scotland	11·4
New Zealand ...	17·3	Austria	11·1
New South Wales ...	17·2	Sweden	11·0
Queensland	17·0	Italy	10·9
Australia	15·8	Hungary	10·7
The Netherlands ...	15·3	Japan	10·4
South Australia ...	14·8	Switzerland	10·1
Prussia	14·6	Belgium	9·4
Roumania	14·4	Ontario, Province of ...	9·4
Germany	14·2	Spain	9·0
Denmark	14·2	Ireland	6·1
Servia	13·5	France	·5

The rate of natural increase in Victoria is lower than in the other States and New Zealand, but higher than in fourteen of the countries enumerated in the above table.

The following table shows the excess per cent. of births over deaths in each of the Australian States and New Zealand for each of the five years 1906 to 1910, together with the mean excess for the same period:— Excess of births over deaths in Australasia.

EXCESS PER CENT. OF BIRTHS OVER DEATHS, AUSTRALIAN STATES AND NEW ZEALAND.

Year.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.	New Zealand.
1906 ...	102	173	175	130	153	164	143	191
1907 ...	116	157	160	141	164	164	144	149
1908 ...	97	164	161	150	169	164	140	187
1909 ...	119	176	181	166	181	199	158	196
1910 ...	113	181	182	158	176	164	156	170
Mean...	109	170	172	149	169	171	148	179

Taking the average of the period 1906-10, it is seen that the least excess in Australasia was in Victoria, and the greatest in New Zealand. To every hundred deaths that occurred there were 209 births in Victoria, 270 in New South Wales, 272 in Queensland, 249 in South Australia, 269 in Western Australia, 271 in Tasmania, 248 in Australia, and 279 in New Zealand.

Excess of births over deaths in districts.

The excess per cent. of births over deaths varies very considerably in different portions of the State, being greater in areas which have been settled at a comparatively recent date than in old-established districts. This is specially noticeable in the excess rates for the Mallee, Gippsland, and Wimmera districts, where the loss of population through every 100 deaths was replaced by 395, 333, and 284 births respectively, as against 185 births in the Metropolitan, 212 in the Central, and 199 in the North Central districts. The following table shows the excess per cent. of births over deaths in nine divisions of the State for the average of the period 1905-7 and for the years 1908, 1909, and 1910:—

EXCESS PER CENT. OF BIRTHS OVER DEATHS IN DISTRICTS.

District.	Excess per cent. of Births over Deaths.			
	1905-7.	1908.	1909.	1910.
Metropolitan	81	74	94	85
Central	121	96	113	112
North Central... ...	87	87	95	99
Western	110	101	118	118
Wimmera	179	175	210	184
Mallee	305	331	336	295
Northern	122	113	134	141
North Eastern ...	133	114	173	161
Gippsland	235	205	258	233
State... ...	108	97	119	113

The very favorable position of the Mallee, Gippsland, and Wimmera districts in respect of their excess of births over deaths is almost wholly due to their low death rates.

Excess of births over deaths in various countries.

Although the excess per cent. of births over deaths is lower in Victoria than in the other States and New Zealand, it is higher than in any of the other countries in the following table, on the average of the latest five years for which this information is available:—

EXCESS PER CENT. OF BIRTHS OVER DEATHS IN AUSTRALASIA AND OTHER COUNTRIES.

Country.	Excess per cent. Births over Deaths.	Country.	Excess per cent. Births over Deaths.
New Zealand	179	Germany	76
Queensland	172	Sweden	75
Tasmania	171	Scotland	72
New South Wales ...	170	Ontario, Province of ...	68
Western Australia ...	169	Switzerland	59
South Australia ...	149	Belgium	57
Australia	148	Russia (European) ...	57
Victoria	109	Italy	51
The Netherlands ...	104	Japan	50
Denmark	101	Austria	48
Bulgaria	91	Hungary	42
Norway	88	Spain	37
Prussia	79	Ireland	35
England and Wales ...	77	France	3

The very favorable position of Australasia as regards the excess of births over deaths is wholly due to its low death rate. Excepting Belgium, Sweden, Ireland, France, and Ontario, higher birth rates prevailed in the above countries than in Australia, but this advantage was more than counterbalanced by their higher death rates. On the average of five years, the loss caused by every 100 deaths was compensated by 248 births in Australia, as compared with 204 in The Netherlands, the highest in Europe, 201 in Denmark, 191 in Bulgaria, 188 in Norway, 179 in Prussia, 177 in England and Wales, 176 in Germany, 172 in Scotland, 157 in Russia, 150 in Japan, and only 103 in France, which had the lowest excess rate of all the countries shown.

Annual increase per cent. in population in various countries.

The annual rates of increase in population in various countries and the period required for each population to double itself if its rate remain unchanged are shown in the following table:—

RATES OF INCREASE IN POPULATION IN VARIOUS COUNTRIES.

Country.	Period.	Annual Rate of Increase per cent.	Period required to double Population.
			Years.
Western Australia ...	1901–11	4·29	16
Canada	1901–11	4·06	17
Argentine Republic ...	1901–9	3·38	21
New Zealand	1901–11	2·70	26
New South Wales ...	1901–11	1·98	35
Queensland	1901–11	1·95	36
United States	1900–10	1·93	36
Australia	1901–11	1·66	42
Prussia	1901–9	1·53	45
The Netherlands ...	1901–9	1·46	47
German Empire ...	1901–8	1·44	48
Denmark	1901–9	1·28	54
South Australia ...	1901–11	1·25	56
Japan	1901–9	1·18	59
Belgium	1901–9	1·15	61
England and Wales ...	1901–11	1·04	67
Hungary	1901–9	1·03	68
Tasmania	1901–11	1·02	68
Austria	1901–8	·97	72
Switzerland	1901–8	·94	74
Victoria	1901–11	·91	76
Spain	1901–9	·83	84
Italy	1901–9	·73	95
Sweden	1901–9	·70	99
Scotland	1901–11	·62	112
Norway	1901–9	·58	120
France	1901–9	·10	697
Ireland	1901–11	−·17	...

The average annual rate of increase in population in the decennium 1901-1911 was lower in Victoria than in any of the other Australian States. It was less than one-fourth of the rate in Canada, slightly more than one-fourth of that in the Argentine Republic, one-third of that in New Zealand, and less than one-half of the rates for New South Wales, Queensland and the United States. The low rate of increase in Victoria was wholly due to the unfavorable conditions which prevailed in the years 1901 to 1904. The average annual rate of increase for the five-year period, ended June, 1911, was 1.29 per cent., as against a rate of .54 per cent. for the preceding five-year period. Between the censuses of 1901 and 1911 there was a considerable movement of the population towards the metropolis. For the intercensal period, the annual rate of increase in population in Greater Melbourne was 1.78 per cent., or about seven times the rate —.25—in the remainder of the State.

POPULATION.

Population of Victoria, 1836 to 1911.

According to manuscript notes made by Captain Lonsdale (afterwards the first Colonial Secretary of Victoria), the first enumeration of the people of this State was made within a year after the arrival of Batman (29th May, 1835) by an officer from Sydney, George Stewart,' Esq., who came in the revenue cutter *Prince George*, with orders from His Excellency Sir Richard Bourke to report upon the state of things in the new district. It was then found (25th May, 1836) that the band of first arrivals consisted of 142 males and 35 females, or, in all, 177 residents of European origin. This, then, was the first official census of what was at that time known as Port Phillip. The second was made on the 8th November of the same year (1836) by order of Captain Lonsdale, who on the 29th of the previous September arrived in H.M.S. *Rattlesnake* (Captain Hobson), which anchored in that part of the port now called Hobson's Bay. Captain Lonsdale had been appointed police magistrate, with instructions to take general charge of the district. On the 5th October the *Stirlingshire* (brig) arrived with the remainder of the Government establishment, consisting of a detachment of Captain Lonsdale's regiment (the 4th), a principal officer of Customs, three surveyors, an officer in charge of commissariat stores, a small number of Crown prisoners for public service, and three constables. From Tasmania and New South Wales, therefore, came the first white people who settled in this State. Notwithstanding these additions to the population, the census of the following month showed an increase of 47 persons only—making a total of 224 persons (186 males and 38 females). The third census was taken nearly two years after, in September, 1838, when it was ascertained that the number of inhabitants had increased to 3,511, and at the end of 1840 it was estimated that the Port Phillip district contained 10,291 persons. During each of the years 1840 and 1841 the population doubled itself owing principally to the number of assisted immigrants who arrived in the district, and good progress continued to be made to the end of 1850, when the community numbered 76,162 persons. The discovery of gold in 1851, however, was the greatest factor in populating Victoria. When the discoveries were announced diggers came in thousands from New South Wales, South Australia, and Tasmania, and later on crowds of emigrants from the United Kingdom and other European countries joined in the rush. America contributed its quota, too, even Californians leaving their own gold-bearing country to try their fortunes in Australia. Some idea of this influx may be gathered from the official figures, which show that the population numbered

463,135 at the end of 1857, or more than six times that of 1850. During the decade 1861 to 1870, the population increased by 188,752, all but 39,000 of which was due to the excess of births over deaths. In the next decennial period, 1871 to 1880, there was an increase of 133,468, but this would have been nearly 13,000 greater if the arrivals in had equalled the departures from the colony. Between 1881 and 1890 an addition of 273,000 was made in the population, about 112,000 being due to immigration. The latter portion of this decennium is known as the "boom period," when land values were highly inflated, wages and prices were at a maximum, and expenditure by the Government and the people generally was conducted in a most lavish manner. The inevitable reaction followed, and this is reflected in the records, the net migration from the State during the ten years following 1890 amounting to 109,000 persons, the increase of 64,000 in the total population being accounted for by the fact that the births exceeded the deaths by 173,000. Most of these emigrants left for Western Australia, where gold had been discovered in large quantities. In 1902-3 a year of unexampled drought was experienced, which was felt severely by this as well as all the other Eastern States. Since then good seasons have followed one another, with the result that employment has been plentiful, and that in addition to retaining its own people, the State has latterly been able to attract others from without. The subjoined table gives a statement of the population in various years from 1836 to 1911:—

ESTIMATED POPULATION OF VICTORIA, 1836 TO 1911.

Year.	Estimated Population, 31st December.			Estimated Mean Population.
	Males.	Females.	Total.	
1836 (25th May) ...	142	35	177	200
1836 (8th Novr.) ...	186	38	224	
1840	7,254	3,037	10,291	8,056
1850	45,495	30,667	76,162	71,191
1855	234,450	129,874	364,324	338,315
1860	328,251	209,596	537,847	534,055
1870	398,755	327,844	726,599	713,195
1880	451,456	408,611	860,067	850,343
1890	596,064	537,202	1,133,266	1,118,500
1900	602,487	594,719	1,197,206	1,193,338
1901	609,920	602,648	1,212,568	1,204,887
1902	609,016	606,695	1,215,711	1,214,140
1903	606,766	608,256	1,215,022	1,215,367
1904	606,864	611,513	1,218,377	1,216,700
1905	611,976	616,732	1,228,708	1,223,543
1906	619,519	624,632	1,244,151	1,236,430
1907	626,922	633,171	1,260,093	1,252,122
1908	632,284	638,383	1,270,667	1,265,380
1909	642,718	647,818	1,290,536	1,280,601
1910	651,093	656,305	1,307,398	1,298,967
1911 (Census, 2nd April)	654,523	660,477	1,315,000*	...

