Victorian Year-Book, 1903.

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

The present official system of compulsory registration Registraof births, deaths, and marriages in Victoria has been in force tion. since 1853; and the registers-framed on the best models-are replete with all necessary information bearing on the family history of the people. The statutory duties under the Registration Acts are performed by the Government Statist, who has control over the local registrars of births and deaths, and (so far as regards their registration duties) of the officiating clergymen and lay registrars; and copies of all entries certified by him or by the assistant Government Statist, are primà facie evidence in the Courts of Australia of the facts to which they relate. At the head office in Melbourne there is kept for reference a complete collection of all registrations effected since 1st July, 1853, as well as certified copies or originals of all existing church records relating to earlier Church periods, as far back as 1837. For the registration of births and deaths, the State is divided into 634 registrars' districts, for each of which a registrar is appointed, who (if not a public servant) is paid by fees at the rate of 2s. 6d. per entry, but is not prevented from following his or her own private business; whilst the marriages are recorded by the clergyman or lay registrar who performs the ceremony. Registrations of marriages are made in triplicate, and of births and deaths in duplicate-each copy bearing the original signatures of the parties married and witnesses (in case of marriage), or of the informant (in case of a birth or death), and of the registrar. One copy is retained by the registrar or clergyman; one forwarded to the Government Statist-to be kept as a permanent record; and the third (in case of marriage only) is given to one of the parties married. The parents of a legitimate child born in Victoria, or the occupier of a house wherein a birth or death occurs, is required under a penalty of £10 to give notice (either personally or by authorized agent) to the registrar of the district within 60 days after the birth, and within 15 days after the death. (As an alternative, the notice may be given by the attending doctor or nurse). If an illegitimate child is born in any house or place of which the mother of the child is not the occupier, or if an illegitimate child, under 5 years of age, dies in, or its dead body is brought to, any house or place, the occupier must give notice to the deputy-registrar within 3 days if within any city, town, or borough, or to either the deputy-registrar or police officer in charge if elsewhere. In the case of an illegitimate birth, if the mother is the occupier the notice must be given within 3 weeks. The penalty for breach of this is imprisonment for 6 months or a penalty of £25. No fee is charged for registration, except in the case of a birth registered after 60 days, when 5s. is charged if within 12 months, and 12s. 6d. if over one year. By an Act

records.

(No. 1835), passed on the 6th April, 1903, an illegitimate child, whose parents marry after the passing of the Act, may, provided there was no lawful impediment, at the time of the birth, to the marriage of the parents, be legitimized if the birth be registered for that purpose within six months after the date of the marriage. If the parents had married before the passing of the Act, the child must have been registered within 6 months after the passing of the Act. 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.

MARRIAGES.

Marriages, 1899-1903.

Marriage rates. The number of marriages celebrated in Victoria during the year 1903 was 7,605, as against 8,477 in 1902, and 8,406 in 1901, and an average of 8,187 during the last five years.

The ordinary marriage rate is the number of marriages per 1,000 of the total population. Like the ordinary birth and death rates similarly estimated, it is only adapted to effect comparisons in old and settled communities where the age constitution of the people remains almost unchanged. It is not suitable for comparative purposes in newly settled countries, such as Australasia, especially in the earlier days. As, however, it furnishes a ready and closely approximate comparison between different years which are not widely separated, the figures are given for the last five years in Victoria:—

1899	6.86
1900	6.96
1901	6.97
1902	7.00
1903	6.29

It will be noticed that, although there was a steady increase from 1899 up to 1902, there was a sudden fall in 1903. The number of marriages celebrated in the latter year was less than in any year since 1897. Though the migration of marriageable men from Victoria accounts to some small extent for the reduction, yet the probable explanation of the decline in the marriage rate is to be found in the prevailing economic conditions.

Factors in marriage rates. It has been shown upon more than one occasion that the frequency of marriage is not dependent upon the number of the total population, still less upon the number of marriageable women, but almost entirely upon the number of marriageable men the community contains, the tendency of whom to

marry is modified by their occupations, and upon the view they take of their future prospects. To demonstrate this, the following table has been constructed showing the proportion of marriages to the population, to the number of single men, and to the number of single women, in each census year from 1854 to 1901:---

PROPORTION OF MARRIAGES PER 1.000 OF POPULATION AND OF SINGLE MEN AND WOMEN, 1854-1901.

		Exclusive of Chinese and Aborigines.											
Year of Census.	Fnumerated	Number Marriageable—			Propor	Proportion of Marriages pe 1,000 of the—							
	Population.	Men.	Women.	Marriages.	Popula- tion.	Marriage- able Men.	Marriage- able Women.						
1854 1857 1861 1871 1881 1891 1901	···· ···· ····	234,361 383,668 513,896 712;263 849,438 1,130,463 1,102,240	70,865 95,427 106,940 89,921 99,824 163,048	$15,083 \\ 26,317 \\ 37,006 \\ 65,386 \\ 119,360 \\ 173,138 \\ 211 \\ 205 \\ 21$	3,696 4,465 4,528 4,715 5,732 9,007	15·77 11·64 8·81 6·62 6·75 7·97	52.1646.7942.3452.4357.4255.2455.24	245.04169.66122.3672.1148.0252.02					
1901	•••	1,193,340	154,334	211,087	8,468	7.08	54.87	40.12					

It will thus be observed that, whilst the proportion of Fluctuations marriages to the population (marriage rate) and to the marriage in marriage rate. able women has fluctuated considerably, the proportion to the marriageable men has been tolerably constant, the extremes being 571 in 1881, and 42 1-3 in 1861, and the usual range was between the narrow limits of 52 and 55. This proportion steadily diminished from 574 in 1881 to 55 in 1901, although the latter was higher than at any period prior to 1881. The proportion of marriages per 1,000 married women, on the other hand, has fallen off considerably. Even in the more settled times, after the gold rush, it fell from 72 in 1871 to a level of about 50 in 1881 and 1891, and still further to as low as 40 in 1901, owing to the generally increased proportion of marriageable women to men, which at the last period reached to as high as 137 per 100 men. In other words, the chances of a woman marrying in Victoria are now very much smaller than at any earlier period, the proportions having fallen from about 1 in every 4 of the marriageable women in 1854, 1 in 8 in 1861, to 1 in 20 in 1891, and 1 in every 25 in 1901.

To further investigate this subject, it will be interesting farriage 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

rates in cer-tain agegroups, 1881-1901.

15 and 50 at each of the last three census periods, and are shown in the following table:—

PROPORTION	\mathbf{OF}	MARRIAGES	PER	1,000	MAR	RIAGEABLE	IVLE N	AND
		Wome	N AT	EACH	AGE.			
								· · · · · · · · · · · · · · · · · · ·

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				Men.		Women.			
Age Group.		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	
3540			56.4	51.1	62.6	53.8	46.4	37.2	
4045			30.2	33.4	39.9	32.2	27.7	22.3	
455 0			21.8	25.9	29.8	22.1	17.8	14.3	
50 upwards		•••	10.2	9.1	9.1	4.9	4.2	2.4	
1545				····		55.9	58.7+	49.0	

Tendency amongst men to defer mar riage. 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 has been a marked decrease in the rates below, but an increase in the rates above that age. In 1901, as compared with 1891, however, there was a considerable increase in the rate at every age period except 20-25 and over 50.

Fall in marriage rates of women at all ages.

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

^{*} In the case of men 20-25.

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

There has been a sensible increase in the mean ages at Ages at marriage of both brides and bridegrooms during the last 20 years, as will be seen from the following statement, which shows for certain quinquennial periods the mean ages of brides marrying under 45 years of age, and of the bridegrooms marrying such brides:-

AGE AT MARRIAGE.

Period.		Brides under 45.	Bridegrooms of Brides under 45.
		24·13 years. 23·83 ,, 24·66 ,, 25·49 ,,	29.93 years. 28.61 ,, 28.66 ,, 29.75 ,,
	iod.	iod.	Brides under 45. 24·13 years. 23·83 ,, 24·66 ,, 25·49 ,,

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

MARRIAGE RATES IN THE AUSTRALIAN STATES AND NEW ZEALAND: RETURN FOR FIVE YEARS.

Year.	Victoria.	New South Wales.	Queens- land.	South Australia.	Western Australia.	Tasmania.	Common- wealth.	New Zealand.
1899	6.86	6.95	6.78	6.45	9.92	6.72	7.03	7.28
1900 1901	6·96 6·97	$7\ 38\ 7\ 68$	$6.88 \\ 6.61$	$6.37 \\ 6.43$	$10.06 \\ 9.66$	$7.71 \\ 7.71$	$7.24 \\ 7.29$	7.67 7.81
1902 1903	$7.00 \\ 6.29$	$7.53 \\ 6.88$	$6^{\cdot}31 \\ 5^{\cdot}72$	$6.61 \\ 6.21$	9 [.] 77 9 [.] 33	7.46 7.53	7·23 6·67	8.01 8.27
Mean	6 81	7.28	6.46	6.41	9.75	7.43	7.09	7.81

It will be observed that, according to the average of the Marriage five years, the lowest marriage rates prevailed in South Australia and Queensland, and by far the highest in Western States Australia. In Victoria the rate was somewhat below, and in New South Wales slightly above the average. For the year 1903, all the States, except Tasmania, showed a decrease in the marriage rate, varying from 10 to 5 per cent., whilst that of the Commonwealth fell nearly 8 per cent. during the year. New Zealand, however, showed an increase of 3 per cent. Marriages in

For reasons already explained, a better and more reliable proportion index of the frequency of marriage in the different States is riageable a comparison of the marriages with the number of marriageable male adults per 1,000, aged 21 and upwards, such as is States and

marriage.

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compared.

Zealand

contained in the following statement for 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	 		5 6 ·8
Western Australia	 		41.9
Tasmania	 •••	•••	65.7
Total Australia	 		55.7
New Zealand	 		55.1

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

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

Hungary	8.4	Holland	-7.4
German Empire	8.4	Denmark	7.4
Belgium	8.3	Scotland	7.3
England and Wales	8.1	Australia (1899-03)	7.1
Austria	8.0	Italy	7.1
Spain	7.7	Norway	6.9
Switzerland	7.7	Sweden	6.1
France	7.5	Ireland	$4 \cdot 9$

MARRIAGE RATES IN VARIOUS COUNTRIES.

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

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

Usual Residence		Usual Resid	Total	Proportion of Bride- grooms		
Bridegroom.	Metro- politan.	Other Urban.	Rural.	Outside Victoria.	Bride- grooms.	per 1,000 of Popula- tion.
In Victoria—			1	·		
Metropolitan Districts	3,274	120	191	34	3,619	7.2
Other Urban ,,	105	1,167	212	11	1,495	7.2
Rural "	288	261	2,318	22	2,889	5.8
Outside Victoria	. 166	52	82	94	394	
Total Brides	3,833	1,600	2,803	161	8,397	6.99
Proportion of Brides per 1,000 of Population	7.7	7.7	5.6		6.99	

USUAL RESIDENCE OF BRIDES AND BRIDEGROOMS, 1900-2.

It will first be noticed that nearly $4\frac{3}{4}$ per cent. of the Lower bridegrooms, and nearly 2 per cent. of the brides resided Marriage outside the State. Excluding non-residents, the figures show that the marriage rate—for both males and females—was the urban districts. same amongst residents of the metropolitan as amongst those of the other urban districts, whilst in both cases it was considerably higher than amongst residents of the rural districts.

rate in rural than

The following table shows the marriages per 1,000 of the Rates in population, males and females, in the metropolitan, urban, and rural districts for the period 1900-2 and for the vear 1903, previous also the decline per cent. during 1903:-

districts in 1903 and vears

PROPORTION OF MARRIAGES TO POPULATION IN DISTRICTS. 1900-2 AND 1903.

		Number of Mari	iages per 1,000 d	of Population in
Period.		Metropolitan Districts.	Urban Districts.	Rural Districts.
$\mathbf{Males} \begin{cases} 1900\text{-}2 & \dots & \dots \\ 1903 & \dots & \dots \end{cases}$	 	$7.2 \\ 6.5$	7•2 6•4	5·8 5·3
Decrease per cent.—Males	••••	9.7	11.1	8.6
Females $\begin{cases} 1900-2 & \dots \\ 1903 & \dots & \dots \end{cases}$	 	7·7 7·1	7·7 6·4	5·6 5·1
Decrease per centFemales		7.8	16.9	8.9
" " Both Sexes		8.7	14.0	8.7

During 1903 the rates for the urban districts were most affected, the decrease in the case of males being 11 per cent., and in the case of females 17 per cent., below the rates of the period 1900-2. In the metropolitan district the decrease was 10 and 8 per cent. respectively, and in the rural districts about 9 per cent. for both sexes.

Causes of lower marriage rate in rural districts To what extent the lower rates in the rural districts are due to variations in sex, age, and conjugal condition, is a problem which may be solved by an examination of the recent census returns. The first striking fact disclosed is the great preponderance of females over males in both urban districts, whilst the reverse was the case in the rural districts—there being over $111\frac{1}{2}$ females to every 100 males in the former, as compared with only $86\frac{1}{2}$ females to every 100 males in the latter. Secondly, there was, when compared with the total population, a larger proportion of adult males, but a much smaller proportion of adult females, in the rural than in the urban districts at each of the three age groups, 15 to 21, 21 to 45, and 45 and over.

The tendency which undoubtedly existed in former years for young men starting life to leave their homes in the country and gravitate to the towns, where life is considered more attractive, and higher wages and easier employment usually prevailed, has, owing to economic causes, been, at least for a time, reversed; although it still continues in the case of women, who can always readily find remunerative employment in the towns. Then again, the census returns show that there is a much larger proportion of marriageable men, but a much smaller proportion of marriageable women, in the country than in either of the two urban districtsthe percentage of marriageable men (aged 21 and upwards) in the total population being 14.4 in the rural, as against 11.1 in the metropolitan and 10.3 in the other urban districts; and that of marriageable women (aged 15 to 45) 11.9, as against 15.2 and 16.0 respectively. To arrive at definite results in regard to the marriage rate, it will, therefore, be necessary to compare, according to the plan already adopted. the marriages, with the marriageable population of each sex in the three districts. Such a comparison shows that the marriage rate of men is far less in the country than in the towns, but that an eligible woman in the country has-under general conditions-a better chance of marriage than one residing in the metropolis, or in the other urban districts; as, out of every 100 eligible men in the rural districts, 4 marry annually, as against nearly 7 in every 100 in the urban districts; whereas of eligible women more than one-twentieth in the rural, but less than one-twentieth in the urban districts,

marry within twelve months. The following are the proportions of marriages per 1,000 marriageable persons, viz., men aged 21 or upwards, or women aged 15 to 45, in each district according to the average of the three years, 1900 to 1902:—

PROPORTIONS OF MARRIAGES PER 1,000 MARRIAGEABLE PERSONS IN METROPOLITAN, URBAN, AND RURAL DISTRICTS.

