# PART IV.-VITAL STATISTICS.

# Marriages, 1889.

442. The marriages returned to the Registrar-General in 1889 numbered 9,194\*, as against 8,946 in the previous year. The excess in favour of 1889 was thus 248.

Marriages, 1889 and former years. 443. More marriages were returned in 1889 than in any previous year. The number returned annually had been almost stationary during the seven years prior to 1880, but in that year an advance was made which has been more than sustained since. In 1882, for the first time, the marriages returned exceeded 6,000; in 1884, they exceeded 7,000; in 1888, they nearly realized 9,000; and in 1889 they exceeded that number by 200.<sup>+</sup>

Marriage rate. 444. The proportion which the number of marriages bear to the total population is generally called the marriage rate. This for many years was declining in Victoria, for, whilst in the three years prior to 1863 it was above 8 per 1,000 of both sexes, and all ages; from 1863 to 1865 it was between 7 and 8, and between 1868 and 1878 it was between 6 and 7 per 1,000. It reached its lowest point, 5.98 per 1,000, in 1879; then gradually revived, and in 1889, although not quite so high as in 1888, it had been exceeded in no other year since 1859. The following table gives the number of marriages and number of persons married per 1,000 of the population during each of the thirty years ended with 1889:—

			Per 1,000 of the Mean Population.			
	Year.		Number of Marriages.	Number of Persons Married.		
1860	•••		8.15	16.30		
1861	•••		8.21	16.42		
1862	•••		8.26	16.52		
1863	•••	• • •	7.51	15.02		
1864	• • •	•••	7.77	15.54		
1865	• • •		7.36	14.72		
1866	•••		6·76	13.52		

ANNUAL MARRIAGE RATE, 1860 TO 1889.

\* Exclusive of 9 marriages celebrated during the years 1868 and 1869, registered for the first time in 1889.

† For the number of marriages during each year since the first settlement of Port Phillip, see Statistical Summary of Victoria (first folding sheet) published in the second volume of this work.

ANNUAL MARRIAGE RATE, 1860 TO 1889—continued.

			Per 1,000 o Popula	f the Mean ation.
	Year.		Number of Marriages.	Number of Persons Married.
1867		• • •	6.97	13.94
<b>1868</b>	• • •		7.08	14.16
1869		• • •	<b>6·89</b>	13 <sup>.</sup> 78
1870	• 7 0		6.63	13.26
1871	• • •		6.37	12.74
1872	* • •	• • •	6·36	12.72
1873			6.20	<b>13</b> ·00
1874	• • •	•••	6.33	12.66
1875	<b>4</b> H 6	·· · ·	6.33	12.66
1876			6.21	12.42
1877			6.31	12.62
1878	• • •		6.20	12.40
<b>1879</b>		•••	<b>5</b> ·98	11.96
1880	•••		6.22	12.44
1881		••••	6.79	13·58
1882	• • •		<b>7</b> ·09	<b>14</b> ·18
<b>1883</b>	• • •		7.43	14.86
1884	• • •	•••	<b>7</b> ·73	15.46
1885			7.72	15.44
1886			7.84	15.68
1887	•••		7.62	15.24
1888			8.42	16.84
1889	• • •		8.33	16.66
Mo	an of 30	vears	7.11	14.22

445. It has been shown, upon more than one occasion,\* that the Marriage rate at frequency of marriage is not dependent upon the numbers of the total various periods. 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 habits and occupations, and upon the view they take of their future prospects. Thus men have a greater tendency to marry in prosperous than in dull times, and the men of a rural, and especially of an agricultural, community have a greater tendency to marry than those of an urban To demonstrate this, the following table has been constructed, one. showing the proportion of marriages to the population, to the number . of single men and to the number of single women, in each of the last five census years :--

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\* See Victorian Year-Book, 1879-80, pages 103 and 184; same work, 1880-81, pages 199 and 200; and same work, 1881-2, pages 165 and 166. PROPORTION OF MARRIAGES TO POPULATION\* AND TO SINGLE MEN AND WOMEN, 1854 TO 1881.

			Exclusive of Chinese and Aborigines.							
Year of Census.			Number of	Proportion of Marriages per 1,000 of the—						
			Population.	Marriages.	Population.	Marriageable Men.†	Marriageable Women.‡			
1854 1857 1861 1871 1881	· · · · · · · · · ·	· · · · · · · · · ·	234,361 3\$3,668 513,896 712,263 849,438	3,696 4,465 4,528 4,715 5,732	$     \begin{array}{r}       15.77 \\       11.64 \\       8.81 \\       6.62 \\       6.75 \\     \end{array} $	52.1646.7942.3452.4357.40	245.04 169.66 122. <b>36</b> 72.11 48.02			

Reasons for fluctuations rate.

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446. The numbers in the last column but two, and those in the last in marriage column, show such a falling-off that, if the proportion that marriages bear to the total population or to the number of single females were to be accepted as an index of the prosperity of the community, an alarming amount of depression would be indicated. The figures in the last column but one, however, tell a very different tale, and exhibit just such fluctuations as might have been expected from the changes which took place in the circumstances of the population between the different periods. Thus, in 1854, there was a very large influx to the colony of single adult males, some of whom brought capital with them, which they saw, or thought they saw, every prospect of speedily increasing, whilst others actually did make money very quickly, and, consequently, the proportion who married was high, but, doubtless, not so high as it would have been had it not been for the discomfort of living in tents and other privations incident to life on the early goldfields, to which a large portion of the community was then subjected. By 1857, immigration had for the time been overdone, the result being that the gold obtained was very much less in proportion to the number of miners at

work than it had been, whilst the discomforts of a goldfields life were as great as ever, and so the rate naturally declined. By 1861, the yield of gold had seriously diminished, and as persons had not yet turned, to any great extent, to other pursuits, much distress was experienced, and

\* The populations in this table are those returned at the respective censuses, the Chinese and Aborigines being excluded; and the marriages are those (exclusive of marriages of Chinese and Aborigines) which took place in the twelve months of which the date of each census was the middle. The proportions of the latter to the former, therefore, differ slightly from those in the previous table, which are based upon the total mean population and all the marriages in the calendar year.