* First count.

The elements of increase in the population of Victoria during 1910 are shown in the following table:— Population, 1910.

ESTIMATED POPULATION OF VICTORIA, 31ST DECEMBER, 1910.

——	Males.	Females.	Males.	Females.	Total.
Estimated Population, 31st December, 1909 ..	..	..	642,718	647,818	1,290,536
Births, 1910	16,411	15,026			
Deaths, 1910	8,132	6,604			
Natural increase ..	..	..	8,279	8,422	16,701
Migration by Sea, 1910 (as adjusted)—					
Arrivals	49,544	33,050			
Departures	49,685	32,644			
Gain Seawards ..	..	..	– 141	406	265
Migration by Land, 1910 (as adjusted)—					
Arrivals	19,497	12,824			
Departures	19,260	13,165			
Loss Overland ..	..	..	+ 237	341	104
Estimated Population, 31st December, 1910 ..	..	..	651,093	656,305	1,307,398
Increase from Census, 31st March, 1901, to 31st December, 1910 ..	..	..	47,373	58,955	106,328
Full-blooded aborigines at the date of the 1901 Census not included in the estimate	..	..	163	108	271

Increase of population, 1891-1911.

The population of Victoria on 5th April, 1891, when the census of that year was taken, was 1,140,405. The following table shows the increase of population by excess of births over deaths, and the loss by emigration since that date:—

INCREASE OF POPULATION BY EXCESS OF BIRTHS OVER DEATHS, AND LOSS BY EMIGRATION, 1891 TO 1911.

Year.	Natural Increase (*i.e.*, Excess of Births over Deaths).	Loss by Emigration.	Net Increase.
1891 (from 5th April, Census) ..	15,859	+1,414	17,273
1892	21,980	11,058	10,922
1893	20,044	12,484	7,560
1894	18,828	12,698	6,130
1895	18,070	14,410	3,660
1896	16,464	22,134	−5,670
1897	16,184	13,754	2,430
1898	11,477	11,127	350
1899	14,430	8,020	6,410
1900	15,564	7,828	7,736
1901 (to 31st March, Census) ..	3,613	+522	4,135
Total Intercensal period (10 years)	172,513	111,577	60,936
1901 (from 1st April)	11,491	+7	11,498
1902	14,284	11,141	3,143
1903	13,974	14,663	−689
1904	15,370	12,015	3,355
1905	15,431	5,100	10,331
1906	15,607	164	15,443
1907	16,827	885	15,942
1908	15,334	4,760	10,574
1909	17,113	+2,756	19,869
1910	16,701	+161	16,862
1911 (to 2nd April, Census) ..	4,689	+2,913	7,602
Total Intercensal period (10 years)	156,821	42,891	113,930
Total (20 years)	329,334	154,468	174,866

In preparing the above table, it has been assumed that the population at the last census date (2nd April, 1911) was 1,315,000, this being the number according to the first count. A slight adjustment may be necessary when the result of the final count is known.

Emigration to Western Australia.

It will be seen that Victoria has since 1891 suffered a serious loss by emigration. Naturally, Western Australia has been by far the greatest gainer. The following table shows to what a large extent that State gained from Victoria from 1891 (the year when gold was first discovered there in large quantities) to the close of 1910. The total gain recorded to the western State is 86,758.

RECORDED MIGRATION TO AND FROM WESTERN AUSTRALIA, 1891 TO 1910.

Year.	Arrivals from.	Departures to.	Excess of Departures.
1891	344	2,304	1,960
1892	632	2,346	1,714
1893	1,922	4,177	2,255
1894	6,545	16,690	10,145
1895	6,344	17,471	11,127
1896	12,951	37,448	24,497
1897	20,580	31,775	11,195
1898	21,687	22,504	817
1899	12,403	12,299	- 104
1900	10,638	13,576	2,938
1901	11,371	16,704	5,333
1902	10,550	18,608	8,058
1903	7,986	12,854	4,868
1904	7,882	12,819	4,937
1905	8,936	10,737	1,801
1906	10,159	8,714	- 1,445
1907	10,389	7,623	- 2,766
1908	8,729	8,133	- 596
1909	7,593	7,320	- 273
1910	8,256	8,553	297
Total	185,897	272,655	86,758

The arrivals and departures cannot all be taken to represent Victorians, as passengers from the Eastern States calling at Victorian ports on the way to the Western State were, up to 31st December, 1902, included. A very large number of Victorians must, however, have emigrated to Western Australia, as the census returns of that State on 31st March, 1901, disclosed the fact that there were then no fewer than 39,491 natives of Victoria living there. Victoria had a greater gold-mining population to draw upon than any of the other States, and it so happened that the mining industry in this State was dull at the very time when that of Western Australia was flourishing. There was some compensation to Victoria for this exodus to Western Australia, as the fathers and sons who went there, and earned good wages, remitted considerable sums of money for the support of their dependents in Victoria.

Emigration to South Africa.

There was a large migration between South Africa and Victoria for some years, which, during the period 1895-1903, resulted in a loss to Victoria of 10,002 of her population. During the five years ended 1908 this State gained 2,907 persons from South Africa, but in 1909 there was a loss of 112, and in 1910 of 331 persons. The following table gives the movement since 1895, the first year in which a separate record relating to South Africa was kept:—

RECORDED MIGRATION TO AND FROM SOUTH AFRICA, 1895 TO 1910.

Year.	Arrivals from.	Departures to.	Excess of Departures.
1895	136	1,524	1,388
1896	333	3,214	2,881
1897	824	1,570	746
1898	740	870	130
1899	994	1,192	198
1900	1,878	3,645	1,767
1901	4,785	3,715	- 1,070
1902	4,215	5,460	1,245
1903	794	3,511	2,717
1904	1,325	1,125	- 200
1905	1,186	1,068	- 118
1906	1,382	878	- 504
1907	2,162	644	- 1,518
1908	1,163	596	-567
1909	665	777	112
1910	483	814	331
Total	23,065	30,603	7,538

It will be observed that the net result of the migration has during the last three years been unimportant, both as regards Western Australia and South Africa.

Immigration and Emigration, 1906 to 1910.

The following table shows the total migration by sea to and from Victoria during the five years 1906 to 1910:—

RECORDED IMMIGRATION AND EMIGRATION BY SEA, 1906 TO 1910.

Year.	Immigrants.	Emigrants.	Excess of Immigrants.
1906	69,282	67,348	1,934
1907	75,784	73,045	2,739
1908	76,863	78,614	- 1,751
1909	78,744	73,768	4,976
1910	82,594	77,951	4,643

The departures exceeded the arrivals in 1908, but there was an excess of immigrants in all the other years mentioned in the table.

Arrivals and departures by rail, 1906 to 1910.

The Inter-State railway passenger traffic is also taken into account in framing estimates of population, and the effect of this traffic during the past five years is shown in the following return:—

RECORDED MIGRATION BY RAIL, 1906 TO 1910.

Year.	Arrivals.			Departures.			Excess of Arrivals.		
	Males.	Females	Total.	Males.	Females	Total.	Males.	Females	Total.
1906 ..	12,829	8,075	20,904	11,519	7,670	19,189	1,310	405	1,715
1907 ..	14,520	9,112	23,632	14,032	9,076	23,108	488	36	524
1908 ..	15,975	9,745	25,720	14,636	9,639	24,275	1,339	106	1,445
1909 ..	16,821	10,386	27,207	15,214	10,034	25,248	1,607	352	1,959
1910 ..	17,725	11,658	29,383	17,509	11,968	29,477	216	-310	-94
Total ..	77,870	48,976	126,846	72,910	48,387	121,297	4,960	589	5,549

In 1910 Victoria gained by rail 158 persons from New South Wales, and 6 from Queensland, but lost 258 to South Australia.

Gain by immigration from various countries and *vice versâ*.

The net result of the recorded immigration and emigration by sea between Victoria and the neighbouring States, the United Kingdom, and foreign countries during each of the five years ended 1910 is shown in the following table. Where a minus sign (—) appears, it indicates that the emigrants exceeded the immigrants by the number against which it is placed:—

RECORDED NET IMMIGRATION TO VICTORIA BY SEA, 1906 TO 1910.

Year.	Excess of Immigration over Emigration between Victoria and—											Net Immigration.
	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.	South Seas.	South Africa.	United Kingdom.	Other British Dominions.	Foreign Ports.	
1906	419	-208	302	1,445	1,766	-2,332	..	504	26	-62	74	1,934
1907	-2,493	-651	-264	2,766	1,901	-573	-1	1,518	371	-14	179	2,739
1908	-3,860	-121	30	596	1,446	-1,781	-7	567	855	200	324	-1,751
1909	-2,048	505	-3	273	4,038	247	36	-112	1,419	161	460	4,976
1910	-2,576	200	-6	-297	3,907	153	21	-331	3,217	99	256	4,643
Total	-10,558	-275	59	4,783	13,058	-4,286	49	2,146	5,888	384	1,293	12,541

The net result of the seaward migration for the five years has been an increase to Victoria of over 12,500 persons, the principal gains being from Tasmania, the United Kingdom, Western Australia, and South Africa; New South Wales and New Zealand, on the other hand, have attracted persons from this State during the same period.

State-assisted immigration.

There is at the present time a very general demand throughout Australia for increased population, and the question of attracting immigrants is now receiving considerable attention. The number of persons who have been assisted to come to Victoria from the foundation of the State to the end of 1910 will be found in the following table:—

STATE-ASSISTED IMMIGRATION TO VICTORIA TO THE END OF 1910.

Period.	Number of State-Assisted Immigrants.
1851–60	87,963
1861–70	46,594
1871–80	5,545
1881–90	2
1891–00	...
1901	...
1902	...
1903	...
1904	...
1905	...
1906	...
1907	...
1908	127
1909	360
1910	652
	1,690
Total	142,933

On making application to the land settlement agent in the office of the Agent-General in London, approved persons may obtain reduced third-class passages to Victoria as follow:—Domestic servants, £4; farm labourers, £6; other approved persons, £12, per adult fare. Assisted passages at £12 are granted to persons who have been nominated by friends or relatives in Victoria. When the nominees in the latter class of passages are the wife and children of the nominator, a rebate of £9 may be allowed on each adult

fare, and proportionately for children. In cases where the nominated passengers are not so related to the nominator, a rebate of £4 per adult may be allowed, with proportionate allowance for children.

Settlers for Irrigation Districts.

The Government of Victoria has for some time been endeavouring to induce settlers to take up blocks in the irrigation districts served by the works belonging to the State. Seeing that a large deficit was accruing annually from these irrigation works, and in view of the fact that no proper agricultural development was taking place in the irrigation districts, the State Government resolved that an organized effort should be made to obtain settlers from abroad, who would be prepared to occupy and develop to its utmost possibility the land in these irrigable areas. The encouragement of immigration from the United Kingdom and America has not only proved successful in aiding the settlement of the areas by oversea people, but it has greatly stimulated the demand by Victorians for irrigation farms.

In May, 1910, the Hon. Hugh McKenzie, Minister of Lands, and Mr. Elwood Mead, Chairman of the State Rivers and Water Supply Commission, left Melbourne as a Government delegation to Europe and America, there to endeavour to turn the attention of intense cultivators to the opportunities existing for competent men in the irrigation lands of this State. Their efforts were entirely successful, and during the past year the results of the mission have been evidenced in the relatively very large increase in the number of persons coming from other countries to make their homes in Victoria. Even before the return of the Commissoners, in November, 1910, the volume of immigration had begun to be felt, and at the present time it is still increasing.