Dis	trict.	Men.	Women.	
Metropolitan Other Urban Rural	···· ··· ··· ···	66·9 69·1 38·9	48.5 46.7 51.5	

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

During the twenty years, 1881 to 1900, of the 153,399 Marriages marriages celebrated in Victoria, 26.73 per cent. were cele- inquarters, brated in the Autumn quarter, 25.97 per cent. in the Spring, 24.00 in the Summer, and 23.30 in the Winter. In the years 1901 and 1902, the percentages were 27.58 in the Autumn, 25.15 in the Summer, 24.57 in the Spring, and 22.70 in the Winter quarter. It would thus appear that marriages are most numerous in the Autumn, and least in the Winter quarters.

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

dition of persons married at certain periods.

CONJUGAL CONDITIONS OF PERSONS MARRYING, 1871-1903.

Conjugal Conditions.	1871-80.	1881-90.	1891-1900.	1901-02.	1903.
Bachelors and Spinsters Bachelors and Widows Widowers and Spinsters Widowers and Widows	$\begin{array}{c} 80.59 \\ 7.10 \\ 7.75 \\ 4.56 \end{array}$	85·84 4·72 6·17 3·27	87·22 4·23 6·07 2·48	$87.35 \\ 3.95 \\ 6.22 \\ 2.48$	88·30 3·60 5·85 2·25

That these percentages are now approaching somewhat those of a settled community, might be inferred from the slight alteration during the last ten years. This is corroborated by the similar percentages for England and Wales during the vear 1900, which were 87.30 for marriages contracted between

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bachelors and spinsters, 3.27 between bachelors and widows, 5.89 between widowers and spinsters, and 3.54 between widowers and widows.

Divorced persons re marrying, 1899-1903. The number of divorced persons remarrying has shown a steady increase in each year since 1899, except during 1903. A larger number of divorced women remarry than divorced men; the ratio for the last five years being about 11 of the former to every 8 of the latter. The following are the numbers of divorced persons remarrying for the last five years:—

DIVORCED PERSONS RE-MARRYING: RETURN FOR FIVE YEARS.

	Year.	Males.	Females.	Total.	
1899 1900	 	 25 40 41	$\begin{array}{r} 46\\ 45\\ 45\end{array}$	71 85 86	
1901 1902 1903	····	 34 33	59 37	93 70	

The reduction in 1903 accords with the decline in the total marriages of that year.

Marriages of minors.

In all civilized countries minors are not permitted to marry without the consent of their parents or guardians. The following table shows the numbers of males and females who marry under 21 to every 100 marriages, for the periods, 1881-90, 1891-5, 1898-1902, and 1903, in Victoria, and for the period 1897-1901 in England and Wales:—

MARRIAGES OF PERSONS UNDER 21 YEARS IN VICTORIA AND ENGLAND AND WALES.

		Nü	nber under 2 Marriages	1 in every in Victoria	100	Number under 21 in every 100 Marriages in Eng- land and Wales.
		1903.	1898-1902.	1891-5.	1881-90.	1897-1901.
Bridegroom Bride	••••	2·57 15·68	$1.95 \\ 15.44$	$1.80 \\ 17.13$	2·26 21·00	5·06 16·52
Mean		9.12	8.74	9·51	11.63	10:79

Marriages by principal denomis nations.

During the five years, 1899 to 1903, an annual average of 8,187 marriages was registered, of which only 159, or a little under 2 per cent., were celebrated by lay registrars. This proportion was as high as 7 in the ten years, 1881-90, but suddenly dropped from 6.6 to 3.7 in 1894, and has since declined to 1.6 in 1903, probably owing to the competition of matrimonial

agencies, which sprang up about 1894. Of the other marriages. 1,661 were solemnized according to the rites of the Church of England, 1,289 of the Presbyterians, 1,704 of the Methodists, 412 of the Baptists, 289 of the Independents, 1,367 of "other sects"-chiefly Protestants-1,280 of the Roman Catholic Church, and 26 according to those of the Jews.

The number of marriages solemnized at matrimonial or Marriages advertising agencies gradually rose from 1,409 in 1898 to 1,701 in 1900, and fell to 1,188 in 1902, but increased again to 1,353 gradver. in 1903. About 20 per cent. of the total marriages were performed in such agencies in 1900, and 18 per cent. in 1903. This accounts for the unduly large proportion of marriages celebrated by "other sects," whose clergymen acted for such agencies.

at matritising agencies.

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BIRTHS.

The number of births registered in Victoria during the Number of year 1903 was 29,569-15,115 males and 14,454 females. This Births, was 892 below the number recorded for the preceding year, and 4,060 fewer than the average of the ten years ended 1900. The figures for each year since 1890 were:-

NUMBER OF BIRTHS IN VICTORIA, 1891-1903.

During the twenty years ended with 1883, the number of births remained almost stationary; but in 1884 a marked increase took place, which continued during the subsequent seven years; the number in 1891 being the highest. Since 1891, however, a rapid falling off has taken place down to the period embraced in the last five years, when the number has fluctuated at a lower level than that which had prevailed at any other period since 1886. The number of births in 1903 was the lowest since 1884.

In connection with this decline in the number of births since 1891, it must be borne in mind that during the whole of the intervening period there has been an extensive emigration from Victoria-the excess of departures over arrivals amounting to 143,542 persons-and as these emigrants were for the most part adults of the reproductive period of life, the diminution in the number of births shown in the last table can be readily understood.

The following table shows the birth rates in Victoria Birth rates, from 1860 to 1903:---

1860 to 1903.

Victorian Year-Book, 1903.

Year.	Birth Rate.	Year.	Birth Rate.	Year.	Birth Rate.
1860 1865 1870 1875 1880 1885 1890	$\begin{array}{r} 42.81 \\ 42.40 \\ 38.07 \\ 33.94 \\ 30.75 \\ 31.33 \\ 33.60 \end{array}$	1891 1892 1893 1894 1895 1896 1897	$\begin{array}{c} 33 \cdot 57 \\ 32 \cdot 51 \\ 31 \cdot 18 \\ 29 \cdot 05 \\ 28 \cdot 46 \\ 27 \cdot 19 \\ 26 \cdot 49 \end{array}$	1898 1899 1900 1901 1902 1903	$\begin{array}{c} 25{\cdot}51\\ 26{\cdot}14\\ 25{\cdot}79\\ 25{\cdot}78\\ 25{\cdot}15\\ 24{\cdot}46\end{array}$

BIRTH RATES IN VICTORIA, 1860-1903.

The above rates, based upon the number of births to every 1,000 of the population, are, like marriage rates, calculated on a similar basis, apt to mislead, unless the different constituents or elements of the population bear a normal proportion to one another.

Ordinary birth rate misleading in new countries. The method is, at all events in young communities, absolutely unreliable and misleading. In the earlier years when, owing to immigration, the population consisted for the most part of men and women at the reproductive period of life, the birth rate is obviously high. As time proceeds, however, notwithstanding that immigration of reproductive adults may be maintained, the proportion of such to the total population must continuously diminish, and with it, of necessity, this birth rate. The decline in Victoria in the latter years is accentuated on account, not only of the cessation of immigration, but on the absolute emigration of adults. Under these circumstances, the figures in the table do not show the true measure of the fall in the birth rate.

Proportion of births to population and married women. A more correct birth rate is the ratio of the number of legitimate births to that of married women under 45, and the following table shows the birth rate computed in the ordinary manner, also the proportion of legitimate births per 1,000 of such women during the last four census years:---

LEGITIMATE BIRTHS PER 1,000 OF THE POPULATION AND OF MARRIED WOMEN UNDER 45 YEARS OF AGE.

				Proportion of I	egitimate Births.
Year.	Enumerated Population.	Married Women under 45 years of Age.	Legitimate Births.	Per 1,000 of the Population.	Per 1,000 Married Women under 45 years of Age.
1871 1881 1891 1901	731,528 862,346 1,140,405 1,201,341	88,561 84,831 120,700 127,858	26,805 25,675 35,853 29,279	36.64 29.77 31.44 24.37	302.67 302.66 297.04 229.00

It will be observed that, although the proportion of legitimate births per 1,000 of the population fluctuated considerably during the four census periods, the proportions per 1,000 of married women remained fairly uniform during the first three census years, but showed a remarkable decline in 1901 from 297 to 229, being equivalent to nearly 23 per cent. A noticeable instance of the unreliability of the ordinary birth rate in a new country such as this, appears in the above table on comparing 1881 with 1891, for whereas the birth rate per 1,000 of the population was considerably higher (by nearly $1\frac{3}{4}$ per 1.000) in the later than in the earlier year, yet the proportion of births per 1,000 married women was actually lower. The fluctuations in the ordinary birth rate from 1871 to 1891 are, therefore, found to have been mainly due to varying proportions of married women in the community at the fruitful The exceptional fall since 1901, however, period of life. cannot be so explained, as other factors must be involved which require further investigation, and which will be dealt with in the following paragraphs.

An analysis of the minor age groups, of which the whole Percentage age group, 15 to 45, is composed, will disclose the fact that of married women in there has been a considerable falling off in 1901, as compared quinquennial groups with previous census periods, in the proportion of married under 45 women at the younger, and more fertile ages, but a counteryears of age balancing increase in that at the higher ages—a result chiefly brought about by a decrease in the proportion of young men at marriageable ages, through emigration, and the consequent decline of the female marriage rates at the lower age groups. Thus, the number of married women under 30 years of age fell from 53,778 in 1891 to 39,230 in 1901, or by 27 per cent., whereas the number over 35 but under 45 increased during the same period from 37,460 to 57,161, or by 521 per cent. Relatively to the whole number at child-bearing ages, the married women under 30 years of age fell from 441 per cent. in 1891 to 30¹/₂ in 1901; whilst those at the higher ages, between 35 and 45, rose from 31 to 441 per cent. This will be seen in the following statement:-

PERCENTAGE OF MARRIED WOMEN IN AGE GROUPS UNDER 45 YEARS AT FOUR LAST CENSUS YEARS.

Census Year.			Perce	entage of M	arried Won	nen Under	45 Years of	f Age.
			15—20.	20-25.	25—30.	3035.	35—40.	40-45.
1871	•••		2.03	13.04	21.14	23.07	23.32	17.40
1881			1.73	15.95	20.46	20.60	20.97	20.29
1891			1.35	15.69	27.52	24.41	17.21	13.82
19 01			·81	9.90	19.83	24.96	24.92	19.58
	al a companya a company	· · ·)	· · · ·	1.1.1.1.1.1.1.1				

Victorian Year-Book, 1903.

Rates of legitimate natality at various ages in Sweden

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

Age of Wives	. ,		Births	per 100 Wi	ves.
15 - 20		 	·	51.8	
20 —25	•••	 		45.1	
25 - 30		 	· · · ·	37.5	
3035		 		31.2	
35 - 40		 		25.0	
40 - 45		 		14.2	

Applying these proportions to the numbers of married women at similar age groups in Victoria in 1891 and 1901, it is found that the relative fertility of such women diminished by 9 per cent. in the interval, owing to their increased average age alone. This will, however, account for little more than a third of the fall since 1891 in the rate actually experienced. It is also found that in 1891 the rate in Victoria was only $5\frac{1}{2}$ per cent. below that of Sweden under similar age conditions, whereas in 1901 the former was nearly 22 per cent. below the latter. The following are the results:—

Year.		Births pe Wom	r 1,000 Married en 15 to 45.	• Percentage of Victorian rate
	1041.	Actual.	Applying Swedish rates to Victoria.	below Swedish.
1891 1901		$302 \cdot 1$ 227 · 9	319·8 291·2	5.5 21.7
Decre	ase ., per cent.	74·2 24·6	28·6 8·9	

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

Prior to 1891, immigration, voluntary and assisted, had cessation practically ceased, and as the bulk of the immigrants belonged to the latter class, they were physically a selected class under the immigration laws, and amongst whom a high birth rate was to be expected. This cessation was probably chiefly responsible for the decline in 1891, and for the larger decline in 1901, when the more prolific women (as a class) were approaching, or had actually passed, the reproductive limit, and the women as a whole were reaching the conditions of a more settled population, with its due proportion of frail and infirm. In brief, the average physique of women now is not equal to that of the earlier years-owing entirely to natural causes, the average in the earlier period being that of a specially selected class, whilst the average of the present is that of nearly a normal population. As further contributing towards the decline from 1891 to 1901, it is pointed out that the conditions obtaining in 1891 were entirely different from those of 1901, the former being a year in a prosperous period, and the latter representing the sixth year of an unprecedented drought, both as regards duration and intensity. Doubtless under these extreme circumstances, prudence was also a factor bringing about the results shown in 1901, and this may be considered a natural, and not an artificial cause, and a condition which can only be regarded as temporary, and which will doubtless pass away with returning prosperity.

The following table gives the birth rates, calculated in Birth rates 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:----

in Aus-tralian States and New Zealand.

Year.	Victoria.	New South Wales.	Queens- land.	South Australia.	Western Australia.	Tasmania	Australia	New Zealand.
1891 1899 1900 1901 1902 1903	$\begin{array}{r} 33 \cdot 57 \\ 26 \cdot 14 \\ 25 \cdot 79 \\ 25 \cdot 78 \\ 25 \cdot 15 \\ 24 \cdot 46 \end{array}$	$\begin{array}{r} 34.50\\ 27.34\\ 27.43\\ 27.60\\ 27.17\\ 25.35\end{array}$	$\begin{array}{r} 36 \cdot 35 \\ 27 \cdot 31 \\ 30 \cdot 19 \\ 28 \cdot 28 \\ 27 \cdot 68 \\ 24 \cdot 62 \end{array}$	$\begin{array}{r} 33.92 \\ 26.64 \\ 25.55 \\ 25.09 \\ 24.60 \\ 23.24 \end{array}$	34.85 30.70 30.80 30.32 30.09 30.27	33·37 26·84 28·16 28·40 28·92 28·47	$\begin{array}{r} 34 \cdot 23 \\ 27 \cdot 27 \\ 27 \cdot 31 \\ 27 \cdot 05 \\ 26 \cdot 63 \\ 25 \cdot 21 \end{array}$	$29.01 \\ 25.12 \\ 25.60 \\ 26.34 \\ 25.89 \\ 26.61$
Mean of 5 Years	25.46	26·98	27.62	25.02	30.44	28·16	26.69	25.91

BIRTH RATES IN THE AUSTRALIAN STATES AND NEW ZEALAND: RETURN FOR 1891 AND THE LAST FIVE YEARS.

Victorian Year-Book, 1903.

Decline in the number of legitimate births. According to the average of the last five years, the highest birth rate prevailed in Western Australia and the lowest in South Australia, the latter being but slightly less than those of Victoria and New Zealand. The comparison of these rates is not a reliable one, but it is useful for certain purposes. As already explained in the case of Victoria, it cannot be relied on as an index of the productiveness of married women, which can be more closely gauged by a comparison of the legitimate births with the number of married women at reproductive ages. Such a comparison is effected in the subjoined return, which shows the results for each Australian State and for New Zealand at the two last census years:—

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

s	tate.	· . · · ·	Proportion of L per 1,000 Ma aged	Decrease	
	an a		1891.	1901.	
Victoria			302-1	227.9	24.6
New South Wales		••••	298.9	235.6	21 2
Queensland			315.0	251.0	20.3
South Australia			311 ·1	2 35·0	24.5
Western Australia			352.8	244.0	31.1
Tasmania			315.9	254.6	19.4
New Zealand			279.1	. 246 1	11.8
			[

It will be seen from these figures that between 1891 and 1901 there was a pronounced decline in the percentage of legitimate births to married women under 45 years of age in the different States, varying from 31 per cent. in Western Australia, and 24 in Victoria and South Australia, to about 20 in Queensland and Tasmania, and to nearly 12 per cent. in New Zealand. The remarks already made regarding changes in age constitution and physique when dealing with the decline in Victoria are equally applicable to other States, except Western Australia, where, although immigrants are still received from the other States, yet they do not belong to the selected classes of former years.

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

	Country	Births per 1,0	00 of Population.	
. <u> </u>	country.	1901.	1876-1900.	Decline per cent.
	Hungary	37.8	42.9	12
	Austria	36.9	37.8	2
	Prussia	36.2	37.7	4.
(German Empire	35.7	37.4	41
1	Spain	34.7	35.9	3
· 1	Italy	32.6	36.6	บ้
.]	Holland	32.3	34.2	6
	Denmark	29.9	31.3	41
]	Norway	-29.8	30.7	3
6	Scotland	29.5	32.2	81
]	Belgium	29.4	30.1	2
8	Switzerland	29.1	28.9	1 (increase)
	England and Wales	28.5	32.3	12
	Sweden	26.8	28.7	7
]	reland	22.7	23.8	5
1 I I	France	22.0	23.7	7

BIRTH RATES IN EUROPEAN COUNTRIES.

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

The following table shows the number of births per 1,000 Birth rates of the population in the metropolitan, the other urban, and the intown and country. rural districts, for 1875 and each subsequent fifth year, and the averages of the years 1901-3:---

		Number per 1,000 of the Population.						
	Year.	Metropolitan District.	Other Urban Districts.	Rural Districts.	Victoria.			
1875		 33.63	38.63	31.54	33 ·94			
1880		31.19	34.21	28.72	. 30.75			
1885		 34.94	31.87	28.12	31.33			
890		 37.71	34.43	28.93	33.60			
1895		 29.46	34.03	25.49	28.46			
1900	•••	 24.54	$32 \cdot 29$	24.26	25.79			
1901-03	•••	 24.54	31.18	23.27	25.13			

BIRTH RATES IN METROPOLITAN, OTHER URBAN, AND RUBAL DISTRICTS.

It will be noticed that in the last three years, as compared with 1890, the birth rate in the metropolitan district fell off by nearly 35 per cent., in the rural districts by 19 per cent. and in the other urban districts by only 9 per cent.

Illegitimate births and rates.

The number of illegitimate births registered in Victoria during the year 1903 was 1,695, which gives a proportion of 5.73 to every 100 births registered, as compared with 5.50 in 1902, which was identical with the average of the five years ended with 1902. This proportion has been fairly constant during the last twelve years, when it was decidedly higher than at any earlier period within the last 30 years. The proportion in Victoria was much lower than in Queensland and New South Wales, and slightly lower than in Tasmania, but higher than in any other of the Australian States or New Zealand; it was also lower than in Scotland, but much higher than in the other portions of the United Kingdom; it was also lower than in 13 out of 18 countries on the continent of Europe, respecting which particulars are available, in six of which the rates run as high as from 10 to 15 per cent.* The following are the proportions of illegitimate births to every 100children born in the Australian States and New Zealand, for the five years ended with 1902, and in the United Kingdom. for the ten years, 1891-00:-

ILLEGITIMATE BIRTH RATES.

		5.6	<i>Australasia</i> — South Australia	••••		4·0 ·
		6.9			·	
		6 ·0	United Kingdom—			
		5.7	Scotland	•••	•••	7.2
ı		4.5	England	•••	•••	4.2
		4.4	Ireland	•••		2. 60
	···· ···· ····	···· ··· ··· ··· ··· ···	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Australasia— 5.6 South Australia 6.9 5.7 Scotland 5.7 Scotland 4.5 England Ireland	Australasia 5.6 South Australia 6.9 6.0 6.0 United Kingdom 5.7 Scotland 4.5 England 4.4 Ireland	Australasia 5.6 South Australia 6.9 6.0 United Kingdom 5.7 Scotland 5.7 Scotland 4.5 England 4.4 Ireland

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

It will readily be supposed that a larger proportion of Illegitimacy illegitimacy prevails in Melbourne and suburbs than in any other district of Victoria, and that the proportion in country districts is the smallest of all. In 1902, in the metropolitan district, about 1 birth in 12; in the other urban districts, about 1 in 18; and in the rural districts, only 1 birth in 44 was registered as illegitimate. During the five years, 1899-1903, the averages were 1 in 12, 1 in 19, and 1 in 39 respectively. Of 32 foreign cities, respecting which the information was given in a previous issue of this work, each is burdened with a larger amount of illegitimacy than that prevailing in Melbourne.

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

ILLEGITIMATE BIRTHS PER 1,000 SINGLE WOMEN.

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

CORRELATION BETWEEN BIRTH RATE AND INFANTILE MORTALITY.

In its incidence upon the birth rate, infantile mortality appears to have been almost entirely overlooked, notwithstanding that it occupies in old and populous communities the position of perhaps the most prominent determinant of the birth rate. A cursory glance at the next table, which shows the ordinary birth rate and the infantile mortality (that is, the percentage of infants dying under one year), is primâ facie evidence of the intimate connection existing between the two events:-

in town and country.

BIRTH AND INFAN	TILE DEATH	RATES IN	VARIOUS	COUNTRIES.
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Country.	Birt	th Rate per 1. the Populatio	,000 Dea	aths under 1 year per 100 Births.
South Australia		25.5		10.9
Victoria		25.7	· · · ·	11.0
New Zealand	•••	25.7		8.1
Sweden		26.9		10.0
Commonwealth of Australia		27.1	· · · ·	11.0
New South Wales		27.4		11.1
Tesmania		28.1		9 ·6
Switzerland		28.4		19.0
Queensland		28.5	• ••	10.4
Great Britain		28.7		15.0
Balgium		28.9		17.0
Topon		29.8		15.2
Donmonk		30.0		14.0
Westown Australia		30.6		14.0
Ttole		33.9		19.0
Thaty		32.1		20.0
Domaina	•••	36.5		21.0
Frussia		37.2		25.0
Austria	•••	38.0	•••	25.6
Hungary	•••	80-0		28.3
Saxony	•••	09.9	•••	200

France and Ireland have been intentionally omitted from this table—the former because the low birth rate is due to the practice of well-known restrictive measures, the latter to the excessive withdrawal of reproductive adults by emigration. Russia is also omitted in consequence of want of reliable figures, but it is generally understood that both the birth rate and infantile mortality are the highest in the civilized world.

This association of high birth rate and high infantile mortality, and low birth rate and low infantile mortality, cannot be regarded as fortuitous, and may readily be submitted to mathematical investigation. Thus, to put the matter very briefly, if depending upon chance alone, the probability that the highest birth rate would become associated with the highest infantile mortality in the twenty countries named in the table is $\frac{1}{20}$; that the first and second in the one series should become so associated with the first and second in the other, and in that order, the probability becomes $\frac{1}{20} \times \frac{1}{19} = \frac{1}{880}$, or 379 chances against 1. The probability of the third association is $\frac{1}{20} \times \frac{1}{19} \times \frac{1}{18} = \frac{1}{6840}$, or 6,839 chances to 1. It is therefore, impossible to doubt the correlation which exists between the two series of events.

The results shown in the table are only those which could reasonably be expected after a scientific investigation of the subject, for it is obvious that the death of an infant under 1 year (and according to the experiences of Victoria, New South Wales, and England, about one-half of those who die under 1 year, die within three months of birth), if it does not

facilitate, certainly does not present any obstacle to conception of another child, though on the other hand the nurture of a child is generally an insuperable obstacle.

In Sweden, as will be seen from the last table, the lowest birth rate in Europe is to be found, and also in accordance with the theory just propounded, the lowest infantile mortality.

Hugh R. Jones, M.A., M.D., B.Sc., in a paper contributed to the Journal of the Royal Statistical Society for March, 1894, writes-"If we examine the statistics of infant mortality in the different European States, the close dependence of feeding and mortality on each other is very clearly shown. The lowest mortality (10 to 13 per cent.) is in Sweden and Norway, where almost every child is nursed by its own mother. Ĩn Wurtemberg, on the other hand, only 33 per cent. of infants are brought up on the breast. The mortality of the breast-fed children was 13.5 per cent., while that of the artificially-fed rose to 42.7 per cent. In Lower Bavaria, the infant mortality reached the extraordinary high proportion of 50 per cent. There, maternal nursing has become the exception T† . . is therefore obvious that infant feeding exercises an enormous influence on infant mortality." No one who has read Dr. Jones' paper would dispute this deduction, and hence it would appear that the birth rate which depends upon the infantile mortality, is therefore primarily dependent upon infant feeding. This quotation also corroborates the opinion that the nurture of a child is opposed to conception, and this doubtless is responsible for the low birth rate of Sweden. On the other hand, the high birth rates of the German States are probably due to the large proportion of infants who are artificially fed, and consequent high infantile mortality.

It has been computed* that the numbers of survivors at the age of five out of every 1,000 children born are for various

Countries.		Survivors.	Countri		Survivors.	
New Zealand		889	Belgium		••••	756
New South Wales		850	Denmark			755
Victoria		844	France			751
Norway		838	Switzerland			748
Ireland		837	Italy			632
Sweden†		783	Austria			614
Scotland		780	Hungary			598
England and Wales	•••	762	Spain	•••		571

CHILDREN PER 1,000 SURVIVING THEIR FIFTH YEAR.

* The European figures have been taken from Mulhall, and those of New Zealand, New South Walk s.and Victoria, computed in the Statist's Office, Melbourne. According to a recent Life Table for Sweden, computed from the census in 1900, it has been four 1 that of 1,000 births S39 live to attain the age of 5 years.

So great indeed is the mortality per 1,000 births in the high birth rate countries, that the ultimate gain to the population of these countries at the expiration of five years is, in some cases, below that of the low birth rate countries, and it is highly probable that, could the mortality have been traced beyond that period, it would be found that the supremacy rests with the low birth rate countries. The following statement shows the birth rates per 1,000 of the population, and the number surviving their fifth year similarly estimated:—

Count	ry.	Birth Rate.		Surviving their Fifth Year.
Hungary		 39.4		23·6
Austria	•••	 37.2		22.8
Prussia		 36.2		25.0
Spain		 34.8		19.9
Italy		 33.9		21.4
Holland		 32.1		25.6
Norway		 30.3		25.4
Denmark		 30.0		22.7
England		 29.2		22.2
Belgium		 28.9		21.9
Switzerland		 28.4		21.2
New South V	Vales	 27.4		23.3
Sweden		 26.9		21.1*
New Zealand		 · 25·7	•••	22.8
Victoria		 25.7		21.7
France	•••	 22.0		16 5

BIRTH RATES AND SURVIVORS.

Although infantile mortality plays such a prominent part in the determination of the birth rate in old countries, yet in young communities its influence is not so pronounced, its effects being masked by the movements of population through migration. For, although the Australian infantile mortality can never be said to have been large compared with the old communities of the world, yet there has been a distinct decline in the Victorian rates (which doubtless is characteristic of all the Australian States), as is evident from the following figures:—

INFANTILE MORTALITY IN VICTORIA, 1867-1903.

Period.			Infantile Mortality.
1867-9	• •••		 13.32 per cent.
1870-4			 11.61
1875 -9			 12.47
1880-4	•••		 12.02
1885 - 9	•••		 13 27 "
1890-4			 11.44
1895.9		••••	 11.28 "
1900-3	•••	•••	 10.33 "

* In accordance with previous note (†) this figure becomes 22.5.

It may here well be asked if the birth rate is so dependent upon infantile mortality as it is claimed, how is it in the early years of the State when the infantile mortality was not high that the birth rate was high? To that it may be answered, that the latter circumstance was entirely due, as has been previously shown, to the abnormal proportion of specially selected lives at the reproductive period introduced into the States by immigration. Indeed, it is certain that had the infantile mortality of Australia in the early days been comparable with those of the European States, the birth rate would have been considerably higher than it was.