The object of the delegation has in a large measure already been attained. The northern irrigation areas now present a spectacle of busy settlement, and the complete development of these lands appears to be a matter of only a very short time. This development means that, not only will the actually settled country benefit, but the cities and towns will feel the pulse of prosperity beating throughout the State, and the increased production and trade will amply justify the action of the Government in sending forth its representatives, and assisting desirable persons in other parts of the world to become citizens of Victoria.

Though the settlement of what has hitherto been only partially used lands has been the mainspring of the assisted immigration movement, other minor channels for helping those desirous of immigrating hither have been opened. Farm labourers and domestic servants may obtain reduced rates for their passages to Victoria, whilst workmen in certain trades where there is an evident shortage of skilled labour are also given the benefit of reduced fares from the United Kingdom.

The system of nomination by persons resident in Victoria of their oversea friends and relatives has been extended, so that intended immigrants may now be nominated for passages from America, and reduced fares have been arranged for these.

Census of 1911.

A census of the whole of Australia was taken by the Commonwealth Government on the evening of 2nd April, 1911. At the date of going to press, the only results which have been made known are first counts of the population of the different States, and of a few of the larger towns. These are shown elsewhere in this Part.

Previous Censuses.

Ages of the people.

The following tables show the ages of the people and their conjugal condition, in the three census years 1881, 1891, and 1901, also their occupations in the two latter years. Particulars of this kind are only collected in census years.

Ages of the People at Censuses, 1881, 1891, and 1901.

Age Group (Years).	1881.		1891.		1901.	
	Males.	Females.	Males.	Females.	Males.	Females.
0–5 ..	57,542	56,141	75,229	73,505	66,807	65,179
5–10 ..	54,555	54,250	64,989	63,251	72,052	70,493
10–15 ..	54,043	53,715	58,536	57,528	67,389	66,640
15–20 ..	49,192	51,020	56,889	57,560	58,896	59,717
20–25 ..	40,385	43,178	63,356	62,185	50,593	57,632
25–30 ..	27,341	26,902	62,910	54,999	45,469	52,832
30–35 ..	22,517	21,880	47,632	39,667	46,635	48,156
35–40 ..	23,314	21,499	31,672	26,398	46,723	43,390
40–45 ..	25,815	21,174	23,924	21,332	37,118	33,551
45–50 ..	28,209	19,374	22,007	19,567	24,137	21,810

AGES OF THE PEOPLE AT CENSUSES, 1881, 1891, AND 1901—*continued.*

Age Group (Years).	1881.		1891.		1901.	
	Males.	Females.	Males.	Females.	Males.	Females.
50–55 ..	26,303	15,245	22,676	19,290	18,348	17,601
55–60 ..	15,885	9,087	22,135	16,132	15,351	15,157
60–65 ..	11,984	6,985	20,091	12,847	14,979	14,292
65–70 ..	6,123	3,788	11,075	7,140	16,080	13,843
70–75 ..	3,667	2,516	7,194	4,775	11,781	8,360
75–80 ..	1,773	1,211	3,191	2,253	5,733	4,231
80–85 ..	847	619	1,378	1,006	2,453	2,065
85–90 ..	178	154	459	356	603	587
90–100 ..	58	66	168	124	160	152
100 and over	11	..	5	5	12	11
Unspecified ..	2,341	1,459	2,898	2,071	2,564	1,759
Total ..	452,083	410,263	598,414	541,991	603,883	597,458
	PROPORTIONS PER CENT.					
0–5 ..	12·79	13·73	12·63	13·61	11·11	10·94
5–10 ..	12·13	13·27	10·91	11·72	11·98	11·83
10–15 ..	12·02	13·14	9·83	10·65	11·21	11·19
15–20 ..	10·94	12·48	9·55	10·66	9·80	10·03
20–25 ..	8·98	10·56	10·64	11·52	8·41	9·68
25–30 ..	6·08	6·58	10·56	10·19	7·56	8·87
30–35 ..	5·01	5·35	8·00	7·35	7·76	8·08
35–40 ..	5·18	5·26	5·32	4·89	7·77	7·28
40–45 ..	5·74	5·18	4·02	3·95	6·17	5·63
45–50 ..	6·27	4·74	3·70	3·62	4·02	3·66
50–55 ..	5·85	3·73	3·81	3·57	3·05	2·96
55–60 ..	3·53	2·22	3·72	2·99	2·55	2·54
60–65 ..	2·66	1·71	3·37	2·38	2·49	2·40
65–70 ..	1·36	·93	1·86	1·32	2·67	2·32
70–75 ..	·82	·62	1·21	·88	1·96	1·40
75–80 ..	·39	·30	·53	·42	·95	·71
80–85 ..	·19	·15	·23	·19	·41	·35
85–90 ..	·04	·04	·08	·07	·10	·10
90 and over ..	·02	·01	·03	·02	·03	·03
Specified Ages	100·00	100·00	100·00	100·00	100·00	100·00

The noticeable features in the above table are the decrease in the number of young women in 1901, as compared with 1891, in the age groups 15-20, 20-25, 25-30, and the increase in the number of women in the groups 30-35, 35-40, 40-45, the later reproductive ages. The same features are apparent in regard to the young and middle-aged men. In 1901, those in the groups 20-25, 25-30, 30-35, were less, and those in the groups 35-40, 40-45, 45-50 greater, in number than in 1891. There is also a marked increase in the proportionate number of old people aged 65 and upwards, both male and female, more old people in 1891 than in 1881, and still more in 1901 than in 1891.

Persons at dependent and supporting ages.

By adopting larger groups a clearer idea is obtained of the age distribution of the population at the three census periods. The subjoined table shows the numbers and proportions of males and females at ages 0-15, 15-45, 45-65 and 65 and upwards. Persons of unspecified ages have been omitted:—

NUMBER OF PERSONS AT DEPENDENT AND SUPPORTING AGES IN VICTORIA AT THREE CENSUS ENUMERATIONS.

Census Year.	Number of Persons at—							
	Dependent Ages (Under 15 years).		Supporting Ages.				Old Age (65 years and upwards).	
			15 to 45 years.		45 to 65 years.			
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1881	166,140	164,106	188,564	185,653	82,381	50,691	12,657	8,354
1891	198,754	194,284	286,383	262,141	86,909	67,836	23,470	15,659
1901	206,248	202,312	285,434	295,278	72,815	68,860	36,822	29,249
	Proportions per cent.							
1881	36·94	40·14	41·93	45·41	18·31	12·40	2·82	2·05
1891	33·37	35·98	48·09	48·56	14·60	12·56	3·94	2·90
1901	34·30	33·96	47·47	49·57	12·11	11·56	6·12	4·91

It will be seen that while the proportion of the population at supporting ages did not vary much at the three periods there was a material difference in the internal age distribution. There was between 1881 and 1901 a considerable increase in the numbers at ages 15-45 and a corresponding decrease at ages 45-65.

OCCUPATIONS OF THE PEOPLE OF VICTORIA AS RETURNED AT THE CENSUSES OF 1891 AND 1901.

Occupations of the people, 1891 and 1901.

Occupation.	1891.	1901.
Breadwinners—		
Professional	29,734	35,224
Domestic	57,571	66,815
Commercial	68,076	79,048
Transport and Communication	31,476	31,516
Industrial	168,534	146,233
Primary Producers	128,983	165,147
Indefinite	17,776	10,066
Total Breadwinners	502,150	534,049
Dependents	631,308	662,355
Occupation not stated	6,947	4,937
Total Population	1,140,405	1,201,341

With an increase in the population between 1891 and 1901 of 60,936, it is satisfactory to find that the number of primary producers had improved by over 36,000.

CONJUGAL CONDITION OF THE PEOPLE, 1881, 1891, AND 1901.
(Exclusive of Chinese and Aborigines.)

Conjugal condition, 1881, 1891 1901.

Ages.	Males.					
	Total Number.			Never Married.		
	1881.	1891.	1901.	1881.	1891.	1901.
Under 15 years ..	166,686	199,109	206,305	166,686	199,108	206,305
15 to 20 years ..	49,316	56,981	58,990	49,263	56,878	58,899
20 „ 30 „ ..	67,130	125,700	95,498	50,769	94,357	75,951
30 „ 40 „ ..	44,238	78,447	92,393	13,525	26,066	32,193
40 „ 50 „ ..	49,251	44,721	60,544	10,360	9,246	12,444
50 „ 60 „ ..	39,487	42,422	33,047	7,760	7,692	5,397
60 years and upwards	23,646	41,937	49,999	4,657	7,206	8,305
All ages ..	439,754	589,317	596,776	303,020	400,553	399,494
Under 21 years ..	224,805	268,156	275,636	224,519	267,875	275,387
21 years and upwards	214,949	321,161	321,140	78,501	132,678	124,107
15 „ „	273,068	390,208	390,471	136,334	201,445	193,189
20 „ „	223,752	333,227	331,481	87,071	144,567	134,290

CONJUGAL CONDITION OF THE PEOPLE, 1881, 1891, AND 1901—*continued.*

(Exclusive of Chinese and Aborigines.)

Ages.	MALES.					
	Husbands.			Widowers.		
	1881.	1891.	1901.	1881.	1891.	1901.
Under 15 years ..	..	1	..	..	..	..
15 to 20 years ..	53	97	89	..	6	2
20 „ 30 „ ..	16,072	30,765	19,294	289	578	253
30 „ 40 „ ..	29,702	50,631	58,408	1,011	1,750	1,792
40 „ 50 „ ..	36,398	32,917	45,334	2,493	2,558	2,766
50 „ 60 „ ..	27,983	30,345	24,418	3,744	4,385	3,232
60 years and upwards	13,730	25,527	29,695	5,259	9,204	11,999
All ages ..	123,938	170,283	177,238	12,796	18,481	20,044
Under 21 years ..	280	274	245	6	7	4
21 years and upwards	123,658	170,009	176,993	12,790	18,474	20,040
15 „ „	123,938	170,282	177,238	12,796	18,481	20,044
20 „ „	123,885	170,185	177,149	12,796	18,475	20,042

Ages.	FEMALES.					
	Total Number.			Never Married.		
	1881.	1891.	1901.	1881.	1891.	1901.
Under 15 years ..	164,437	194,365	202,235	164,432	194,362	202,235
15 to 20 years ..	51,140	57,603	59,789	49,657	55,964	58,748
20 „ 30 „ ..	70,223	117,527	110,676	38,304	64,345	71,832
30 „ 40 „ ..	43,471	66,314	91,813	5,501	12,870	24,212
40 „ 50 „ ..	40,641	41,069	55,516	2,425	3,701	8,331
50 „ 60 „ ..	24,397	35,603	32,851	1,062	1,877	2,679
60 years and upwards	15,375	28,665	43,684	718	1,483	2,142
All ages ..	409,684	541,146	596,564	262,099	334,602	370,179
Under 21 years ..	225,264	264,239	273,634	222,220	260,768	271,394
21 years and upwards	184,420	276,907	322,930	39,879	73,834	98,785
15 „ „	245,247	346,781	394,329	97,667	140,240	167,944
20 „ „	194,107	289,178	334,540	48,010	84,276	109,196

CONJUGAL CONDITION OF THE PEOPLE, 1881, 1891, AND 1901—*continued.*

(Exclusive of Chinese and Aborigines.)