This association of the two events has apparently always Certain Vital Statistics in European towns and existed. countries in the eighteenth century show that in Sweden, for the period 1755 to 1776, the birth rate was 36.9, and the infantile mortality 23.0 per cent. of the births, as against the modern figures, 26.9 and 10 respectively. In the town of Stockholm, the birth rate was for the same period 35.7, the infant mortality 42.2. In the low birth rate countries of that period, the provinces of Vaud and Brandenburg, where such rates were 27.9 and 26.0 respectively, the infantile mortality rates were 18.9 and 22.5 respectively, which, though not to be regarded as low when compared with modern figures, were the lowest when compared with the rates current at the time. It has also been possible to ascertain the number of survivors attaining 5 years of age per 1,000 births in localities where the birth rates mostly ranged from 30 to 40 per 1,000 of population, and which are presented in the following table:---

Period.		Locality.	Infa	ntile Mortality.		Surviving 5th year per 1000 Births.
Circ. 1750	•••	Vaud	•••	18.9		701
1750-80		Shrewsbury		18.3		651
1755-76		Sweden		23 ·0		647
1710-59	•••	Brandenburg	•••	22.5		642
1772-81	•••	Chester		19.8		598
1735-80		Northampton		25.8		536
1730-69		Norwich		27.0		498
1773-81		Warrington		24.3		483
1728-37		London		32 ·0	•••	452
1759-68	••••	London		32.0		425
1752-55		Berlin		36.7		402
1755-63		Stockholm		42.2		381
Cire. 1750	•••	Vienna		45.8		374

INFANTILE MORTALITY IN THE EIGHTEENTH CENTURY.

DEATHS.

The following return shows the number of deaths—males and females—also the quarters in which they were registered and proportion per 1,000 of the population, during the years 1899-1903:—

Year.	Total	s	ex.	Qua	Death Rate per 1,000			
	Deaths.	Males.	Females.	March.	June.	September.	December.	of the Popula- tion.
1899 1900 1901 1902 1903	16,578 15,215 15,904 16,177 15,595	9,286 8,627 9,035 9,152 8,626	7,292 6,588 6,869 7,025 6,969	4,153 4,113 4,129 3,886 4,036	3,806 3,393 3,844 3,930 3,994	3,717 3,758 4,120 4,281 3,810	4,902 3,951 3,811 4,080 3,775	$ \begin{array}{r} 13.97 \\ 12.74 \\ 13.22 \\ 13.40 \\ 12.90 \\ \end{array} $
Average	15,894	8,945	6,949	4,063	3,794	3,937	4,100	13.25

DEATHS IN EACH QUARTER: RETURN FOR FIVE YEARS.

Deaths.

The number of deaths during the year 1903 was 15,595— 8,626 males and 6,969 females—a result somewhat under the average of the last five years, when the total was 15,894 the males 8,945, and the females 6,949. According to the experience of the five years, 1899-1903, the quarter of the year ending 31st December is the most fatal, the next in order being the quarter ending 31st March. These positions, however, were not maintained in the year under review, when the greatest number of deaths occurred in the March quarter, and the next in the June quarter. Excepting the year 1900, the death rate for 1903 is the lowest experienced during the last five years.

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 1899 to 1903:—

DEATH RATES IN THE AUSTRALIAN STATES AND NEW ZEALAND : RETURN FOR FIVE YEARS.

Year.		Victoria	New South Wales.	Queens- land.	South Australia.	Western Australia.	Tasmania	Australian States.	New Zealand.
1899 1900 1901 1902 1903	•••	13.9712.7413.2213.4012.90	11.92 11.16 11.68 11.95 11.63	$ \begin{array}{c} 12.07 \\ 11.72 \\ 11.88 \\ 12.08 \\ 12.38 \end{array} $	$12.65 \\10.68 \\11.22 \\11.86 \\10.79$	$ \begin{array}{r} 13.79 \\ 12.65 \\ 13.36 \\ 13.63 \\ 12.60 \\ \end{array} $	$12.91 \\ 11.02 \\ 10.45 \\ 10.90 \\ 11.86$	$12.90 \\11.77 \\12.17 \\12.45 \\12.09$	$ \begin{array}{r} 10.24 \\ 9.43 \\ 9.81 \\ 10.50 \\ 10.40 \end{array} $
Average		13.25	11.67	12.03	11:44	13.20	11.45	12.29	10.08

Although the death rate of Victoria, according to the average of the five years, 1899-1903, was higher than in any other State, this result is due, as will be shown later on, to the larger proportion of persons aged 60 years and over. amongst whom the death rate is very high.

The following were the maximum, minimum, and mean Death rates death rates per 1,000 of the population, in the principal in European countries. European countries during the five years ended with 1900, also the average of the 25 years ended with the same year. It is remarkable that, with the exception of Sweden, Austria and Hungary, Spain and Italy, the minimum rate during the five year period almost invariably occurred in 1896, and the maximum in 1900. In all, except Ireland, there has been a noticeable decrease, and in Austria, Hungary, Switzerland, Germany (including Prussia), Holland, and Italy, a considerable decrease in the recent five year period, as compared with the average of 25 years. The countries are arranged in order according to the average rate of mortality in the more recent period :---

	Constant	Fi	Five Years 1896-1900.				
	country.	Max.	Min.	Mean.	of 25 Years.		
1.	Norway	15.8	15.2	15.7	16.6		
2.	Sweden	. 17.7	15.1	16.1	17.1		
3.	Denmark	17.3	15.5	16.4	18.3		
4.	Holland	17.8	16.9	17.2	20.3		
5.	England and Wales	18.2	17.0	17.7	19.1		
6.	United Kingdom	18.4	17.0	17.8.	19.0		
7.	Scotland	18.5	16.6	17.9	19.2		
8.	Ireland	. 19.6	16.6	18.1	18.2		
9.	Belgium	. 19.3	17.2	18.1	20.1		
10.	Switzerland	19.3	17.6	18.1	20.6		
11.	France	21.9	19.5	20.7	21.9		
12.	Prussia	21.8	20.0	21.0	23.7		
13.	Germany	. 22.1	20.5	21.2	24.2		
14.	Italy	. 24.0	21.8	22.9	26.4		
15.	Austria	26-4	24.9	25.6	28.8		
16.	Hungary	28.9	26.9	27.9	32.3		
17.	Spain	29.9	28.6	29.2	30.6		

DEATH RATES IN EUROPEAN COUNTRIES.

Comparing this statement with a previous one, it will be Death rates noticed that the death rate of Victoria-the highest in of European Australasia, is considerably lower than that in Norway-the asian States And although, owing to the fact that lowest in Europe. emigration from the old to the newer countries tends to raise the death rate in the former, but to lower it in the latter, the

and Australcompared.

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death rates, calculated on the total population, would naturally be on a higher level in Europe than in Australasia, yet it may be safely affirmed that the true rate of mortality, allowing for differences in the age constitution of the people, is lighter in Australasia than in any State in Europe, except, perhaps, Norway, Sweden, and Denmark.

Death rates country.

In every country the death rate is higher in towns than it in town and is in the country districts. This circumstance, although no doubt partly attributable to the superior healthfulness and immunity from contagion prevailing in the latter, is also to a great extent due to the fact that hospitals and charitable institutions, which are frequented by patients from the country as well as by town residents, are generally situated in the towns; and further, that outside of charitable institutions many persons die who have come from the country on the approach of a serious illness for the sake of the superior nursing and medical attendance to be obtained in town. - Ĭn_' the ten years ended with 1890, the rate in the metropolitan district was higher than in the other urban districts, but in more recent years was much lower, in consequence of a marked decrease in the rate in the former district; whilst in the rural districts the rate has remained fairly constant, at about 9 per 1,000, or much less than half the rate in the extra-metropolitan towns. The following are the figures for the means for the periods, 1881-90 and 1891-1900, and the years 1901, 1902. and 1903:---

	Period.			Metropolitan District.	Other Urban Districts.	Rural Districts.
1881-90 1891-1900 1901 1902 1903	···· ··· ···	···· ····	····	$20.65 \\ 16.25 \\ 15.09 \\ 14.93 \\ 14.37$	$ \begin{array}{r} 19.90 \\ 21.17 \\ 19.54 \\ 20.86 \\ 20.17 \\ \end{array} $	8·90 8·98 8·73 8·77 8·41

DEATH RATES IN METROPOLITAN, OTHER URBAN, AND RURAL DISTRICTS.

Proportion of deaths in general hospitals, 1899-1903.

Unreliability of ordinary death rate.

In Victoria during the past five years one in every seven deaths occurred in general hospitals, and in Melbourne and suburbs during the same period one in every four took place in some public institution.

The misleading results arrived at by a comparison of the ordinary death rates of different countries, or of the same country at different periods, unless the age distribution is identical, have often been pointed out in former editions of This applies more especially to such a comparison this work.

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

PERCENTAGE OF POPULATION IN AGE GROUPS, SWEDEN AND AUSTRALIA.

Age Group.		Percentage of Population Living at each Age Group in—			
(Years).		Sweden in 1890.	Australia in 1901.		
Under 1 vear		9.55	9.477		
1 to 5	•••	4'99	2.47		
5 to 15	•••	920	99.60		
15 to 20	•••	0.50	23.00		
20 to 25		8.90	10 04		
25 to 30	•••	6.70	9.50		
30 to 35	••••	6.00	7.70		
35 to 40		6.00	7.25		
40 to 45		5.60	5.88		
45 to 55		9.40	7.29		
55 to 65*		7.70	4.76		
65 to 75		5.40	3.01		
75 to 85		2.34	-89		
85 and over		·26	•11		
Total		100:00	100.00		

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

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

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Index of mortality. In accordance with the decision of the Conference of Statisticians, held at Hobart in 1902, that "for computing the 'Index of Mortality' the table of age groups adopted by the Congress of International Statistics be followed, viz.:—Under 1 year, 1 to 20 years, 20 to 40 years, 40 to 60 years, and 60 years and over, and that the population of Sweden, as enumerated at the last census at those ages, be taken as a standard," the method referred to has been adopted in Victoria. It consists of applying the ascertained death rates in the age groups specified to a population whose age distribution corresponds with that of Sweden in 1890.

The following was the result for Victoria in 1901, when the populations within the several age groups were accurately known, and the incidental death rates could be established:—

Age.	Standard Popula- tion per 1,000. (Sweden, 1890.)	Death Rate per 1,000 at each Age in Victoria, 1901.	Index of Mor- tality for Vic- toria, 1901.
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{r} 25.5\\ 398.0\\ 269.6\\ 192.3\\ 114.6\end{array}$	$ \begin{array}{r} 112.55 \\ 4.19 \\ 6.21 \\ 13.19 \\ 59.81 \\ \end{array} $	2.88 1.67 1.68 2.54 6.86
Total	1,000.0	13.22	15.63

"INDEX OF MORTALITY," VICTORIA, 1901.

Proportions of population at five age-groups in Australian States and New Zealand.

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

State	Proport	Proportion per 10,000 of Total Population Living at the Age Period							
State.	Under 1 Year.	1 to 20.	20 to 40.	40 to 60.	60 and over.				
Both Sexes.	_								
Victoria	. 236	4,163	3,272	1,531	798	10,000			
New South Wales	. 253	4,382	3,210	1,597	558	10,000			
Queensland	. 260	4,348	3,309	1,601	482	10,000			
South Australia	. 227	4,445	3,054	1,641	633	10,000			
Western Australia	273	3,324	4,548	1,529	326	10,000			
Tasmania		4,519	3,118	1,488	608	10,000			
Australia	247	4.269	3.290	1.571	623	10,000			
New Zealand	238	4,195	3,295	1,596	676	10,000			
					<u></u>				
Males Only.	1.00	0.000	-	707	404	F 097			
Victoria	120	2,093	1,585	795	434	5,027			
New South Wales	127	2,210	1,664	915	324	5,240			
Queensland	132	2,201	1,910	1,016	302	5,561			
South Australia .	116	2,234	1,527	897	312	5,086			
Western Australia	. 140	1,704	2,994	1,073	219	6,130			
Tasmania	135	2,297	1,639	802	323	5,196			
Australia .	125	2,154	1,723	890	350	5,242			
New Zealand	124	2,117	1,692	906	415	5,254			

PROPORTIONS LIVING AT FIVE AGE GROUPS IN AUSTRALIAN STATES AND NEW ZEALAND, 1901.

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

"INDEX OF MORTALITY" IN EACH AUSTRALIAN STATE AND NEW ZEALAND, 1901.

State.		Ordinary Death Rate.	"Index of Mortality."	
Victoria			13.22	15.63
New South Wales	•••		11.68	15.33
Queensland	••		11.88	15.24
South Australia			11.22	14.30
 Western Australia			13.36	17.89
Tasmania		• • • •	10.45	13 82
Australia			12.17	15.41
New Zealand			9.81	12.42
				j

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

"Adjusted" death rates, 1871 to 1902

The "Index of Mortality" has not yet been computed for earlier years, or for other countries, except Sweden (where it was, in 1900, 16.72); but an equally fair comparison is available for Victoria, for three successive decades, and for the triennial period 1900-2, by means of the "Adjusted"* death rates, already alluded to, and these are embodied in the following table for each sex, together with the ordinary death rates, based on the total population of either sex, irrespective of age variations:----

Period	Ordinary I	eath Rate.†	Adjusted Death Rate.‡		
	Males.	Females.	Males.	Females.	
1871 to 1880 1881 to 1890 1891 to 1900 1900 to 1902	. 16.45 . 16.65 . 15.47 . 14.80	$14.15 \\ 13.56 \\ 12.36 \\ 11.43$	$16.48 \\ 15.97 \\ 14.14 \\ 13.05$	$ \begin{array}{r} 14.64 \\ 13.85 \\ 12.04 \\ 10.75 \\ \end{array} $	

Adjusted Death Rates in Victoria, 1871-1902.

Diminishing rate of mortality in Victoria.

The "adjusted" rates indicate that there has been a considerable falling off in the true rates of mortality at each successive decade, more especially the last, at which the rate was about $2\frac{1}{2}$ per 1,000 lower than in the first decade, and over 13 lower than in the second one. A further fall occurred during the three years, 1900-1902, when the mortality was exceptionally low, being more than 1 per 1,000 below that of the ten years, 1891-00.

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

^{*} For the method of calculating the "Adjusted death rate" see "Victorian Year Book, 1892." For the method of calculating and Adjusted data late to the field of the standard population.
 ‡ Per 1,000 of the standard population. See "Year-Book, 1892," paragraph 656.

the population, according to the census of 1901, taken at the end of March, was used for computing the rates in the last column:----

DEATH RATES AT VARIOUS AGE GROUPS IN VICTORIA, 1891-1900 AND 1900-2.

	De	aths.	Deaths per 1,000 Living at each Age.		
Ages.	Average of Ten Years, 1891-1900.	Average of Three Years, 1900-2.	Average of Ten Years, 1891-1900.	Average of Three Years, 1900-2.	
Males—					
Under 5 years	2,794	2,282	39.29	34.07	
5-10	. 231	195	3.36	2.70	
10-15	. 139	142	2.20	2.10	
15-20	. 191	184	3.28	3.11	
20-25	. 274	249	4.79	4.90	
25-35	. 672	579	6.60	6.25	
35-45		742	9.03	8.81	
4555	671	655	15.32	15.34	
55-65	1,200	910	32.90	29.86	
65-75	1.460	1,724	62.99	61.57	
75 and upwards .	1,032	1,276	145.05	141.59	
All Ages .	9,297	8,938	15.47	14.80	
Females—		·			
Under 5 years .	2,367	1,900	34:09	29.10	
5-10	209	186	3.15	2.63	
10—15	128	128	2.06	1.92	
15-20	202	175	3.43	2.92	
20-25	289	237	4.81	4.10	
25—35	í 676	608	6.89	6.00	
35-45	543	642	8.68	8.32	
45-55	476	454	12.12	11.48	
55—65	693	635	23.64	21.49	
65—75	785	994	45.87	45.07	
75 and upwards .	673	868	124.33	122.77	
All Ages .	7,041	6,827	12.36	11.43	

It will be observed that the rate of mortality in the three Low moryears, 1900-1902, was lower at every age group in the case of tally in 1900-2. females, and at all age groups except two-20 to 25 and 45 to 55-in the case of males.

A still greater improvement is noticeable on comparing Decreased the rates for the decade, 1891-00, with those for the previous mortality one;* for in the case of males, there was a much diminished ages, 1831-00, with those and only a slight 90 to 1891rate of mortality at every age group below 55, and only a slight 1900. increase in the groups over that age, and, in the case of females, a considerable decrease at every age group except 55-65.

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

Victorian Year-Book, 1903.

Infantile mortality, 1903.

Infantile mortality of illegitimates.

Deaths of infants at different ages.

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Infantile mortality showed a slight decrease in 1903, as compared with the preceding year, and was lower than the average of the ten years ended 1900. The total number under 1 year of age who died in 1903 was 3,146, and as the births numbered 29,569, it follows that 1 infant died in every 9.4 births, or 10.64 infants to every 100 births. In the ten years ended with 1900, the proportion of infants dying before completing their first year was 11.11 to every 100 births.*

The mortality of illegitimate infants under 1 year of age, during the years 1901 and 1903, was nearly three times as great as that prevailing amongst children legitimately born. On the average of the two years under review, of every 100 illegitimate children born, 26.4 died within a year, as compared with only 9.5 deaths to every 100 legitimate births.

In classifying the deaths of infants, those are distinguished which occur at under the age of one month, at from 1 to 3 months, at from 3 to 6 months, and at from 6 to 12 months. The annual numbers of these during the ten years ended with 1900, and the period, 1900 to 1903, are shown in the following table, together with the proportion of deaths at each of those periods of age and the number at each such period to every 100 births—after making due allowance for immigration. It will be noticed that in the last three years the mortality of infants under 1 month was above, but that of those at every other age period was below, the average of the ten years ended with 1900:—

Average Annual Deaths at under 1 year of Age. Ten Years-1891 to 1900. Ages. Four Years-1900-3. Percentage Number per Percentage Number per Number. Number. at each Age. 100 Births. at each Age. 100 Births. Bous. Under 1 month 650. 31.73.7959634.53.82 1 to 3 months 355 17.32.07315 18.22.023 to 6 44521.72.59367 21.22.35•• 6 to 12 600 29.33.50 45226.12.9035 Total 2,050 100.0 11.951.730... 100.0 11.09Girls. Under 1 month 48828.72.98476 33.6 3.211 to 3 months 301 17.71.8423016.31.55 3 to 6 385 22.62.35311 22.02.09,, 6 to 12 52831.03.23398 28.12.68,, Total 1,702... 100.0 10.40 1.415100.09.53

DEATHS OF INFANTS AT VARIOUS AGES, 1891-1900 AND 1900-3.

*See next table but one

During both periods referred to in the table, the mortality More death of male infants in proportion to the number born exceeded than temale that of female infants at each of the age periods-more infants at especially in the first month of life, when the excess was about one-fourth. During the period of ten years, the births of male infants were in the proportion of about 105 to every 100 female infants; but as the numbers shown above indicate a proportion of 120¹ deaths of the former to 100 of the latter, the proportion alive at the end of the first year is reduced to 103 males to every 100 females. These proportions remained undisturbed during the four year period 1900-3.

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

Of infants of both sexes who died, under 12 months, 47.8 Infantile were under 3 months, 22.1 were from 3 to 6 months, and 30.1 mortality in victoria, per cent. from 6 to 12 months. In England and Wales, for England, the same period, the percentages were—under 3 months, 48.4; 3 to 6 months, 20.9; 6 to 12 months, 30.7. In New South Wales the percentages were 50.3, 22.6, and 27.1 respectively.

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

The following table shows the proportion of deaths of Infantile infants under one year to the total births in each Australian in Aus-State and in New Zealand for each of the last five years, and the average for the ten years ended with 1900:---

and New South Wales.

of infants.

	W een	Deaths Under 1 Year per 100 Births.									
	Year.	Victoria.	New South Wales.	Queens- land.	South Australia.	Western Australia.	Tasmania	New Zealand.			
1891-	-1900	 11.11	11.22	10.34	10.54	14•48	9.58	8·38			
1899		 11.09	11.87	10.94	11.13	13.99	11.61	9.59			
1900		 9.53	10.32	9.84	9.93	12.61	7.99	7.51			
1901		 10.29	10.37	10.19	10.01	12.89	8.90	7.14			
1902		 10.86	10.97	10.02	9.40	14.20	7.91	8.29			
1903		 10.64	11.63	11.99	9.71	14 ·1 2	11.08	8.11			
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INFANTILE MORTALITY IN AUSTRALASIA.

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

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

INFANTILE MORTALITY IN VARIOUS COUNTRIES.

	Deaths of Age	under 1 to 106 Bir	Year rths.	Deaths u of Age to	nder 1 Y 5 100 Bir	ths. of	aths und Age t o 10	ler 1 Year 00 Births.	,
Russia		30.0	Italy		19.0	Victoria		11.1	
Bavaria		27.0	Belgium		17.0	South Aus	tralia	10.5	
Austria		25.0	France		17.0	Queensland	f	10.3	
Wurtemburg	·	25.0	Great Bri	tain	15.0	Sweden		10.0	
Prussia`	·	21.0	Greece		15.0	Ireland		10·0	
Holland		20.0	Western	Australia	14.5	Tasmania		9.6	
Roumania	·	20.0	Denmark		14.0	New Zeala	nd 🛄	8.4	
Switzerland		19.0	New Sout	h Wales	11.2				

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

Deaths of children under 5. In the year 1903 deaths of male children under 5 years of age numbered 2,188, and deaths of female children under that age numbered 1,940—the former being in the proportion of about 25 per cent., and the latter of about 28 per cent., to the total number of deaths at all ages. These proportions are much below the average of former years. Comparing the averages of the last three decades, a marked falling off took place, from period to period, in the mortality of children

relatively to that of persons of all ages, and the following table shows the annual number of such deaths at each year of age, and their proportion to the deaths at all ages, in each of the last three years and during the three decennial periods ended with 1880, 1890, and 1900, respectively:-

		Total Under 5 Years.						
Period.		0	1	2	3	4	Number.	Proportion Per 100 Deaths at all ages.
Males.				,				
1871-80		1,783	508	206	148	119	2,764	39.41
1881-90	••	2,158	464	161	114	92	2,989	34.28
1891-1900		2,050	432	143	93	76	2,794	30.02
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
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
1 901		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

MORTALITY OF CHILDREN UNDER FIVE YEARS.

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

deaths.

DEATHS OF CHILDREN UNDER FIVE IN PROPORTION TO POPULATION.

		Ma	les.	Females.				
Age last Birth-	Mean Number Living	Mean umber iving		Deaths per 1,000	Mean Number Living	Annual 1891 t	Deaths per 1,000	
	1891 and 1901.	Number.	Per- centage.	Children Living.	1891 and 1901.	Number.	Per- centage.	Children Living.
					1			
0	15,516	2,050	73·38	$132 \cdot 12$	15,089	1,702	71.94	112.80
1	14,124	432	15.46	30.29	13,783	385	16.27	27.94
2	13,981	143	5.11	10.23	13,428	129	5.45	9.61
3	13,780	93	3.33	6.75	13,667	82	3.47	6 ∙0 0
4	13,698	76	2.72	5.22	13,437	• 68	2.87	5.06
Total	71,099	2,794	100.00	39.29	69,404	2,366	100.00	34.09

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

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

Boys and girls dying under 1 year.

Proportion of deaths of children at each age.

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

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

It results from actuarial calculations, based upon the figures for the decade 1891-00 in the last table, that of every 20,000 boys and girls in equal numbers born in Victoria, 1,195 boys and 1,040 girls may be expected to die before they complete a year of life, 265 more boys and 247 more girls before they complete 2 years, 81 more boys and 84 more girls before they complete 3 years, 63 more boys and 52 more girls before they complete 4 years, and 47 more boys and 43 more girls before they complete 5 years. At the end of that period it is probable that 1,651 of the boys and 1,466 of the girls will have died; and 8.349 of the boys and 8.534 of the girls will be still living. The average result for both sexes is 8,441 per 10,000, which is more favourable than that deduced from the mortality of either of the two previous decades 1881-90. and 1871-80, which showed the number of survivors at the end of the first five years of life to be 8,211 and 8,103 respectively.

Out of every 10,000 infants born in Victoria, there will Tendency on the average be 5,120 boys and 4,880 girls-being in the ratio of 105 of the former to every 100 of the latter. These, according to the results just arrived at, will be reduced at the end of 5 years to 4,275 boys and 4,165 girls-or in the ratio of 103 of the former to every 100 of the latter. Thus, one-half of the excess of males over females at birth is neutralized in the first five years.

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

CHILDREN SURVIVING THEIR FIFTH YEAR IN VARIOUS COUNTRIES.

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

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

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the sexes towards equality in the first 5 years after hirth

every 1,000

Country.				Birthrate.	Surviving the 5th Year.
Hungary				39.4	99.6
Austria		• •••		37.2	23 0
Prussia				36.5	22.8
Spain	· • • •			34.8	19.9
Italy		•••		33.9	21.4
Holland	•••	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		32.1	25.6
Norway		•••	·	30.3	25.4
Denmark	•••	• •••		30.0	22.7
England	••••			29.2	22.2
Belgium	•••			28.9	21.9
Switzerland		•••]	28.4	21.2
New South W	ales			$27 \cdot 4$	23.3
Sweden	•••	•••		26.9	21.1
Wew Lealand		•••		25.7	22.8
Francos	•••	•••		25.7	21.7
r lauce	•••	•••		22.0	16.5

BIRTH RATES AND SURVIVORS IN VARIOUS COUNTRIES.

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

Deaths in childbed.

The death rate of women in childbed is usually ascertained by comparing the number of deaths of parturient women with the total number of births. Such deaths are classified in two If the death is supposed to occur merely from the ways. consequences of childbearing without specific disease, it is set down under the head of childbirth, Class VI., Sub-class 9; but, if it should arise from puerperal fever, it is placed under that head, Class I., Sub-class 6. The proportion of deaths of childbearing women has fallen decade by decade from 64 per 10,000 in 1871-80 to 56 in 1891-00. In the years 1901 and 1902, however, the rate was as high as in the decade 1871-80. This rise was no doubt partly attributable to the increased average age of mothers, previously referred to. The proportions which prevailed in the last three years, and the averages of previous periods back to 1864, are shown in the following table:----

DEATHS OF MOTHERS TO EVERY 10,000 CHILDREN BORN ALIVE.

Period.			The Number of	Deaths of Mothers to every 10.000		
-		Child Birth.	Puerperal Fever.	Total.	Children Born Alive.	
1864-70			109		100	
1871-1880			100	20	128	49.06
1881-1890	••••	•••	101	40	173	64.38
1801 1000		• ·	121	64	185	59.19
1001-1900	•••	•••	117	66	183	56.01
1901			130	71	201	64.82
19 0 2	••••		131	68	199	65.32
1903		•••	136	53	189	63.92

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The natural increase, i.e., the excess of births over deaths, Natural increase per 1,000 per 1,000 of the population, in the various Australian States and New Zealand for each of the years 1899 to 1903, and also of populafor the mean of that period, is shown in the following table:- Australasia

NATURAL INCREASE PER 1,000 OF THE POPULATION, AUSTRALIAN STATES AND NEW ZEALAND.

Year.	Victoria.	New South Wales.	Queens- land.	South Australia.	Western Australia.	Tasmania.	Australian States.	New Zealand.
1899 1900 1901 1902 1903	12.1713.0512.5611.7811.56	$15.42 \\ 16.27 \\ 15.92 \\ 15.22 \\ 13.72$	$15.24 \\18.47 \\16.40 \\15.60 \\12.24$	13.9914.8713.8712.7412.45	$16.91 \\18.15 \\16.96 \\16.46 \\17.67$	$13.93 \\ 17.14 \\ 17.95 \\ 18.02 \\ 16.61$	$14.37 \\ 15.54 \\ 14.88 \\ 14.18 \\ 13.12$	$14.88 \\ 16.17 \\ 16.53 \\ 15.39 \\ 16.21$
Mean	12.22	15.31	15.59	13.58	17.23	16.71	14.42	15.83

The mean natural increase of the Australian States for the period 1899-1903, viz., 14.42, is probably not far from that which will be attained under ordinary circumstances when the age constitution of the population will have become normal, and when undisturbed by migration. At the present time, the birth rate and death rate are both below normal, owing to factors in operation which have already been discussed in dealing with the birth and death rates. This annual rate of increase, 14.4, of the population will enable a population to double itself in about 48 years. It will, however, be noticed that the rate for the last year was 1.3 below the average of the five years, and if this reduced rate were maintained, the population would take about 54 years to double itself.