Ages.	FEMALES.					
	Wives.			Widows.		
	1881.	1891.	1901.	1881.	1891.	1901.
Under 15 years ..	5	3	..	..	..	..
15 to 20 years ..	1,463	1,620	1,039	20	19	2
20 „ 30 „ ..	30,824	52,072	38,098	1,095	1,110	746
30 „ 40 „ ..	35,205	50,172	64,029	2,765	3,272	3,572
40 „ 50 „ ..	32,817	31,474	40,892	5,399	5,894	6,293
50 „ 60 „ ..	17,994	24,272	21,011	5,341	9,454	9,161
60 years and upwards	7,566	14,033	18,173	7,091	13,149	23,369
All ages ..	125,874	173,646	183,242	21,711	32,898	43,143
Under 21 years ..	2,997	3,434	2,233	47	37	7
21 years and upwards	122,877	170,212	181,009	21,664	32,861	43,136
15 „ „	125,869	173,643	183,242	21,711	32,898	43,143
20 „ „	124,406	172,023	182,203	21,691	32,879	43,141

Ages	MALES—PROPORTION PER 100 LIVING AT EACH AGE.								
	Never Married.			Husbands.			Widowers.		
	1881.	1891.	1901.	1881.	1891.	1901.	1881.	1891.	1901.
Under 15 years ..	100·0	100·0	100·0	..	..	..	..	..	..
15 to 20 years ..	99·9	99·8	99·8	·1	·2	·2	..	..	..
20 „ 30 „ ..	75·6	75·1	79·5	24·0	24·5	20·2	·4	·4	·3
30 „ 40 „ ..	30·6	33·2	34·9	67·1	64·6	63·2	2·3	2·2	1·9
40 „ 50 „ ..	21·0	20·7	20·6	73·9	73·6	74·9	5·1	5·7	4·5
50 „ 60 „ ..	19·7	18·2	16·3	70·8	71·5	73·9	9·5	10·3	9·8
60 years and upwards	19·7	17·2	16·6	58·1	60·9	59·4	22·2	21·9	24·0
All Ages ..	68·9	68·0	66·9	28·2	28·9	29·7	2·9	3·1	3·4
Under 21 years ..	99·9	99·9	99·9	·1	·1	·1	..	..	..
21 years and upwards	36·5	41·3	38·7	57·5	53·0	55·1	6·0	5·7	6·2
15 „ „	49·9	51·6	49·5	45·4	43·7	45·4	4·7	4·7	5·1
20 „ „	38·9	43·4	40·5	55·4	51·1	53·5	5·7	5·5	6·0

CONJUGAL CONDITION OF THE PEOPLE, 1881, 1891, AND 1901—*continued.*

(Exclusive of Chinese and Aborigines.)

Ages.	FEMALES—PROPORTION PER 100 LIVING AT EACH AGE.								
	Never Married.			Wives.			Widows.		
	1881.	1891.	1901.	1881.	1891.	1901.	1881.	1891.	1901.
Under 15 years ..	100·0	100·0	100·0	..	..	..	..	..	..
15 to 20 years ..	97·1	97·2	98·3	2·9	2·8	1·7	..	..	..
20 „ 30 „ ..	54·6	54·8	64·9	43·9	44·3	34·4	1·5	·9	·7
30 „ 40 „ ..	12·7	19·4	26·4	81·0	75·7	69·7	6·3	4·9	3·9
40 „ 50 „ ..	6·0	9·0	15·0	80·7	76·6	73·7	13·3	14·4	11·3
50 „ 60 „ ..	4·3	5·3	8·2	73·8	68·2	63·9	21·9	26·5	27·9
60 years and upwards	4·7	5·2	4·9	49·2	48·9	41·6	46·1	45·9	53·5
All Ages ..	64·0	61·8	62·1	30·7	32·1	30·7	5·3	6·1	7·2
Under 21 years ..	98·7	98·7	99·2	1·3	1·3	·8	..	..	..
21 years and upwards	21·6	26·7	30·6	66·6	61·5	56·0	11·8	11·8	13·4
15 „ „	39·8	40·4	42·6	51·3	50·1	46·5	8·9	9·5	10·9
20 „ „	24·7	29·2	32·6	64·1	59·5	54·5	11·2	11·3	12·9

The table shows that the proportionate number "never married" in the age groups of the males 20-30, and 30-40, materially increased from 1881 to 1901. In the group 40-50 the position remained about the same, while the number of men "never married" over 50 decreased considerably. As regards the females, there is a very noticeable increase in the number of spinsters from 20 years of age right up to 60. In the age groups 20-30, 30-40, and 40-50, the increase is very marked, and in the last two groups mentioned, the number more than doubled between 1881 and 1901.

Density of population, &c.

In the following return the persons and dwellings to the square mile, persons and rooms to a dwelling, and persons to a room, are shown for the five census years 1861-1901:—

DENSITY OF POPULATION.—RETURN FOR FIVE CENSUS YEARS.

Year of Census.	Persons to the Square Mile (exclusive of Persons in Ships).	Inhabited Dwellings to the Square Mile.	Persons to the Inhabited Dwelling (exclusive of Persons in Ships).	Rooms to a Dwelling (Inhabited and Uninhabited).	Persons to a Room.
1861 ..	6·126	1·470	4·16	2·96	1·35
1871 ..	8·298	1·714	4·84	3·89	1·18
1881 ..	9·791	1·935	5·06	4·44	1·08
1891 ..	12·948	2·549	5·08	5·10	·92
1901 ..	13·643	2·747	4·97	5·25	·90

The population returned at the census of 1901 furnishes a proportion of 13.6 persons to the square mile. In 1891 the proportion was 12.9; in 1881, 9.8; in 1871, 8.3; and in 1861, 6.1. There were 497 persons to every 100 inhabited dwellings in 1901, a smaller number than in 1891 and 1881, when the numbers were 508 and 506 respectively, but greater than in 1871 and 1861, when the numbers were 484 and 416.

Density of Population in Australia and New Zealand.

The following table contains particulars of the density of the population, inhabited dwellings to the square mile, persons and rooms to a dwelling, and persons to a room in each Australian State and New Zealand at the census of 1901:—

DENSITY OF POPULATION IN AUSTRALIAN STATES AND NEW ZEALAND, 1901.

State.	Persons to the square mile (exclusive of persons in ships.)	Inhabited dwellings to the square mile.	Persons to the inhabited dwelling (exclusive of persons in ships.)	Rooms to a dwelling (inhabited and uninhabited.)	Persons to a Room.
Victoria	13·643	2·747	4·97	5·25	·90
New South Wales ...	4·373	·814	5·37	5·15	·99
Queensland	·753	·148	5·09	4·71	·94
South Australia (Proper)	·931	·181	5·16	...	...
" " (Northern Territory)	·008	·002	3·31	...	...
Western Australia ...	·184	·050	3·68	3·42	·97
Tasmania	6·526	1·303	5·01	4·58	·98
Australia	1·268	·251	5·06	...	...
Dominion of New Zealand	7·427	1·527	4·86	...	...

Victoria is the most thickly populated of the Australian States, having more than twice as many persons to the square mile as Tasmania, the next State in point of density, and more than three times as many as New South Wales. About five persons to the inhabited house is the proportion existing in each Australian State, except Western Australia and the Northern Territory, where the number is somewhat more than three. As regards the number of rooms to each dwelling, Victoria stands highest with an average of $5\frac{1}{4}$ rooms, and Western Australia lowest with about $3\frac{1}{2}$ rooms to each habitation. In the five States of Australia which collected the information, it was ascertained that there was nearly one person to

every room—Victoria having 90 (the lowest), and New South Wales 99 (the highest) persons to every 100 rooms—the other States varying between these numbers.

Birthplaces of the people, 1901.

The census of 1901 gives the principal birthplaces of the people as follows:—

BIRTHPLACES OF THE PEOPLE OF VICTORIA, 1901.

Birthplaces.	Males.	Females.	Total.
Victoria	428,823	447,180	876,003
Other Australian States ...	30,672	34,422	65,094
New Zealand	4,404	4,616	9,020
England and Wales	64,871	52,237	117,108
Scotland	19,003	16,748	35,751
Ireland	28,796	32,716	61,512
Other British Possessions ...	3,000	1,551	4,551
Total British	579,569	589,470	1,169,039
Germany	5,295	2,313	7,608
United States	1,382	753	2,135
Sweden and Norway ...	2,033	174	2,207
China	6,158	72	6,230
Other Foreign Countries ...	5,814	1,588	7,402
Total Foreign ...	20,682	4,900	25,582
At Sea	782	782	1,564
Unspecified	2,850	2,306	5,156
Grand Total	603,883	597,458	1,201,341
Allegiance—			
British Subjects	586,921	594,080	1,181,001
Foreign „	16,962	3,378	20,340

Victorian born.

Persons of Victorian birth were in the proportion of 73 to every 100 persons in 1901, as compared with 63 in 1891. These, combined with natives of the other Australian States and New Zealand, amounted to nearly four-fifths of the total population of Victoria.

Decrease of natives of the United Kingdom.

The decrease of natives of all parts of the United Kingdom resident in Victoria during the ten years ended 1901 was considerable, amounting to 84,510. This decrease is equivalent to 28 per cent. of the natives of England, Wales, and Ireland, and 29 per cent. of the natives of Scotland, who were resident in the State in 1891.

Foreign subjects.

The number of persons in the State in 1901 who owed allegiance to some foreign power was 20,340 or 1.7 per cent. of the population. This is a large decrease compared with 1891, when they numbered 35,126 or 3.1 per cent. of the population.

In the interval between the censuses of 1891 and 1901 natives of China decreased from 8,467 (including 17 of European race) to 6,230 (including 70 of European race). This, however, does not represent all the Chinese in the State, as there are persons of this race born in places outside of China resident in Victoria. The total number of the Chinese race in Victoria was 9,377 in 1891 and 7,349 in 1901. Chinese.

Universal obligation to military service is imposed on all males in Australia aged 18 to 60 years, the order of their being called upon to serve being fixed by age and conjugal condition. There are five classes, and the following table shows the number of persons in each of these who were living in Victoria at the date of the last census in 1901, also the estimated number at the end of the year 1909. The proportions of widowers of military ages with and without children cannot be stated exactly, but it is believed that the numbers which have been allocated to the various age groups approximate closely to the actual facts. The additions to the first four classes due to this cause amount to 4,505 for 1901, and 4,860 for 1909 :— Males at the military ages.

NUMBER OF MALES AGED 18 TO 60 YEARS IN VICTORIA AT THE CENSUS OF 1901, AND ESTIMATED NUMBER IN 1909.

Class.	Age.	Conjugal Condition.	Number of Males enumerated at the Census of 1901.	Estimated number of Males at the end of 1909.
I.	18 and under 35 years	Unmarried, or widowers without children	116,909	126,270
II.	35 and under 45 years	Unmarried, or widowers without children	21,248	22,950
III.	18 and under 35 years	Married, or widowers with children	46,035	49,720
IV.	35 and under 45 years	Married, or widowers with children	61,371	66,290
V.	45 and under 60 years	Married or unmarried	56,627	61,170
Total	...	...	302,190	326,400

The numbers for a later date than 1909 will be given after the ages of the people at the 1911 census are known.

Victorians in each Australian State and New Zealand.

Persons of Victorian birth living in other Australian States and New Zealand numbered 136,638 at the census of 1901, as compared with 69,021 at the previous census in 1891, thus showing an increase of 67,617.