The following table shows the natural increase per 1,000 Natural of the population in various European countries-the mean of the five years, 1897-1901, being adopted, and the countries of populaplaced in order of increase:---

increase per 1,000 European countries.

NATURAL INCREASE PER 1,000 OF POPULATION-EUROPEAN COUNTRIES -- MEAN OF FIVE YEARS, 1897 TO 1901.

	0001				,			
	Country.	Natural Increase.	1		Cour	itry.		Natural Increase.
1.	Prussia	 15.5		10.	Italy	•••		11.0
2.	The Netherlands	 14.8		11.	Belgiun	n		10.9
3.	German Empire	 14.6		12.	United	Kingdom	·	10.7
4.	Norway	 14.5		13.	Sweden		·	10.6
5.	Denmark	 13.5		14.	Switzer	land		10.2
6.	Austria	 11.9	1	15.	Spain			5.6
7.	Hungary *	 11.7		16.	Ireland			4.7
8.	Scotland	 11.6		17.	France			1.2
9.	England and Wales	 11.4						

It is seen from this statement that the present Australian rate is below the first four countries shown, and it might

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therefore be inferred that those countries were increasing their populations at a greater rate than the Commonwealth of Australia, but emigration must be taken into account when dealing with European countries.

Actual rates of increase of population in European countries.

The actual rates of increase in various European countries have been computed and are set forth in the following table, which also shows the periods from which such rates were obtained, and also the periods in which the population would double itself at the computed rate of increase:-

EUROPEAN COUNTRIES.											
Country.		Annual Rate of Increase per cent.	Experience.	Period required to double Population.							
1. German Empire	•••	1.12	1872-1901	624							
2. Prussia		1.11	1867-1901	623							
3. The Netherlands		1.05	1853-1901	66 1							
4. Denmark		1.03	1861 - 1901	671							
5. Great Britain	·	•91	1864-1901	76							
6. Hungary	·	.97	1876 - 1901	$71\frac{3}{2}$							
7. Belgium		-84	$1853 \cdot 1901$	83							
8. Norway		·81	$1871 \cdot 1901$	86							
9. Sweden		-77	$1852 \cdot 1901$	90±							
10. Austria		.77	1853-1901	901							
1. Switzerland		.72	1868-1901	961							
2. Italy		64	$1872 \cdot 1901$	1081							
13. Spain		•45	1861-1901	154							
4. France		.16	1854-1001	4991							

ACTUAL RATE OF INCREASE OF PORTLA ---- 17

Even at the present rate of natural increase in Australia. the period required to double its population, viz., about 50 years—and which is independent of immigration—is considerably less than that required by any of the European countries, based upon actual experience.

1853-1901

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Excess per cent. of deaths in Australasia 14. France

The following table shows the excess per cent. of births births over over deaths in each of the Australian States and New Zealand for each of the five years, 1899 to 1903, together with the mean of the same period:----

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

Year.	Victoria.	New South Wales.	Queens- land.	South Australia.	Western Australia.	Tasmania.	Australian States.	New Zealand.
1899 1900 1901 1902 1903	87 102 95 88 90	$129\\146\\136\\127\\118$	$126 \\ 158 \\ 138 \\ 129 \\ 99$	111 139 124 107 115	$123 \\ 143 \\ 127 \\ 121 \\ 140$	108 156 172 165 140	111 132 122 113 109	$145 \\ 171 \\ 169 \\ 147 \\ 156$
Mean	92	131	130	119	131	148	117	157

From this it is seen that the least excess in Australasia is in Victoria and the greatest in New Zealand. To every hundred deaths that occur in Victoria there are 192 births, in New South Wales 231, in Queensland 230, in South Australia 219, in Western Australia 231, in Tasmania 248, whilst in New Zealand there are 257. The position occupied by Victoria is due to the excessive emigration of adults in recent years, which is also chiefly responsible for the low birth rate, and (compared with Australian rates) to some extent for its somewhat high death rate. But even under these adverse circumstances, the excess in Victoria compares advantageously Excess of with those of European countries, as will be seen from the following table, which shows the excess in those countries as derived from the mean of the five years, 1897-1901:---

births over deaths in European countries.

EXCESS PER CENT. OF BIRTHS OVER DEATHS IN EUROPEAN COUNTRIES.

Country.		Excess.	Country.		F	Ixcess.
1. Norway	•••	92	10. Great Brit	ain		60
2. The Netherlands	•••	86	11. Switzerland	d		58
A Denmark	•••	82	12. Italy		•••	49
5 German Empire	•••	74	13. Austria		•••	47
6. England and Wales	•••	69 65	14. Hungary	•••	•••	43
7. Sweden	•••	65	16. Ireland		÷.	26
8. Scotland		64	10. Span 17 France		•••	20
9. Belgium		61	r. Flance	•••	•••	0

Thus it will be seen that in no European country does the Comparison excess per cent. of births over deaths reach the average of the Australian Commonwealth, and in only one country, Norway, does it reach that of the lowest Australian State, Victoria. In Hungary, which has the highest birth rate amongst the European States quoted, viz., 38.9, the death rate is so high, viz., 27:2 per 1,000 of the population, that the excess per cent. of births over deaths is only 43, whilst Australia, with its birth rate of only 26 7, has an excess of 117 per cent. In other words, whilst in Hungary the loss caused by every 100 deaths is replaced by 143 births, in Australia such loss is replaced by 217 births. In New Zealand, which has a birth rate of only 25 9, the 100 deaths are replaced by no less than 257 births. In Germany every 100 deaths are replaced by 169 births, in Great Britain by 160, and in France by only 106. The comparison, it is obvious, is entirely to the advantage of Australasia.

The mean population of Greater Melbourne was 502,060 vital for the year 1903. This area embraces a radius of ten miles, and is divided into 31 sub-districts. At the end of 1903, there was living within the area an average of 3 persons to the acre. The density varies considerably, however, in the several subdistricts, ranging from 36 persons to the acre in Fitzroy, 32

between excess per cent. of births over deaths in Australasia and European countries.

statistics of Greater Melbourne.

in North Melbourne, and 31 in Richmond, to 1 person to the acre in Boroondara, and less than 1 in Preston, Oakleigh, and other outlying districts. The density is calculated exclusive of parks, gardens, and other public reserves within the area, which contained, on 31st December, 5,323 acres.

The births and deaths for the twelve months were:--

			Males.		Females.		Total.
Births			6,116	••••	5,896		12,012
Deaths	• •••		3,772		3,445	•••	7,217
Natura	l increase		2,344	·	2,451		4,795
The illegitin	mate births	numl	pered		••• •		1,031
The cases o	f twins nur	nbered	l				101
The cases of	f triplets n	umber	ed				4

The number of illegitimate births, 1,031, is 27 less than in 1902. Over two-fifths took place in the Women's Hospital or in buildings under the supervision of the officers of that institution. The proportion of illegitimate births to the whole number registered in Greater Melbourne was 1 in 12, as against 1 in 12 in 1902 and 1901, 1 in 11 in 1900, and 1 in 12 in the 8 previous years. The birth rate, exclusive of public and charitable institutions, was 21.78 per thousand of the mean population, and including these establishments it was 23.93. The corresponding averages for the ten years, 1892-1901, were 26.83 and 28.55 per thousand.

The highest rate, 29.23 per thousand, obtained in the subdistrict of Oakleigh, and the lowest, 17.73, in Camberwell and In these districts, however, the population is Boroondara. comparatively small. Further examination will disclose that the birth rate varied in groups of districts, as well as districts, as will be seen by combining Collingwood, Brunswick, Fitzroy, North Melbourne, Footscray, Port Melbourne, and Richmond, and Kew, Hawthorn, Brighton, St. Kilda, Caulfield, Malvern, and Camberwell. In the former, the rate is 24.18, and in the latter, only 19.63, per thousand of the popula-The death rate, exclusive of public and charitable instition. tutions, was 11 01 per thousand, and including these establishments, 14.37; whilst the corresponding averages for the previous decade were 12.39 and 15.76.

The municipal estimate of population, the births and deaths, and their proportions to the population, the excess of births over deaths, the mean temperature in the shade, the rainfall, and the mean atmospheric pressure in Greater Melbourne, during each of the twenty years ended with 1903, were as follow:—

Year.	Mean	Number of Births.		Numt	Number of Deaths.		of Births Deaths.	Mean		
	Population.	Total.	Per 1,000 of the Population.	Total.	Per 1,000 of the Population.	Number.	Per cent.	Temperature in the Shade.	Rainfall.	of Barometer.*
1884 1885 1886 1887 1888 1889 1891 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1903	$\begin{array}{c} 322,690\\ 345,380\\ 371,630\\ 391,546\\ 419,490\\ 445,220\\ 473,500\\ 473,500\\ 491,700\\ 481,550\\ 457,230\\ \hline \\ 419,994\\ \hline \\ 441,890\\ 448,250\\ 448,250\\ 448,250\\ 456,170\\ 460,430\\ 476,360\\ 457,420\\ 460,430\\ 476,360\\ 487,420\\ 491,780\\ 498,030\\ 502,120\\ 502,060\\ \hline \end{array}$	$\begin{array}{c} 10,911\\ 12,066\\ 12,941\\ 14,583\\ 15,645\\ 16,934\\ 17,859\\ 18,018\\ 17,399\\ 15,338\\ 15,169\\ \hline \\ 13,672\\ 13,672\\ 13,672\\ 13,672\\ 12,303\\ 12,016\\ 12,435\\ 12,067\\ 12,375\\ 12,478\\ 12,012\\ \hline \end{array}$	$\begin{array}{r} 3381\\ 3494\\ 3482\\ 3724\\ 3730\\ 3804\\ 3771\\ 3664\\ 3613\\ 3355\\ \hline \\ \hline \\ 3612\\ \hline \\ \hline \\ 3094\\ 2945\\ 2799\\ 2672\\ 2538\\ 2551\\ 2454\\ 2485\\ 2485\\ 2485\\ 2393\\ \hline \end{array}$	$\begin{array}{r} 6,628\\ 6,960\\ 7,590\\ 8,321\\ 8,606\\ 10,412\\ 9,297\\ 9,368\\ 7,698\\ 7,698\\ 7,805\\ \hline \\ 8,268\\ \hline \\ 6,871\\ 7,076\\ 7,121\\ 6,833\\ 8,523\\ 7,317\\ 7,071\\ 7,515\\ 7,496\\ 7,217\\ \end{array}$	$\begin{array}{c} 20\ 54\\ 20\ 15\\ 20\ 42\\ 21\ 25\\ 20\ 52\\ 23\ 39\\ 19\ 63\\ 19\ 05\\ 15\ 99\\ 17\ 07\\ \hline \\ 19\ 69\\ \hline \\ 15\ 55\\ 15\ 79\\ 15\ 61\\ 14\ 84\\ 18\ 01\\ 15\ 01\\ 14\ 28\\ 15\ 09\\ 14\ 93\\ 14\ 37\\ \hline \end{array}$	$\begin{array}{c} 4,283\\ 5,106\\ 5,351\\ 6,262\\ 7,039\\ 6,522\\ 8,650\\ 9,701\\ 7,533\\ \hline \\ 6,901\\ \hline \\ 6,801\\ 6,132\\ 5,648\\ 5,470\\ 3,493\\ 5,118\\ 5,046\\ 4,860\\ 4,982\\ 4,795\\ \hline \end{array}$	$\begin{array}{c} 65\\ 73\\ 71\\ 75\\ 82\\ 63\\ 92\\ 92\\ 126\\ 97\\ \hline \\ 83\\ \hline \\ 99\\ 87\\ 79\\ 80\\ 41\\ 70\\ 72\\ 65\\ 66\\ 66\\ 66\\ 66\\ \hline \end{array}$	$\begin{array}{c} \circ \\ 56.7 \\ 57.1 \\ 57.1 \\ 58.5 \\ 58.5 \\ 58.5 \\ 58.7 \\ 57.6 \\ 57.4 \\ 57.9 \\ \hline \\ 57.7 \\ \hline \\ 58.4 \\ 58.5 \\ 57.8 \\ 57.7 \\ 58.7 \\ 58.7 \\ 57.6 \\ 58.7 \\ 57.7 \\ 57.6 \\ 58.7 \\ 57.6 \\ 58.7 \\ 57.6 \\ 58.7 \\ 57.6 \\ 58.7 \\ 57.6 \\ 58.7 \\ 57.6 \\ 58.7 \\ 57.6 \\ 58.7 \\ 57.7$	$\begin{array}{c} \text{Inches.}\\ 25^{\circ}85\\ 26^{\circ}94\\ 24^{\circ}00\\ 32^{\circ}39\\ 19^{\circ}42\\ 27^{\circ}14\\ 24^{\circ}24\\ 24^{\circ}2$	Inches. 29.94 30.00 29.96 29.94 29.99 29.94 29.92 29.98 29.93 29.93 29.93 29.93 29.95 29.93 29.95 29.94 29.91 29.95 29.95 29.95 29.95 29.95 29.95 29.95 29.95 29.95 29.95
for 10 yrs	476,451	12,534	26.31	7,299	15.32	5,235	72	57.5	24:22	29.94

POPULATION, BIRTHS AND DEATHS, ETC, IN GREATER MELBOURNE, 1884 TO 1903.

The proportion of deaths of elderly persons—aged 75 and upwards—has shown a marked increase in the last thirteen years, thus indicating that the percentage of elderly persons in the population has considerably increased, and has apparently not yet reached a maximum; and this is proved by a comparison of the results of the past two censuses, which show that the male population at those ages has increased from 1,552 in 1891 to 2,795 in 1901, and the females from 1,551 to 3,065. There are now nearly 12 persons aged 75 and upwards in every 1,000 of the population, as compared with a proportion of only $6\frac{1}{3}$ ten years previously.