VICTORIANS LIVING IN EACH AUSTRALIAN STATE AND NEW ZEALAND, 1901.

State in which Living.	Numbers Born in Victoria.		
	Males.	Females.	Total.
Victoria	428,823	447,180	876,003
New South Wales	30,358	25,661	56,019
Queensland	6,721	3,551	10,272
South Australia	5,134	5,190	10,324
Western Australia...	24,342	15,149	39,491
Tasmania	4,502	3,447	7,949
Australia	499,880	500,178	1,000,058
New Zealand	6,530	6,053	12,583
Total	506,410	506,231	1,012,641

Natives of other States and New Zealand living in Victoria.

The following table gives the number of Australians other than Victorians who were resident in this State at the 1901 census date:—

NATIVES OF OTHER STATES AND NEW ZEALAND LIVING IN VICTORIA, 1901.

State.	Males.	Females.	Total.
New South Wales	10,631	11,786	22,417
Queensland	1,363	1,669	3,032
South Australia	10,720	11,209	21,929
Western Australia	673	795	1,468
Tasmania	6,871	8,492	15,363
New Zealand	4,404	4,616	9,020
Australasia (State not given) ..	414	471	885
Total	35,076	39,038	74,114

Comparing these two tables, it is seen that the number of persons of Victorian birth in the other States and New Zealand exceeded the number of persons born in those places living in Victoria in 1901 by 62,524.

The exodus to Western Australia was the principal factor contributing to this result, for whereas in 1891 there were only 1,036 Victorians resident there, in 1901 the number had increased to 39,491.

The enumerated population in the last six census years, and the increases, numerical and centesimal, are as under:— Increase of population in six decades.

POPULATION OF VICTORIA (INCLUDING ABORIGINES) AT SIX CENSUS PERIODS.

Year of Census or Estimate.	Both Sexes.			Males.			Females.		
	Population.	Increase since last Census.		Population.	Increase since last Census.		Population.	Increase since last Census.	
		Numerical.	Centesimal.		Numerical.	Centesimal.		Numerical.	Centesimal.
1861	540,322	129,556	31·54	328,651	64,317	24·33	211,671	65,239	44·55
1871	731,528	191,206	35·39	401,050	72,399	22·03	330,478	118,807	56·13
1881	862,346	130,818	17·88	452,083	51,033	12·72	410,263	79,785	24·14
1891	1,140,405	278,059	32·24	598,414	146,331	32·37	541,991	131,728	32·11
1901	1,201,341	60,936	5·34	603,883	5,469	·91	597,458	55,467	10·23
1911	*1,315,000	113,659	9·46	654,523	50,640	8·39	660,477	63,019	10·55

* First count.

Between the censuses of 1901 and 1911 the increase in population (113,659) was smaller than in any intercensal period since 1851, with the exception of the decennium 1891-1901, when it was only 60,936 persons. The increases in other periods were 278,059 between 1881 and 1891, and 130,818 and 191,206 respectively in the two decennial periods prior to 1881. Population, 1861–1911.

The proportions of sexes at the six census enumerations were:— Proportions of sexes, Victoria.

Year.	Females to 100 Males.
1861	64.41
1871	82.40
1881	90.75
1891	90.57
1901	98.94
1911	100·91

The numbers of the sexes are more on an equality in Victoria than in any of the other States. This will be apparent from the following figures which show that while in Western Australia there Proportions of sexes in Australia and New Zealand.

are only 75 females, and in Queensland 84, to every 100 males, in Victoria the proportion is 101 to 100:—

PROPORTION OF THE SEXES IN AUSTRALIA AND NEW ZEALAND, 1911.

	Females to 100 Males.		Females to 100 Males.
Victoria	100·91	Western Australia ...	74·95
New South Wales ...	92·17	Tasmania	96·12
Queensland	83·86		
South Australia Proper ...	96·93		
" " Northern Territory	20·16	Australia	92·78
		New Zealand	89·60

Population of Greater Melbourne, 1911.

The following table shows for Greater Melbourne its area in acres, its enumerated population, and the number of persons to the acre at the census of 1911, in the various municipalities:—

POPULATION, &C., OF GREATER MELBOURNE, 1911.

Sub-District.	Area in Acres.	Enumerated Population at the Census of 1911.	Persons to the acre.
Melbourne City	7,658	103,345	13·5
Fitzroy City	923	34,199	37·1
Collingwood City	1,139	34,259	30·1
Richmond City	1,430	40,310	28·2
Brunswick City	2,722	32,197	11·8
Northcote Town	2,850	18,096	6·4
Prahran City	2,320	45,665	19·7
South Melbourne City	2,311	46,097	20·0
Port Melbourne Town	2,366	13,501	5·7
St. Kilda City	2,049	25,557	12·5
Brighton Town	3,288	12,068	3·7
Essendon City	4,000	23,696	5·9
Hawthorn City	2,400	24,407	10·2
Kew Town *	3,553	11,148	3·1
Footscray City	2,577	23,473	9·1
Williamstown Town	2,775	15,267	5·5
Oakleigh Borough	2,178	2,164	1·0
Caulfield Town	6,080	15,693	2·6
Malvern City †	4,000	15,486	3·9
Camberwell Town	8,320	12,462	1·5
Preston Shire	8,800	5,038	·6
Coburg Borough	4,800	9,499	2·0
Remainder of District	84,941	23,983	·3
Shipping in Hobson's Bay and River	...	4,220	...
Total, including Shipping ...	163,480	591,830‡	3·6

* Kew was constituted a town on 8th December, 1910. † Malvern was proclaimed a city on 30th May, 1911. ‡ First count.

Density of metropolitan population.

Fitzroy is the most thickly populated municipality, with about 37 persons to the acre; Collingwood has 30; Richmond, 28; Prahran and South Melbourne about 20; and Melbourne City 13 persons.

There are large areas devoted to parks, gardens, and other reserves in many of the municipalities, so that the population is really living closer together than these figures indicate. Melbourne City contains 1,985 acres of such reserves, Kew 634, South Melbourne, 494, Williamstown 455, St. Kilda 278, Caulfield 265, Richmond 206, and Brighton 157 acres. There are smaller areas in other districts, but they do not appreciably affect the question of density of population. The total area of all the reserves is 5,550 acres, and if these be excluded, the number of persons to the acre in the places named will be as follows:—Richmond 33, South Melbourne 25, Melbourne City 18, St. Kilda 14, Williamstown 7, and Kew 4; but in Brighton and Caulfield the proportions will remain about the same.

Greater Melbourne —Increase of population.

The following return has been prepared, showing the populations of the municipal districts in Greater Melbourne in 1891, 1901, and 1911, the totals of these three years being respectively 490,896, 496,079, and 591,830. There was a falling off in the cities of Melbourne, Fitzroy, Collingwood, Richmond, Footscray, and South Melbourne from 1891 to 1901, but a recovery from the latter year to 1911. North Melbourne and Flemington and Kensington were annexed by Melbourne during 1905, and the figures for that city in 1891 and 1901 have been adjusted to include these districts. In Prahran, St. Kilda, Brunswick, Essendon, and Hawthorn, there has been a continued increase. Of the towns, Port Melbourne and Williamstown fell away up to 1901, but slightly recovered to 1911. There has been a continued increase in Northcote, Brighton, Malvern, Caulfield, Camberwell, and Kew. In the borough of Oakleigh the increase has been continuous. The same remark applies to Coburg, which was a shire in 1891 and 1901, but became a borough in 1905. In the shire of Preston there has been an increase in each period. In the parts of shires included in the Greater Melbourne area, the population was 14,217 in 1891; 15,445 in 1901; and 23,983 in 1911.

RETURN SHOWING THE POPULATION OF GREATER MELBOURNE IN 1891, 1901, AND 1911.

Municipal Districts.	Population at the Census of—		
	1891.	1901.	1911.
Cities—			
Melbourne	104,316	97,440	103,345
Fitzroy	32,453	31,687	34,199
Collingwood	35,070	32,749	34,259
Richmond	38,797	37,824	40,310
Brunswick (Town 1891 and 1901) ..	21,961	24,141	32,197
Prahran	39,703	40,441	45,665
South Melbourne	41,724	40,619	46,097
St. Kilda	19,838	20,542	25,557
Essendon (Town 1891 and 1901) ..	14,411	17,426	23,696
Hawthorn	19,585	21,430	24,407
Footscray	19,149	18,318	23,473

RETURN SHOWING THE POPULATION OF GREATER MELBOURNE IN 1891, 1901, AND 1911—*continued.*

Municipal Districts.	Population at the Census of—		
	1891.	1901.	1911.
Towns—			
Northcote	7,458	9,677	18,096
Williamstown	15,960	14,052	15,267
Port Melbourne (Borough 1891) ..	13,067	12,176	13,501
Brighton	9,858	10,047	12,068
Malvern (Shire 1891)*	8,136	10,619	15,486
Caulfield (Shire 1891)	8,005	9,541	15,693
Camberwell (Shire 1891 and 1901) ..	6,204	8,602	12,462
Kew (Borough 1891 and 1901) ..	8,462	9,469	11,148
Boroughs—			
Oakleigh	1,236	1,273	2,164
Coburg (Shire 1891 and 1901) ..	5,752	6,772	9,499
Shires—			
Preston	3,569	4,059	5,038
Parts of Shires, forming remainder of District	14,217	15,445	23,983
Shipping in Hobson's Bay and River ..	1,965	1,730	4,220
Total	490,896	496,079	591,830

* Proclaimed a city 30th May, 1911.

Metropolitan population compared with remainder of State.

In the next return Victoria is divided into two districts—the Metropolitan (Greater Melbourne) district, extending in all directions for a distance of 10 miles from the centre of the city, and the total space embraced in urban and rural districts outside that area. The population at the census of 1911, the ratio of the population of each district to that of the whole State, and the number of persons to the square mile, are as follows:—

METROPOLITAN POPULATION COMPARED WITH THAT OF REMAINDER OF STATE, 1911.

Districts.	Estimated Area in Square Miles.	Enumerated Population, Census 1911.		
		Total.	Proportion per Cent.	Persons to the Sq. Mile.
Metropolitan	255	591,830	45·01	2,321
Other Urban and Rural	87,629	723,170	54·99	8·3
Total State	87,884	1,315,000	100·00	15·0

The urban is greater than the rural population, and the population of the metropolis alone is equal to 45 per cent. of that of the whole State. Proportion of metropolitan population.

PROPORTION OF POPULATION OF GREATER MELBOURNE TO THAT OF THE WHOLE OF VICTORIA.

Year.	Per cent.
1907 ...	42·7
1908 ...	43·1
1909 ...	43·3
1910 ...	44·4
1911 ...	45·0

Outside Melbourne and suburbs, the most important towns in Victoria are Ballarat, comprising three municipalities; Bendigo, two; Geelong, three; Castlemaine, two; Warrnambool, Maryborough, and Stawell, one each. The enumerated populations of these, with their immediate suburbs, according to the census of 1901, and estimates for 1910 were as follows:— Population of chief extra metropolitan towns.

POPULATION OF CHIEF TOWNS IN VICTORIA, 1901 AND 1910.

Name of Town.	1901 (Census).	1910 (Estimated).
Ballarat	49,414	44,000
Bendigo	42,701	42,000
Geelong	25,017	28,880
Castlemaine	7,912	8,000
Warrnambool	6,404	6,700
Wonthaggi	...	6,000
Maryborough	5,622	5,500
Stawell	5,318	5,250

There are many other important towns in Victoria, and the principal of these containing a population of 3,000 persons or over in 1910 are given below:—

Town.	Estimated Population in 1910.
Hamilton	5,000
Ararat	4,300
St. Arnaud	4,030
Wangaratta	4,030
Daylesford	3,880
Echuca	3,867
Horsham	3,750
Colac	3,650
Sale ...	3,600
Maldon	3,500
Kyneton	3,400
Bairnsdale	3,120
Shepparton	3,100

Rates of increase of population.

The average annual rates at which the population has increased (1) in the whole State, (2) in Melbourne and Suburbs, and (3) in remainder of State are shown hereunder:—

AVERAGE ANNUAL RATE OF INCREASE IN POPULATION IN THE WHOLE STATE, IN MELBOURNE AND SUBURBS, AND IN REMAINDER OF STATE, 1850 TO 1910.

Period.	In Victoria.		In Melbourne and Suburbs.		In Remainder of State.	
	Rate of Natural Increase.	Rate of Total Increase.	Rate of Natural Increase.	Rate of Total Increase.	Rate of Natural Increase.	Rate of Total Increase.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1850–60 ...	2·01	21·59	*	13·62	*	26·67
1860–70 ...	2·46	3·05	1·96†	3·91	2·63†	2·74
1870–80 ...	1·87	1·70	1·33	3·31	2·11	1·01
1880–90 ...	1·66	2·80	1·53	5·56	1·74	1·17
1890–1900...	1·47	·55	1·36	·25	1·55	·77
1901 ...	1·26	1·28	·98	1·35	1·46	1·24
1902 ...	1·18	·26	·99	·25	1·31	·26
1903 ...	1·15	–·06	·95	·58	1·29	–·51
1904 ...	1·27	·28	1·05	1·14	1·42	–·34
1905 ...	1·27	·85	1·05	1·64	1·43	·27
1906 ...	1·27	1·26	1·02	2·06	1·46	·67
1907 ...	1·35	1·28	1·14	2·35	1·51	·49
1908 ...	1·22	·84	1·02	2·62	1·37	–·51
1909 ...	1·35	1·56	1·16	2·85	1·49	·56
1910 ...	1·29	1·31	1·07	2·57	1·47	·30

* Not available. † Average 1862–1870.

It will be observed that the rate of natural increase (excess of births over deaths) has at all periods been less in Melbourne than in other portions of the State, while the rate of total increase has usually been greater. It would appear from this that the metropolis has been gaining population at the expense of the country districts. The higher rate of natural increase in extra-metropolitan areas is due principally to the low death rates there prevailing, and this favorable mortality can only be partially accounted for by the migration from country to town of persons in indifferent health. The greater vitality in country districts shows the advantage to be derived from a large increase in the population of these portions of the State.

The following table shows the population of each Australian State and New Zealand at each census from 1851 to 1911:— Population of Australia and New Zealand, 1851-1911.

POPULATION OF THE SIX STATES OF AUSTRALIA AND NEW ZEALAND, 1851-1911.

State.	1851.	1861.	1871.	1881.	1891.	1901.	1911.*
Victoria ..	77,345	540,322	731,528	862,346	1,140,405	1,201,070	1,315,000
New South Wales ..	191,099	350,860	503,981	751,468	1,132,234	1,354,846	1,648,210
Queensland		30,059	117,960	213,525	393,718	498,129	603,908
South Australia ..	63,700	126,830	185,626	279,865	320,431	363,157	411,161
Western Australia ..	5,886	15,100	25,270	29,708	49,782	184,124	280,316
Tasmania ..	70,130	89,977	101,020	115,705	146,667	172,475	190,898
Australia ..	408,160	1,153,148	1,665,385	2,252,617	3,183,237	3,773,801	4,449,493
New Zealand	22,108	84,536	257,810	489,933	626,658	772,719	1,008,407

* First count.

In the next table is shown the enumerated population of each Australian State (excluding aborigines) at the census of 1911, also the increase of population since the census of 1901, and the number of persons to the square mile. Population of Australian States and New Zealand, 1911.

POPULATION OF EACH AUSTRALIAN STATE AND NEW ZEALAND, 2ND APRIL, 1911.

State.	Enumerated Population, 2nd April, 1911.			Increase since Census of 1901.	Persons to the Square Mile.
	Males.	Females.	Total.		
Victoria	654,523	660,477	1,315,000	113,930	14·96
New South Wales ..	857,666	790,544	1,648,210	293,364	5·31
Queensland	328,457	275,451	603,908	105,779	·90
South Australia Proper	209,832	201,329	411,161	48,004	·45
„ „ Northern Territory					
Western Australia ..	160,222	120,094	280,316	96,192	·29
Tasmania	97,335	93,562	190,898	18,423	7·28
Australia	2,308,036	2,141,457	4,449,493	675,692	1·50
New Zealand ..	531,858	476,549	1,008,407	235,688	9·63

Australian States—Increase of population, 1851 to 1911.

The following table contains particulars as to the movement of population by immigration and emigration, and the natural increase by excess of births over deaths in each of the Australian States since 1851:—

TABLE SHOWING INCREASE OF POPULATION IN AUSTRALIAN STATES, 1851 TO 1911.

Period.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia	Tasmania.	Australia.
Increase by Excess of Immigration over Emigration.							
1851–61 (Census period)	400,045	126,314		35,750	6,510	7,709	576,328
1861–71 „	41,789	48,247	68,581	17,060	6,386	– 5,183	176,880
1871–81 „	– 15,322	107,536	58,904	45,032	– 135	– 770	195,245
1881–91 „	116,950	164,424	114,835	– 28,275	12,973	5,993	386,900
1891–01 „	– 111,577	223	16,693	– 16,121	118,441	– 2,179	5,480
1901–11 „	– 42,891	45,326	17,803	– 6,113	51,925	– 14,905	51,145
Total ..	388,994	492,070	276,816	47,333	196,100	– 9,335	1,391,978
Natural Increase (*i.e.*, Excess of Births over Deaths).							
1851–61 (Census period)	62,932	63,506		27,380	2,704	12,138	168,660
1861–71 „	149,417	104,874	19,320	41,736	3,784	16,226	335,357
1871–81 „	146,140	139,951	36,661	49,207	4,573	15,455	391,987
1881–91 „	161,109	209,705	65,358	68,841	7,101	24,969	537,083
1891–01 „	172,513	226,676	87,718	58,294	15,901	27,987	589,089
1901–11 „	156,821	248,038	87,976	54,117	44,267	33,328	624,547
Total ..	848,932	992,750	297,033	299,575	78,330	130,103	2,646,723
Total Increase.							
1851–61 (Census period)	462,977	189,820		63,130	9,214	19,847	744,988
1861–71 „	191,206	153,121	87,901	58,796	10,170	11,043	512,237
1871–81 „	130,818	247,487	95,565	94,239	4,438	14,685	587,232
1881–91 „	278,059	374,129	180,193	40,566	20,074	30,962	923,983
1891–01 „	60,936	226,899	104,411	42,173	134,342	25,808	594,569
1901–11 „	113,930	293,364	105,779	48,004	96,192	18,423	675,692
Total ..	1,237,926	1,484,820	573,849	346,908	274,430	120,768	4,038,701

Some very interesting results are disclosed by this table. During the ten years 1901-11 Australia gained 51,145 persons by immigration—there being increases from this source in Western Australia, New South Wales, and Queensland, and decreases through excess of emigration over immigration in the other States, Victoria losing no less than 42,891 persons. Over the whole period of 60 years the excess of births over deaths contributed 66 per cent. to the total increase of population, excess of immigration over emigration being responsible for the remaining 34 per cent. Tasmania is the only State which has suffered a loss of population by migration since 1851, the departures by sea since that date having exceeded the arrivals by 9,335 persons.

Effective strength of population in Australasia.

The subjoined tabulation shows, according to the census of 1901, the number of persons at the supporting and dependent ages, in each of the Australian States and in New Zealand, in every 10,000 of the population:—

STRENGTH OF AUSTRALASIAN POPULATION, 1901.

State or Colony.	Numbers in every 10,000 Persons living.		
	At Supporting Ages (15 to 65 Years).	At Dependent Ages.	
		Under 15 Years.	65 Years and upwards.
1. Western Australia ...	6,920	2,899	181
2. New Zealand	6,255	3,339	406
3. New South Wales	6,055	3,601	344
4. Queensland	6,048	3,693	259
5. Victoria	6,030	3,418	552
6. South Australia	6,024	3,564	412
7. Tasmania	5,877	3,716	407

Relative strength population of Australasia.

Western Australia stands, as might be expected, far ahead of all the States in the relative strength of its population, and this is undoubtedly due to the development of gold mining there and the consequent large immigration of adult males from all the adjoining States. New Zealand occupies the second position, and Victoria, which ten years before was second only to Western Australia in this respect, has fallen to the fifth place on the list. Tasmania has relatively the weakest population of any of the States.

Old persons in Australasia.

Victoria has the largest proportion of old people in its population, viz., 552 per 10,000, and is followed by South Australia with 412, Tasmania with 407, and New Zealand with 406. In New South Wales, Queensland, and Western Australia the proportions are much lower.

Population of Australasian Capital Cities, 1861-1911.

The enumerated population of Australasian capital cities during the past 50 years is shown in the following table. Melbourne during that time has made good progress, more especially in the decennial period, 1881-91, when the increase was 73 per cent. Between 1891 and 1901 the population remained almost stationary, but in the intercensal period 1901 to 1911 there was an increase of 95,751. Sydney, which since 1902 has been the most populous city in Australasia, had 637,102 inhabitants in 1911. These two cities contain 27½ per cent. of the population of the Commonwealth. Perth has

made a remarkable advance since 1891, when the enumerated population was about 8,500; this had increased to 56,204 in 1911.

POPULATIONS OF AUSTRALASIAN CAPITAL CITIES, 1861 TO 1911.

Capital City (with Suburbs).	Enumerated Population at the Census of—						Persons to the Acre, 1911.
	1861.	1871.	1881.	1891.	1901.	1911.*	
Melbourne ..	139,916	206,780	282,947	490,896	496,079	591,830	3·62
Sydney ..	95,789	137,776	224,939	383,283	481,830	637,102	6·69
Brisbane ..	6,051	15,029	31,109	101,554	119,428	141,027	·72
Adelaide ..	18,303	42,744	103,864	133,252	162,094	193,294	1·15
Perth ..	3,507	5,445	5,822	8,447	36,274	56,204	2·72
Hobart ..	24,773	26,004	27,248	33,450	34,604	38,055	4·75
Wellington ..	4,176	7,908	20,563	34,190	49,344	70,729	4·47

* First count.

Density of population in capital cities.

It will be noticed that the population of Sydney is more concentrated than that of any other metropolitan city, and that the population of Melbourne is spread over about double the area. In Adelaide there is only about one person, and in Brisbane less than one person, to the acre.

Populations of Principal Towns in Australia and New Zealand.

The populations of the principal towns in Australia and New Zealand are given in the following statement. In most cases the immediate suburbs are included. The figures relating to the capital cities are given as at the census date, 1911. In nearly all other instances the particulars are estimates for the year 1910:—

POPULATIONS OF PRINCIPAL TOWNS IN AUSTRALIA AND NEW ZEALAND.