DEATHS OF PERSONS AGED 75 YEARS AND UPWARDS IN GREATER MRLBOURNE, 1891-1903

Year.	Males.	Females.	Total.	Per cent. of Deaths at all Ages.
1891	286	271	557	5.94
1892	263	219	482	6.26
1893	264	233	497	6.37
1894	284	279	563	8.19
1895	353	284	637	9.00
1896	352	299	651	9.14
1897	327	290	617	9.03
1898	418	372	790	9.27
1899	421	326	747	10.21
1900	402	376	778	11.08
1901	443	415	858	11.42
1902	500	404	904	12.06
1903	432	424	856	11.86

Deaths of females were more numerous than those of males at the age periods between 5 and 35, but less at all other periods except the age periods between 1 and 5, when they were equal. The following were the numbers of those of either sex who died at various periods of age in 1903, and the proportion of the deaths at each period to the total number during the year:—

Ages	\mathbf{AT}	Death	IN	GREATER	Melbourne,	1903.
------	---------------	-------	----	---------	------------	-------

			Both Sexes.			
Ages.	maies. remaies.		Total.	Proportions per cent.		
Under 1 year	793	700	1,493	20.69		
1 to 5 years	223	223	446	6.18		
5 to 15	146	158	304	4.21		
15 to 25	146	215	361	5.00		
25 to 35	250	292	542	7.51		
35 to 45	384	346	730	10.15		
45 to 55	385	264	649	8.99		
55 to 65	394	320	714	9.89		
65 to 75	619	503	1,122	15.55		
75 years and over	432	424	856	11.86		
Total	3,772	3,445	7,217	100.00		

DEATHS IN PUBLIC INSTITUTIONS IN GREATER MELBOURNE, 1903.

		No.	1	No
Melbourne Hospital		692	Benevolent Asylum	122
Alfred Hospital		190	Infant Asylum	6
St. Vincent's Hospital		25	Convent of the Little Sisters of	•
Women's Hospital		79	the Poor	37
Children's Hospital		150	Protestant Refuge	10
Homeopathic Hospital		69	Eye and Ear Hospital	3
Austin Hospital		79	Melbourne Gaol	17
Foundling Hospital	·	29	Pentridge Stockade	
Metropolitan Lunatic Asylun	a	87		
Yarra Bend Lnnatic Asylum		65	Total	774
Victorian Homes for Aged	and			
Infirm		109		

Of the total number, 1,256 took place in Melbourne City, 122 in North Melbourne, 87 in Kew, 69 in South Melbourne, 25 in Fitzroy, 37 in Northcote, 5 in Coburg, and 173 in the remainder of district. These figures, compared with the total deaths (7,217), furnish a proportion of 25 per cent., or, in other words, 1 person in every 4 who died in Greater Melbourne during 1903 ended his or her days in a public or charitable institution.

Nearly one-third of all who died at the age of 5 or upwards in 1903, three-fifths of those who died of typhoid fever, half of those who died of diphtheria, about one-third of those who died of cancer, the same proportion of victims of accident, and more than one-fourth of those who died of phthisis, ended their days in public or charitable institutions, as will be seen from the following statement:—

	In Hospitals, &c.	Outside Hospitals, &c.	Total.
Total Deaths	1,739	5,478	7.217
Deaths under five years Deaths from—	203	1,736	1,939
Typhoid Fever	38	27	65
Diphtheria	21	19	40
Cancer	128	322	450
Phthisis	178	526	704
Accidents	75	145	220
Other Causes	1,299	4.439	5.738

DEATHS OCCURRING IN AND OUTSIDE HOSPITALS, ETC., 1903.

The following is a summary of the deaths from some of the principal diseases during each of the last twenty years, the averages of the decades, 1884-93 and 1894-1903, being also shown:—

Year.	Measles.	Scarlet Fever.	Influenza.	Diphtheria and Croup.	Whooping- cough.	Typhoid Fever.	Diarrhœal Discases.	Erysipelas.	Cancer.	Phthisis.	Tubercular Diseases (exclusive of Phthisis).	Diseases of the Brain and Nerves.	Heart Diseases, &c.	Diseases of the Digestive System.	Bronchitis and Laryngitis.	Other Lung Diseases.	Diseases of the Urinary System.	Child- bearing.
1884 1885 1886 1887 1888 1889 1890 1891 1892	$176 \\ 6 \\ 12 \\ 64 \\ 15 \\ 6 \\ 1 \\ 3 \\ \\ 386$	$ \begin{array}{r} 10 \\ 3 \\ 5 \\ 3 \\ 17 \\ 18 \\ 41 \\ 3 \\ 13 \\ 18 \\ $	8 15 9 2 3 11 57 406 34 69	$99 \\ 129 \\ 104 \\ 137 \\ 269 \\ 465 \\ 541 \\ 208 \\ 121 \\ 43$	$161 \\ 38 \\ 127 \\ 43 \\ 10 \\ 179 \\ 44 \\ 99 \\ 76 \\ 54$	$\begin{array}{c} 220\\ 183\\ 294\\ 338\\ 326\\ 560\\ 403\\ 192\\ 154\\ 120\\ \end{array}$	$\begin{array}{r} 405\\ 506\\ 642\\ 652\\ 546\\ 608\\ 335\\ 415\\ 320\\ 251 \end{array}$	$19 \\ 19 \\ 34 \\ 13 \\ 13 \\ 15 \\ 13 \\ 10 \\ 8 \\ 12$	$180 \\ 214 \\ 239 \\ 248 \\ 232 \\ 322 \\ 288 \\ 325 \\ 313 \\ 358 \\$	789 826 790 909 904 923 948 849 925 846	$173 \\ 202 \\ 237 \\ 254 \\ 270 \\ 305 \\ 310 \\ 324 \\ 256 \\ 206$	869 855 897 988 886 1,023 962 970 827 765	$\begin{array}{c} 323\\ 382\\ 407\\ 528\\ 556\\ 583\\ 619\\ 666\\ 583\\ 572 \end{array}$	608 681 703 895 1,064 1,350 982 1,104 1,025 1,023	$\begin{array}{c} 335\\ 305\\ 290\\ 344\\ 346\\ 381\\ 358\\ 472\\ 292\\ 322\\ \end{array}$	$516 \\ 655 \\ 617 \\ 528 \\ 501 \\ 628 \\ 637 \\ 712 \\ 536 \\ 609$	$179 \\ 196 \\ 221 \\ 238 \\ 243 \\ 336 \\ 288 \\ 255 \\ 241 \\ 284$	93 75 81 92 96 72 96 82 94 86
Average for 10 yrs	67	13	61	212	83	279	468	.16	272	871	254	904	522	944	345	594	248	87
1894 1895 1896 1897 1898 1899 1900 1901 1902 1903	$ \begin{array}{r} 1 \\ \\ 2 \\ 6 \\ 403 \\ 3 \\ 95 \\ 10 \\ 35 \\ 11 \\ 11 \end{array} $	$\begin{array}{c} 30\\ 19\\ 17\\ 26\\ 12\\ 3\\ 2\\ 11\\ 28 \end{array}$	551344965913296214211659	$\begin{array}{c} 60 \\ 72 \\ 108 \\ 173 \\ 143 \\ 69 \\ 80 \\ 52 \\ 43 \\ 42 \end{array}$	$159 \\ 43 \\ 32 \\ 3 \\ 52 \\ 132 \\ 12 \\ 125 \\ 55 \\ 60$	$155 \\ 144 \\ 149 \\ 121 \\ 222 \\ 143 \\ 94 \\ 69 \\ 72 \\ 65$	$171 \\ 152 \\ 178 \\ 145 \\ 219 \\ 172 \\ 104 \\ 124 \\ 153 \\ 129$	$ \begin{array}{c} 3\\25\\12\\11\\14\\9\\11\\9\\23\\31\end{array} $	$\begin{array}{r} 362\\ 377\\ 381\\ 366\\ 427\\ 416\\ 426\\ 445\\ 437\\ 450\\ \end{array}$	$778\\814\\722\\739\\801\\654\\698\\771\\721\\704$	190 198 198 182 244 197 212 218 197 212	738 732 693 739 788 757 752 829 770 696	551 609 665 632 705 685 757 810 785 821	888 896 1,110 847 1,200 949 875 865 1,039 925	237 270 236 252 269 227 219 227 243 220	538 575 588 514 765 596 549 557 650 586	$\begin{array}{r} 342\\ 329\\ 352\\ 355\\ 345\\ 395\\ 421\\ 465\\ 407\\ 478\\ \end{array}$	78 97 72 82 77 81 65 88 105 70
Average for 10 yrs }	57	15	110	84	67	123	155	15	409	740	205	749	702	959	240	592	389	82

DEATHS FROM CERTAIN DISEASES IN GREATER MELBOURNE, 1884 TO 1903.

The decline which has taken place in the deaths from certain diseases is worthy of notice, especially that from diphtheria and croup, typhoid, diarrhœal diseases, bronchitis and larvngitis. On the other hand, an increase has taken place in the number of deaths from influenza, cancer, heart diseases. and diseases of the urinary system. The number of deaths in child-bearing remains about the same in both The increase in the annual number of deaths from decades. cancer, viz., from 272 in the decennium, 1884-1893, to that of 409 in the decennium, 1894-1903, is partly due to the greater number of middle-aged and old people in the later period than at the earlier, for cancer is essentially a disease of those periods of life. Part also is probably due to better diagnosis in the later decennium. Probably some part also is really due to an actual increase in the disease

The following table shows the number of deaths in Greater Melbourne from all causes, also from typhoid fever, diarrhoeal diseases, and diphtheria and croup, registered in each month of the last ten years:—

		Number of Deaths in Ten Years from—									
Months.		All Causes.	Typhoid Fever.	Diarrhœal Diseases.	Diphtheria and Croup.						
January		6,822	204	282	27						
February		5,806	199	184	51						
March		6,238	207	221	73						
April		5,665	211	137	90						
May		5,668	137	73	93						
June		5,921	55	43	83						
July		6,136	28	34	89						
August		6,156	27	21	81						
September		5,579	15	29	65						
October		5,412	14	37	79						
November		6,050	31	163	61						
December	••••	7,538	106	323	50						
Total	••••	72, 9 91	1,234	1,547	842						

DEATHS IN EACH MONTH FROM ALL CAUSES, AND FROM TYPHOID FEVER, DIARRHEAL DISEASES, AND DIPHTHERIA, 1894 TO 1903.

The estimated mean population, the births and deaths, and their proportions to population, and the excess of births over deaths in each of the metropolitan cities of Australasia in 1903, were as follow:—

•		Bi	ths.	De	aths.	Excess of Births over Deaths.			
Capital Cities (with Suburbs).	Mean Population	Total Number.	Number per 1,000 of the Population.	Total Number.	Number per 1,000 of the Population.	Numerical.	Centes- imal.		
Melbourne	502,050	12,012	23.93	7,217	14.37	4,795	66		
Sydney	509,770	12,749	25.01	5,913	11.60	6,836	116		
Brisbane	121,500	3,190	26.26	1,610	13.25	1,580	98		
Adelaide	166,895	3,788	22.70	2,114	12.67	1,674	79		
Perth	45,200	1,666	36.85	805	17.81	861	107		
Hobart	34,871	947	27.16	636	18.24	311	49		
Wellington	53,082	1,520	28.63	580	10.93	940	162		

VITAL STATISTICS OF AUSTRALASIAN CAPITALS, 1903.

PREVALENCE OF TUBERCULOSIS IN VICTORIA.

BY D. A. GRESSWELL, M.A., M.D., OXON., PERMANENT HRAD OF THE HRAITH DEPARTMENT, AND CHAIRMAN OF THE BOARD OF PUBLIC HEALTH.

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

Average	YEARLY	Death	RATES	PER	100,000	OF	THE	POPULATIO	N.
	IN TRIEN	NIAL PI	ERIODS	BETW	EEN 186	2 а	ND 1	902.	

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

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

Striking as these facts are, and conclusive as they may appear to be in deciding the question whether the prevalence of tubercular diseases can properly be said to have diminished or not in Victoria, it was pointed out in the report that there were considerations to be entered upon before that conclusion could be definitely accepted. Some of them were in part discussed in the report referred to, but in this place it will be possible to add somewhat to the discussion in the light of other data that have since been put together.

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

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

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

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

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

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

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

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

In the report already several times adverted to, I drew attention to the fact that the table showed a very considerable fall of mortality during the last 9 to 12 years in the metropolitan districts both from phthisis and from other tubercular diseases, and but little change of mortality during that period from those diseases in the extra metropolitan districts, at the same time noting that as the mortality from phthisis and from other tubercular diseases was only rarely half as high in the extra metropolitan as in the metropolitan districts, there had not been the same room for improvement in the former as in the latter, though in some parts of the former high death rates from consumption had ruled for years, as, for instance, in the great mining centres of Ballarat* and Bendigo,* and I invited attention to the chart, which showed that the tubercular mortality in the metropolis had presented an almost continuous yearly fall from 27.8 in 1888 to 19.8 in 1901 (here I may add to 18 in 1902) per 10,000 of the population.

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

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

Secondly, the question already dealt with may again be put, whether the selection of Victoria as a place of residence

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

for consumptives from other States and other countries has of late years been materially checked, a question to which I am not able to give an affirmative reply. though there is a belief that consumptives have of late years arrived in Victoria in somewhat smaller numbers than previously. The general mortality, too, cannot be adduced as evidence that there has been no abolition of the factors favourable to the dissemination of tuberculosis. But, as stated in my report several times referred to, "Com-"parison of the mortality from respiratory diseases and in-"fluenza on the one hand, with that from consumption and "all tubercular diseases on the other, will serve, I think, to "suggest that the fall in the latter may have been in part "a matter of compensation."