	Population.
VICTORIA.	
Melbourne (Census 1911)	591,830
Ballarat	44,000
Bendigo	42,000
Geelong	28,880
Castlemaine	8,000
Warrnambool	6,700
Maryborough	5,500
Stawell	5,250
Hamilton	5,000
NEW SOUTH WALES.	
Sydney and Suburbs (Census 1911)	637,102
Newcastle and Suburbs ...	65,500
Broken Hill	30,600
Parramatta	13,600
Maitland East and West ...	12,500
Goulburn	10,900
Bathurst	10,000
Lithgow	8,700
Granville	8,300
Lismore	7,900
Grafton and Grafton South	7,700
Tamworth	7,430
Orange and Orange East ...	7,100
Albury	7,000
Wagga Wagga	6,600
Rookwood	5,700

	Population.
NEW SOUTH WALES—*continued.*	
Cobar	5,700
Auburn	5,400
Dubbo	5,400
Armidale	5,200
Katoomba	5,200
Illawarra North	5,100
Illawarra Central ...	5,000
Forbes	5,000
Prospect and Sherwood ...	5,000
Wellington	4,800
Inverell	4,700
Liverpool	4,700
Wollongong	4,600
Mudgee	3,650
QUEENSLAND.	
Brisbane (Census 1911) ...	141,027
Toowoomba	41,457
Rockhampton	28,690
Charters Towers... ...	25,500
Ipswich	23,354
Gympie	18,450
Townsville	15,500
Bundaberg	15,190
Mount Morgan	14,750
Mackay	14,000
Maryborough	13,500
Cairns	9,000

Populations of Principal Towns in Australia and New Zealand—*continued.*

South Australia.

	Population.
Adelaide and Suburbs (Census 1911)	193,294
Port Pirie	11,864
Wallaroo	4,128
Mount Gambier	3,659

Western Australia.

Perth	56,204
Kalgoorlie (including Boulder, 10,357)	29,242
Fremantle	20,000
Midland Junction ...	4,157
Claremont	3,802
Bunbury	3,560
Albany	3,211
Broome	3,000
Northam	2,942
Geraldton	2,593
Coolgardie	2,222

Tasmania.

Hobart (Census 1911) ...	38,055
Launceston	21,778
Zeehan	9,053

Tasmania—*continued.*

	Population.
Devonport	5,105
Beaconsfield	5,058
Queenstown	4,916
Queensborough	3,493
Glenorchy	3,199
Gormanston	3,152
St. Leonards	3,058
New Town	3,031

New Zealand.

Auckland (Census 1911) ...	102,676
Christchurch " " ..	78,442
Wellington " " ...	70,729
Dunedin " " ...	64,237
Invercargill	15,000
Palmerston North ...	13,039
Timaru	12,000
Napier	11,277
Wanganui	11,120
Nelson	8,954
Petone	7,500
Greymouth	5,633
Masterton	5,538
Oamaru	5,536
New Plymouth	5,502
Lyttelton	4,300

Populations of British Dominions.

The following table gives the distribution of population throughout the whole of the British Empire, and includes all protectorates except Egypt, the Soudan, and Johore:—

British Dominions.—Areas and Populations.

Territory.	Estimated Area, Square Miles.	Year of Census (c) or Estimate.	Ascertained or Estimated Population.	Population per Square Mile.
European.				
England and Wales ..	58,324	1911 (c)	36,075,269	619
Scotland	29,796	„	4,759,445	160
Ireland	32,605	„	4,381,951	134
Isle of Man	227	„	50,542	223
Channel Islands.. ..	75	1901 (c)	95,841	1,278
Total United Kingdom	121,027	..	45,363,048	375
Gibraltar	2	1909	18,351	9,175
Malta	117	„	215,879	1,845
Total	121,146	..	45,597,278	376

BRITISH DOMINIONS.—AREAS AND POPULATIONS—*continued.*

Territory.	Estimated Area, Square Miles.	Year of Census (*c*) or Estimate.	Ascertained or Estimated Population.	Population per Square Mile.
ASIATIC.				
British India	1,097,821	1911 (*c*)	315,000,000	178
Feudatory Native States	675,267			
British North Borneo ..	31,106	1909	160,000	5
Brunei	4,000	,,	30,000	8
Ceylon	25,332	,,	4,082,936	161
Cyprus	3,584	,,	261,587	73
Federated Malay States ..	27,700	,,	969,440	35
Hong Kong	49	,,	343,877	7,018
Labuan	30	,,	8,231	274
Sarawak	42,000	,,	500,000	12
Straits Settlements ..	1,600	,,	636,961	398
Weihaiwei	285	1905	150,000	526
Others	1,803	1901 (*c*)	158,228	88
Total	1,910,577	..	322,301,260	169
AFRICAN.				
Basutoland	10,293	1904 (*c*)	348,626	34
Bechuanaland Protectorate	275,000	1909	137,200	·50
British East Africa Protectorate	181,661	,,	4,000,000	22
Mauritius and Dependencies	835	,,	379,186	454
Nigeria	332,960	,,	15,661,700	47
Nyasaland	39,801	,,	923,335	23
Rhodesia	439,575	,,	1,623,000	4
Somaliland	68,000	,,	348,000	5
Union of South Africa ..	473,184	1911 (*c*)	5,938,499	13
Uganda Protectorate ..	223,500	1909	2,660,609	12
Zanzibar	1,020	,,	197,199	193
Others	161,762	,,	2,872,414	18
Total	2,207,591	..	35,089,828	16
AMERICAN.				
Bermudas	19	1907	19,229	1,012
British Guiana	90,500	1909	305,097	3
Canada	3,729,665	1911 (*c*)	8,000,000	2·14
Falkland Islands ..	6,500	1909	2,323	·36
Honduras	8,598	,,	44,156	5
Labrador	120,000	,,	4,026	·03
Newfoundland	42,734	,,	234,588	5
West Indies	12,021	,,	1,795,020	149
Total	4,010,037	..	10,404,439	2·6

BRITISH DOMINIONS.—AREAS AND POPULATIONS—*continued.*

Territory.	Estimated Area, Square Miles.	Year of Census (*c*) or Estimate.	Ascertained or Estimated Population.	Population per Square Mile.
AUSTRALASIAN.				
Australia	2,974,581	1911 (*c*)	4,449,493	1·5
New Zealand	104,751	„	1,008,407	9·6
Papua	90,540	1909	350,000	3·9
Total	3,169,872	..	5,807,900	1·8
OCEANIC.				
Fiji	7,740	1909	133,831	17
Tonga	390	„	21,958	56
British Solomon Islands ..	12,000	„	150,310	13
Gilbert and Ellice Islands	166	„	35,000	211
Total	20,296	..	341,099	17
GRAND TOTAL of British Dominions	11,439,519	..	419,541,804	36·7

Population of the World.

The estimated population of the world is given below. Arctic regions are included in the continents to which they belong; Antarctic regions are too ill-defined to enable an approximate calculation of the distribution of land and water to be made:—

THE WORLD.—ESTIMATES OF AREA AND POPULATION.

Divisions.	Area in Square Miles (000's omitted).	Estimated Population (000's omitted).	Population per Square Mile.
Europe	3,860,	440,864,	114·2
Asia	17,000,	950,000,	55·9
Africa	11,500,	150,000,	13·0
North America	8,548,	130,000,	15·2
South America	7,342,	47,000,	6·4
Australasia and Polynesia ..	3,400,	7,400,	2·2
Total	51,650,	1,725,264,	33·4

Populations of the principal cities of the World.

The following list contains the latest estimated populations of some of the principal cities of the world. In most cases capital cities have been selected, but when their importance warranted it, others have been included :—

POPULATIONS OF THE PRINCIPAL CITIES OF THE WORLD.

City.	Country.	Year of Enumeration or Estimate.	Population.
Greater London ..	England	1911	7,252,963
New York	United States ..	1910	4,803,264
Paris	France	1906	2,722,731
Tokio	Japan	1908	2,186,079
Chicago	United States ..	1910	2,185,283
Vienna	Austria	1910	2,107,981
Berlin	Prussia	1910	2,053,049
St. Petersburg	Russia	1910	1,577,892
Philadelphia	United States ..	1910	1,549,008
Moscow	Russia	1910	1,493,600
Buenos Aires	Argentine Republic ..	1910	1,270.234
Osaka	Japan	1908	1,226,590
Constantinopie.. ..	Turkey	1909	1,200,000
Calcutta	India	1910	1,031,206
Canton	China	1908	1,000,000
Bombay	India	1906	977,822
Manchester (with Salford)	England	1910	960,990
Hamburg	Germany	1910	917,750
Glasgow	Scotland	1910	884,505
Rio de Janeiro ..	Brazil	1910	870,475
Buda-Pest	Hungary	1910	833,703
Tient-sin	China	1909	800,000
Liverpool	England	1910	767,606
Warsaw	Russia	1908	764,054
Brussels	Belgium	1910	720,000
Pekin	China	1908	700,000
Cairo	Egypt	1910	683,353
Sydney	New South Wales ..	1911	637,102
Bangkok	Siam	1909	628,675
Milan	Italy	1910	611,184
Melbourne	Victoria	1911	591,830
Rome	Italy	1910	590,113
Munich	Bavaria	1910	590,000
Madrid	Spain	1910	571,539
Birmingham	England	1910	570,113
Amsterdam	Holland	1910	570,057
Madras	India	1910	568,146
Barcelona	Spain	1910	560,000
Dresden	Saxony	1910	542,500
Breslau	Prussia	1910	506,175
Montreal	Canada	1909	500,000
Prague	Austria	1910	497,905
Mexico	Mexico	1910	470,659
Copenhagen	Denmark	1910	459,000
Rotterdam	Holland	1910	422,132
Dublin	Ireland	1910	402,928
Belfast	Ireland	1910	391,167
Toronto	Canada	1909	380,000

POPULATIONS OF THE PRINCIPAL CITIES OF THE WORLD—*continued.*

City.	Country.	Year of Enumeration or Estimate.	Population.
Edinburgh	Scotland	1910	360,276
Lisbon	Portugal	1900	356,009
Stockholm	Sweden	1910	342,908
Washington	United States ..	1910	331,069
Antwerp	Belgium	1910	327,668
The Hague	Holland	1910	274,236
Christiania	Norway	1910	240,178
Adelaide	South Australia ..	1911	193,294
Venice	Italy	1910	183,224
Johannesburg	Transvaal	1909	180,687

It will be seen from the above table that Sydney is the seventh city in the British Empire, and Melbourne the eighth.

Chinese and Aborigines in Victoria.

In the subjoined table is given the population of Victoria at the last six census enumerations, Chinese and Aborigines being distinguished so far as particulars are available:—

POPULATION OF VICTORIA, DISTINGUISHING CHINESE AND ABORIGINES, AT SIX CENSUS PERIODS.

Year of Census.	Total Population—including Chinese and Aborigines.			Chinese.			Aborigines.		
	Persons.	Males.	Females.	Persons.	Males.	Females	Persons.	Males.	Females
1861	540,322	328,651	211,671	24,732	24,724	8	1,694	1,046	648
1871	731,528	401,050	330,478	17,935	17,899	36	1,330	784	546
1881	862,346	452,083	410,263	12,128	11,869	259	780	460	320
1891	1,140,405	598,414	541,991	9,377	8,772	605	565	325	240
1901	1,201,341	603,883	597,458	7,349	6,740	609	652	367	285
1911	1,315,000	654,523	660,477	..	..	..	..	..	..