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

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

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

Year.	Death Rate the Pop	per 1,000 of oulation.	Year.	Death Rate per 1,000 of the Population.			
	Males.	Females.		Males.	Females.		
1861	18.84	20.47	1882	16.91	13.57		
1862	18.28	18.56	1883	15.52	12.95		
1863	17.34	16.25	1884	15.49	13.18		
1864	15.52	14.67	1885	16.47	13.39		
1865	17.74	16.29	1886	16.49	13.72		
1866	19.82	19.16	1887	17.14	14.18		
1867	18.39	17.99	1888	16.80	13.91		
1868	15.95	14.23	1889	19 ·19	16.20		
1869	16.40	14.32	1890	17.59	14.44		
1870	15.59	13.41	1891	17.74	14.63		
1871	14.49	12.21	1892	14.99	12.15		
1872	15.42	13.14	1893	15.69	12.35		
1873	15.91	13.99	1894	14 60	11.47		
1874	16.78	14.48	1895	14.28	11.74		
1875	20.40	18.29	1896	14.73	11.77		
1876	18 [.] 25	15.64	1897	14.22	11.34		
1877	17.17	14.26	1898	17.57	13 ·99		
1878	16.57	14.22	1899	15.48	12.43		
1879	16.04	12.93	1900	14.34	11.11		
1880	14.80	12.48	1901	14.90	11.48		
1881	15.38	12.77	1902	15.13	11.66		
			[]				

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

В.

DEATH RATES IN VICTORIA PER 10,000 FROM INFLUENZA.

· .		Ma	les.		Females.					
Age Group.	1870-2.	1880-2.	1890-2.	1900-2.	1870-2.	1880-2.	1890-2.	1900 -2 .		
0-15	0.69	·34	2.50	1.10	•52	·34	1.86	1.15		
15-20		•07	•64	•34		—	• •92	_ •8 3		
2025			1.20	•59	<u> </u>	·	1.28	•69		
25-35	0.05	07	1.20	·79	·07	•07	2.35	•89		
35-45	0.05		3.04	1.31		•08	4.11	1 8 6		
4555	0.09		5.12	3.20	.17	- 1	5.39	2.02		
55_65	0.67	.24	12.65	5.25	·39	·62	11.46	5.23		
65 upwards	1.09	2.36	27.13	17.02	•84	3.18	35.22	16.02		
All ages	0.33	·25	3.94	2.30	·28	•24	3.72	2.13		

C.

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

Age Grown		M	ales.		Females.					
	1870-2.	1880-2,	1890-2.	1900-2.	1870-2.	1880-2.	1890-2.	1900-2.		
0—15	22.65	29.02	28.52	16.53	18.50	24.18	24.13	13.85		
15 —20	3.45	3.30	2.92	2.70	1.88	2.02	3.52	2.34		
2020	5.70	5.34	4.88	4.85	3.54	4.23	3 ·05	3.34		
20	4.69	8.31	6.82	5.94	4.51	5.72	5.65	3.75		
3045	10.28	15.80	13.55	9.49	7.94	12.53	11.55	7.68		
4 5-55 ···	20.43	26.29	25.18	18.04	7.87	13.63	17.01	11.80		
55 —65	41.79	51.65	56.51	38.37	22.97	29.15	32.10	27.42		
65 upwards	108.11	136.54	141.07	112.38	73.10	116.12	112.38	86.78		
All ages	17.29	24.48	24.30	18.66	12.63	17.08	17.62	13.28		

D.

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

Ag	res.		Death-rate per 10,000 persons during							
			1870-2.	1880-2.	1890-2.	1900-2.				
0—15			7.53	7.98	10:36	5.64				
15 - 20			.64		1.17	1.19				
20 - 25			1.80	1.23	-89	1.77				
25 - 35	•••		•70	-66	.84	1.01				
35 - 45			-77	.88	•77	1.90				
45 - 55			-95	-85	-67	1.64				
5565			-88	1.07	-78	9.40				
65 and ov	er		1.09	2.36	•56	1.17				
All ages	•••		3.46	3.22	4.02	2.99				
			FEM	ALES.		· · · · · · · · · · · · · · · · · · ·				
015			5.89	7.28	8.43	5.33				
15 - 20	•••		.82	1.30	1.27	1.05				
20 - 25			$\cdot 52$	·69	1.23	2.00				
25 —35			54	41	-88	1.08				
3 5—45			1.04	.70	.42	1.77				
45 - 55			.17	67	-34	1.01				
5565	•••		.39	·62	•69	.71				
65 and ove	er		1.69	1.19	·64	.71				
All ages	. 		3.10	3.39	3.58	2.91				

MALES.

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

	1		1870	-2.]	1880-2. 1890-2.						1900)-2.				
Ages.		Phthi- sis.	Other Tuber- cular Diseases	Respi- ratory and Influ- enza.	Total.	Phthi- sis.	Other Tuber- cular Diseases	Respi- ratory and Influ- enza.	Total.	Phthi- sis.	Other Tuber- cular Discases	Respi- ratory and Influ- enza.	Total.	Phthi- sis.	Other Tuber- cular Diseases	Respi- ratory and Influ- enza.	Total.
	1		<u></u> /	' -	[]	J-	MALES	•		,						
015 1520 2025 2535 3545 4545 4555 5565 65 and over	···· ····	$ \begin{array}{r} 1 \cdot 22 \\ 5 \cdot 71 \\ 18 \cdot 75 \\ 22 \cdot 21 \\ 21 \cdot 83 \\ 22 \cdot 24 \\ 27 \cdot 86 \\ 19 56 \\ \hline 12 \cdot 89 \\ \end{array} $	$ \begin{array}{r} 7.53 \\ .64 \\ 1.80 \\ .70 \\ .77 \\ .95 \\ .88 \\ 1.09 \\ 3.46 \\ \end{array} $	$\begin{array}{r} 23.34 \\ 3.05 \\ 5.70 \\ 5.74 \\ 10.33 \\ 20.52 \\ 42.46 \\ 109.20 \\ \hline 17.62 \end{array}$	32.09 9:40 26:25 28:65 32:93 43:71 71:20 129:85 33:97	$ \begin{array}{c} 1.74\\ 6.88\\ 21.19\\ 30.33\\ 25.11\\ 28.65\\ 31.41\\ 18.08\\ \hline 15.33\\ \end{array} $	7.98 .81 1.23 .66 .88 .85 1.07 2.36 3.55	29·36 3·37 5·34 8·38 15.80 26·83 51.89 138·90 24·73	$ \begin{array}{r} 39.08 \\ 11.06 \\ 27.76 \\ 39.37 \\ 41.79 \\ 56.33 \\ 84.37 \\ 159.34 \\ \hline 43.61 \end{array} $	·90 3·41 18·29 23·70 28·28 31·17 36·48 25·40 15·73	$ \begin{array}{r} 10.36\\ 1.17\\ .89\\ .84\\ .77\\ .67\\ .78\\ .56\\ \hline 4.02\\ \end{array} $	$\begin{array}{r} 31 \cdot 02 \\ 3 \cdot 56 \\ 6 \cdot 08 \\ 8 \cdot 35 \\ 16 \cdot 59 \\ 30 \cdot 30 \\ 69 \cdot 16 \\ 168 \cdot 20 \\ \hline \hline 28 \cdot 24 \end{array}$	$\begin{array}{r} 42 \cdot 28 \\ 8 \cdot 14 \\ 25 \cdot 26 \\ 32 \cdot 89 \\ 45 \cdot 64 \\ 62 \cdot 14 \\ 106 \cdot 42 \\ 194 \cdot 16 \\ \hline 47 \cdot 99 \end{array}$	·38 5·06 14·35 20·31 22·07 25·05 35·75 31·07 13·51	5.64 1.12 1.77 1.91 1.39 1.64 2.40 1.17 2.99	17.63 3.04 5.44 6.73 10.80 21.24 43.62 129.40 20.96	$\begin{array}{c} 23 \cdot 65 \\ 9 \cdot 22 \\ 21 \cdot 56 \\ 28 \cdot 95 \\ 34 \cdot 26 \\ 47 \cdot 93 \\ 81 \cdot 77 \\ 161 \cdot 64 \\ \hline \\ \overline{37 \cdot 46} \end{array}$
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								Femai	ES.			·				15 00	01.00
0-15 15-20 20-25 25-35 35-45 45-55 55-65 65 and over	· · · · · · · · · · · · · · · · · · ·	$\begin{array}{c} 0.98\\ 12.37\\ 19.28\\ 22.02\\ 21.63\\ 19.60\\ 10.51\\ 12.61\\ \end{array}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c} 19.02\\ 1.88\\ 3.54\\ 4.58\\ 7.94\\ 8.04\\ 23.36\\ 73.94\\ \end{array} $	$\begin{array}{c} 25 \cdot 89 \\ 15 \cdot 07 \\ 23 \cdot 34 \\ 27 \cdot 14 \\ 30 \cdot 63 \\ 27 \cdot 81 \\ 34 \cdot 26 \\ 88 \cdot 24 \end{array}$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	24 52 2.02 4.23 5.79 12.61 13.63 29.77 119.30	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{c c} 1.43 \\ 9.51 \\ 18.49 \\ 21.77 \\ 22.53 \\ 16.13 \\ 12.35 \\ 8.25 \\ \end{array} $	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{r} 25 \cdot 99 \\ 4 \cdot 44 \\ 4 \cdot 33 \\ 8 \cdot 00 \\ 15 \cdot 66 \\ 22 \cdot 40 \\ 43 \cdot 56 \\ 147 \cdot 60 \end{array}$	35.85 15.22 24.05 30.65 38.61 38.87 56.60 156.49	-93 8·18 12·79 18·15 17·74 14·41 12·52 8·18	5·33 1·95 2·09 1·98 1·77 1·01 ·71 ·71	$ \begin{array}{r} 15.00 \\ 3.17 \\ 4.03 \\ 4.64 \\ 9.54 \\ 13.82 \\ 32.95 \\ 102.80 \\ \hline 15.4 \end{array} $	21.26 13.30 18.91 24.77 29.05 29.24 46.18 111.69
All ages		10.6	2 3.10	12.91	26 [.] 63	12.75	5 3.39	17.32	33.46	11.51	3.28	21.34	36.43	$\ 9.72$	2.91	15.41	28.04

Vital Statistics.

DEATHS FROM PHTHISIS IN VICTORIA FOR THE YEARS 1860-1902.

		Deaths from	n Phthisis.		Deaths fro	m Phthisis.
Year.		Total Number.	Number per 10,000 Persons Living.	Year.	Total Number.	Number per 10,000 Persons Living.
1860 1865 1870 1875 1880 1885 1890 1895	· · · · · · · · · · · · · · · · · · ·	772 741 888 1,027 1,175 1,384 1,631 1,567	$14.46 \\ 12.12 \\ 12.45 \\ 13.04 \\ 13.82 \\ 14.46 \\ 14.58 \\ 13.23 $	1898 1899 1900 1901 1902 Sum and Mean of	$1,520 \\ 1,339 \\ 1,387 \\ 1,416 \\ 1,412 \\ \hline 49,579$	12.85 11.29 11.62 11.77 11.69 13.15
1895	1,567	13.23	Mean of 43 Years	49,579	13.15	

G.

DEATH RATES IN VICTORIA FROM PHTHISIS AT DIFFERENT AGES AT FIVE CENSUS PERIODS, 1860-2, 1870-2, 1880-2, 1890-2, 1900-2. Males.

	A 2007		Annual Mortality from Phthisis per 10,000 of the Population.					
· · · · · · · · · · · · · · · · · · ·	Ages.		1860-2.	1870-2.	1880-2.	1890-2.	1900-2	
0—15	••••		2.55	1.22	1.74	.90	.38	
1520	•••		7.72	5.71	6.88	3.41	5.06	
20-25	· • • •		12.23	18.75	21.19	18.29	14.35	
25-35	•••	·	16.53	$22 \cdot 21$	30.33	23.70	20.31	
35-45	•••	•••	21 ·6 3	21.83	25.11	28.28	22.07	
555			23.14	$22 \cdot 24$	28.62	31.17	25.05	
65-65	•••		25.63	27.86	31.41	36.48	35.75	
5 and upwards		••••	$23 \cdot 20$	19.56	18.08	25.40	31.07	
All ages		13.33	12.89	15.33	15.73	13.51		

				FRMALES.			
0-15 15-20 20-25 25-35 35-45 45-55 55-65 65 and up	 wards	···· ··· ··· ···	$\begin{array}{r} 3.70\\ 14.07\\ 18.95\\ 24.76\\ 25.62\\ 25.01\\ 22.59\\ 18.03\end{array}$	$\begin{array}{r} \cdot 98 \\ 12 \cdot 37 \\ 19 \cdot 28 \\ 22 \cdot 02 \\ 21 \cdot 65 \\ 19 \cdot 60 \\ 10.51 \\ 12 \cdot 61 \end{array}$	$ \begin{array}{r} 1.76\\ 12.50\\ 21.00\\ 26.56\\ 24.06\\ 20.72\\ 14.26\\ 13.12 \end{array} $	$\begin{array}{c} 1.43\\ 9.51\\ 18.49\\ 21.77\\ 22.53\\ 16.13\\ 12.35\\ 8.25\end{array}$	-93 8·18 12·79 18·15 17·74 14·41 12·52 8·18
All ages .			14.46	10.62	12.75	11.51	9.72

I

H.

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

	Age Group.				1880-82.	1890-92.	1900-02
					<u> </u>		1
				MALES.			
0-15	•••]	23.34	29.36	31.02	17.63
15 - 20	•••	•••		3.02	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
4555	•••	• • • •		20.52	26.83	30.30	21.24
55—65	•••			42.46	51.89	69.16	43.62
35 and upwa	rds	•••		109.20	138.90	168.20	129.40
Allages	•••	•••		17.62	24.73	28.24	20.96
				PENATES		<u>.</u>	
0 15				T BMALLS.			
0	•••	•••		19.02	24.52	25.99	15.00
.0	•••	•••	· · · ·	1.88	2.02	4.44	3.17
0	•••	•••	.	3.24	4.23	4.33	4 ·03
0-35	•••			4.28	5.79	8.00	4.64
545	•••	••••		7.94	12.61	15.66	9.54
555	•••			8.04	13.63	22.40	13.82
565	•••	•••		23.36	29.77	43.56	32.95
5 and upwar	ds	•••		73.94	119.30	147.60	102.80
All ages	•••	•••		12.91	17.32	21.34	15.41