Decrease of Chinese.

Chinese first began to arrive in Victoria in 1853, and at the census of 1854, 2,000 were enumerated. In 1857, when the next census was taken, they had increased to 25,424; and at the end of 1859 it was estimated that they numbered no less than 42,000. Soon after this an exodus of Chinese took place, chiefly to New South Wales, it being estimated that besides those who departed by sea, as many as 11,000 went over the frontier to work at the Lambing Flat diggings in that colony. In consequence of this the census of 1861 showed the number of Chinese remaining in Victoria to be only 24,732, or 692 less than in 1857. Since 1861 there has been a continuous decrease in the Chinese population. At the census of 1901 they reached a total of only 7,349 (of whom 609 were females —111 pure race and 498 half-castes), and by the end of 1910 it was estimated that they numbered only 6,700. The Chinese Immigration Restriction Act passed in December, 1888 (afterwards

Chinese Restriction Act 1890), was largely instrumental in later years in limiting the number of Mongolian immigrants. This Act provided that no vessel should enter any port in this State having on board more than one Chinese to every 500 tons of her burden, and that in the event of any vessel bringing more than this proportion, her owner, master, or charterer would be liable to a penalty of £500 for every one by which it should be exceeded; also that any Chinese who should enter Victoria by land should obtain a permit in writing from an officer duly appointed to grant it, and failing to do so should be liable to a penalty ranging from £5 to £20. Under the Immigration Restriction Act of the Commonwealth, the practice is not to permit the landing of Chinese unless they pass the prescribed dictation test, or hold permits dispensing with that condition.

The principal occupations in which Chinese engage are market gardening, mining, furniture-making, laundrykeeping, storekeeping, and retailing fruit and vegetables. At the date of the census in 1901 the conjugal condition of the Chinese population was ascertained. Of the total of 7,349 persons of both sexes, only 443 were married, 66 were widowed, 6,838 had never entered the married state, and 2 were unspecified.

Decrease of Aborigines.

At the first colonization of Victoria the Aborigines were officially estimated to number about 5,000, but according to other and apparently more reliable estimates they numbered at that time not less than 15,000. When the colony was separated from New South Wales, the number was officially stated to be 2,693. At the 1901 census there were enumerated 652 Aborigines, consisting of 271 of pure blood and 381 half-castes. These figures indicate that the race is gradually but surely dying out, for, although the half-castes had increased by 133 since 1891, the pure race showed a decrease of 46 in the ten years. From the report of the Aborigines Board, dated 2nd November, 1910, it would appear that a fair proportion of the pure race and half-castes is under the care of that body, in the following mission stations:—

NUMBER OF ABORIGINES UNDER CARE AT MISSION STATIONS IN VICTORIA, 1909-10.

Station.	Area of Reserves.	Total Number under care.
	Acres.	
Coranderrk	2,400	61
Lake Condah	2,050	50
Lake Tyers	4,000	73
Framlingham	548	39
Colac and Lake Moodemere	41	..
Depôts	..	33
Total	9,039	256

Of the Aborigines not enumerated in the table, some are residing elsewhere than at the mission stations, but receive supplies of food and clothing when they call; while others prefer to lead a wandering life, and but rarely come under the notice of the Board.

During the year 1909-10 twenty deaths occurred—eight at Coranderrk, five at Lake Condah, and seven at Lake Tyers. There were seven births—one at Lake Condah, and three each at Coranderrk and Lake Tyers. Four marriages took place at Coranderrk.

Expenditure on Aborigines.

The total amount expended on the maintenance of Aborigines during the year was £4,226. The following statement contains particulars of the net cost of Aborigines in Victoria (including cost of administration) from 1851 to 1910:—

Amount expended	£366,569
Revenue from stations paid into the Consolidated Revenue	13,152
Net cost	353,417

Arrivals and departures of Chinese.

During the three years 1907, 1908, and 1910, a greater number of Chinese entered than left Victoria, but during the years 1906 and 1909 the reverse was the case. The net decrease in the Chinese population in the five years mentioned in the following table by excess of emigration over immigration was 14. The figures for each year are:—

CHINESE IMMIGRATION AND EMIGRATION, 1906 TO 1910.

Year.	Immigrants.	Emigrants.	Excess of—Arrivals (+). Departures (-).
1906	376	526	- 150
1907	464	419	+ 45
1908	566	448	+118
1909	523	556	- 33
1910	424	418	+ 6
Total	2,353	2,367	- 14

Immigration and emigration of coloured persons, 1901 to 1910.

With a view to restricting the immigration of Asiatics and other coloured persons, the Commonwealth Parliament passed the Immigration Restriction Act in 1901, which provides that any person, who, when asked to do so by a public officer, fails to write out from dictation and sign in the presence of the officer, a passage of fifty words in any prescribed language, is prohibited from landing in Australia. Certificates of exemption are granted in certain cases, and members of the military and naval forces, as well as the master and crew of any public vessel of any government, are excepted. The Act appears to have achieved its purpose, judging by the small

number of coloured persons who have been admitted to the Commonwealth since it commenced to operate. The following are the numbers of coloured persons, other than Chinese, who have entered or left Victoria since 1st April, 1901:—

IMMIGRATION AND EMIGRATION OF COLOURED PERSONS (OTHER THAN CHINESE) FROM 1ST APRIL, 1901, TO 31ST DECEMBER, 1910.

Year.	Immigrants.	Emigrants.	Excess of— Arrivals (+) Departures (−).
From 1st April, 1901, to 31st Dec., 1901	609	483	+126
1902	307	525	− 218
1903	96	92	+ 4
1904	48	75	− 27
1905	58	136	− 78
1906	71	129	− 58
1907	41	79	− 38
1908	64	62	+ 2
1909	69	69	..
1910	137	156	− 19
Total	1,500	1,806	− 306

Coloured persons in Victoria, 1901 and 1910.

The number of coloured persons in Victoria was ascertained at the census of 1901, and the information then collected gave a total of 7,349 Chinese and 1,273 other coloured persons at that time. It is believed that these numbers had diminished by the end of 1910, the Chinese being then estimated at about 6,700, and other coloured persons at 1,000.

NUMBER OF PERSONS OF COLOURED RACES (EXCLUSIVE OF ABORIGINES) IN VICTORIA AT THE CENSUS OF 1901.

Birthplace.	Persons.	Birthplace.	Persons.
Chinese—		Other Asiatic countries—	
Born in China	6,160	British India	772
„ Hong Kong ..	49	Syria	344
„ Singapore ..	8	Japan	55
„ Victoria	1,091	Others	81
„ other British colonies	39		
„ at Sea	1	Total other Asiatic countries	1,252
Unspecified	1		
		Polynesia	2
Total Chinese ..	7,349	Africa	19
		Grand Total Coloured Persons	8,622

Naturalization.

Under the "Commonwealth Naturalization Act No. 11 of 1903," the right to issue certificates of naturalization was taken from the States, and vested in the Commonwealth. This Act came into force on 1st January, 1904. All persons who, prior to that date, had been granted letters or certificates of naturalization in the various States are to be deemed naturalized. To obtain a certificate a person, not being an aboriginal native of Asia, Africa, or any of the islands of the Pacific (excepting New Zealand), must have resided in Australia continuously for the two years immediately preceding the application, and must produce, in support of his application, a statutory declaration stating his name, age, birthplace, occupation, and residence, the length of his residence in Australia, and that he intends to settle in the Commonwealth, in addition to a certificate of good character signed by a justice of the peace, postmaster, State school teacher, or police officer. If a person has been naturalized in the United Kingdom, he must produce the certificate, also a declaration that he is the person named in it, that he obtained it without any fraud or misstatement, and that he intends to settle in the Commonwealth. An alien woman who marries a British subject becomes naturalized thereby. Children of naturalized parents, who have at any time resided in Australia with their father or mother, have all the rights, powers, and privileges of naturalized persons, and this provision also applies to the children of an alien mother married to a natural-born British subject, or to a person who has obtained a certificate of naturalization. Under the State Act Chinese were allowed to take out letters of naturalization, but owing to the large increase in such applications, 1,178 of which were granted in 1885, it was decided in 1886 to issue no more "unless a sufficient reason was assigned," with the result that only 173 were issued in 1886, and 16 in 1887, and none have been granted since then. The following are the native countries of persons naturalized in Victoria from 1871 to 1910, from which it will be seen that about 32 per cent. of the total were Germans, and 26 per cent. Chinese:—

NATURALIZATION, 1871 TO 1910.

Native Places.	Numbers Naturalized in each Year.					Total Naturalized, 1871 to 1910.
	1906.	1907.	1908.	1909.	1910.	
France	11	11	8	7	12	273
Belgium	3	1	3	1	5	47
Austria	11	7	4	13	4	260
Germany	115	63	95	226	128	3,639
Russia	10	4	11	28	34	472
Norway and Sweden ...	48	52	37	70	44	3,526
Other European Countries	87	70	77	134	87	
United States ...	12	6	8	21	15	184
China	...	...	...	...	...	2,969
Other Countries ...	4	...	...	7	...	158
Total ...	301	214	243	507	329	11,528

Decrease of aliens in Australia.

With regard to Australia as a whole, it may here be mentioned that, according to the Commonwealth Statistics prepared in connexion with the Immigration Restriction Act, the number of persons of coloured races who arrived in Australia in 1910 was 3,993, and of those who departed 4,082, giving a departure balance of 89. Most of the coloured persons who left Australia were Chinese, Japanese, and Papuans, and of those who arrived, the greater number were formerly domiciled in the Commonwealth.

Chinese and Aborigines in Australasia.

The following is a statement of the number of Chinese and Aborigines in each Australian State at the census of 1901 and in New Zealand at the census of 1906:—

CHINESE AND ABORIGINES IN AUSTRALIA, 1901, AND NEW ZEALAND, 1906.

State.	Chinese.		Aborigines.			
			Full Blood.		Half-caste.	
	Males.	Females.	Males.	Females.	Males.	Females.
Victoria	6,740	609	163	108	204	177
New South Wales ..	10,590	673	2,451	1,836	2,108	1,885
Queensland ..	8,783	530	13,000	12,137	773	760
South Australia ..	3,280	175	14,076	12,357	349	341
Western Australia ..	1,526	43	2,933	2,328	492	459
Tasmania	536	72	..	..	79	78
Australia ..	31,455	2,102	32,623	28,766	4,005	3,700
New Zealand ..	2,515	55	23,387	20,406	2,151	1,787

Decrease of Chinese in Australia.

There are more Chinese in New South Wales and Queensland than in the other States, but they appear to be steadily diminishing in Australia as a whole. With the exception of Queensland and Western Australia, the number enumerated in 1901 was smaller than in 1891—the total decrease in Australasia in the decade amounting to about 6,100 persons. In Western Australia they increased from 917 to 1,569, and in Queensland from 8,574 to 9,313 in the same period.

Aborigines in Australia.

The enumeration of Aborigines, owing to their nomadic habits, was incomplete. In Victoria the number returned is believed to be correct, but in some of the other States—for example, Queensland—the figures given are only a rough approximation. The aboriginal race is extinct in Tasmania—the last male having died in 1869, and the last female in 1876. The Maoris enumerated at the census of 1906 in New Zealand show an increase of 4,588 over those returned in 1901, but this increase the authorities in New Zealand state may in part be attributable to more favorable circumstances having permitted a closer enumeration to be made on the later date than on previous occasions.