† Comprising bachelors of 20 and upwards, and widowers at all ages.

Comprising spinsters of 15 and upwards, and widows at all ages.

the rate fell to a minimum. By 1871, and in a greater degree by 1881, a large proportion of the population had settled on farms, whilst some unable to obtain congenial occupation, had left the colony; tents had almost disappeared from the goldfields; the miners were, for the most part, working for wages, and did not, as formerly, rush about from place to place; manufactures had been started, and had made considerable progress, and, accordingly, the rate improved. In 1871, the marriage rate was higher than at any previous period of the colony's history, and in 1881, it was still higher than in 1871.

447. The decline in the female marriage rate shown in the last Probability of female column of the table will be better realized when it is considered that in marriage rate revi-1854 about 1 in 4 of all the spinsters and widows in the colony married ving. in the year—which proportion, three years after, had fallen to 1 in 6; four years later, it had fallen to 1 in 8; ten years still later, it had fallen to 1 in 14; and ten years later, viz., in 1881, it had reached the exceedingly low point of 1 in 21. The tide had probably then turned, and the youthful native-born male population growing up to manhood had commenced to fill the gap in early adult life caused by the passing on to later periods of the immigrants who, at the time of the discovery of the first goldfields, came to Victoria unaccompanied by persons at younger ages who should supply their places as they passed onward or disappeared altogether from the scene. It may, therefore, be expected that, if the colony continues to enjoy a fair amount of prosperity, the next census will show that the marriages have increased in proportion to the available females, as the last enumeration showed they had done in proportion to the available males.

448. Whilst, according to the lowest line in the last table, Victorian, marriageable males in Victoria marry at the annual rate of 57 per and Swiss 1,000, and marriageable females at the annual rate of 48 per 1,000, rates. similar proportions are in France 57 and 46, and in Switzerland 49 and 38; the former approximating very closely to, but the latter, as

French, marriage

regards both males and females, being much lower than, the proportions for Victoria.\*

449. The following table gives a statement of the number of Marriage rates in marriages to every 1,000 of the population of the various Austral-Australasian asian colonies for each year from 1865 to 1889, except Western colonies. Australia, for which colony it is given for the last eighteen of those years :---

\* The French and Swiss male and female marriage rates are taken from papers read by M. Toussaint Loua before the Statistical Society of Paris in September and December, 1884.

### MARRIAGE RATES IN AUSTRALASIAN COLONIES, 1865 TO 1889.\*

		Number of Marriages † per 1,000 of Mean Population.							
Year.		Victoria.	New South Wales.	Queens- land.	South Australia.	Western Australia.	Tasmania.	New Zealand.	
1965		7.36	8,94	13.27	9.45		6.27	10.47	
1966		6.76	8.26	11.61	8.12		5.93	10.32	
1967	* • •	6.07	7.84	9.54	$8\cdot20$		6.10	9.69	
1868	***	7.08	8.23	8.33	7.37		6.57	9.35	
1960	5 <b>e +</b>	6.80	8.04	8.31	6.78		6.44	8.32	
1970	* • •	6.63	7.85	7.80	6.90		6.62	7.62	
1870	3	6.37	7.78	8.06	6.77		5.90	7.15	
1872		6.36	7.46	8.70	7.20	5.56	6.17	6.85	
1873	30+	6.50	8.05	9.66	8.00	6.25	6.36	7.91	
1874	• • •	6.33	7.70	8.62	8.00	6.96	6.83	8.87	
1875	• • •	6.33	7.88	8.63	8.01	7.26	6.63	8.94	
1876		6.21	7.66	7.57	8.49	7.07	7.13	8.25	
1877		6.31	7.94	7.57	8.66	6.38	7.79	7.63	
1878	- • •	6.20	8.08	6.98	9.47	6.20	7.96	8.03	
1879	•••	5.98	7.80	7.49	8.81	7.57	7.23	7.60	
1880	••••	6.52	7.68	6.97	8.69	7.42	7.38	6.71	
1881		6.79	8.27	7.71	8.33	6.60	7.30	6.65	
1882		7.09	8.74	8.56	8.73	7.07	8.03	7.07	
1883		7.43	8.88	8.93	8.49	6.95	9.01	6.82	
1884		7.73	8.49	8.91	8.28	7.11	7.81	6.88	
1885		7.72	8.18	<b>9</b> ·20	7.82	7.51	7.97	6.73	
1886		7.84	7.97	8.38	6.31	7.99	7.27	5.99	
1887		7.62	7.42	8.21	6.31	7.58	6.71	5.97	
1888		8.42	7.37	8 <sup>.</sup> 63	6.26	7.18	6.59	5.97	
1889	•••	8.33	6.76	7.87	6.47	6.99	6.20	5.99	
Means	•••	6.94	7.97	8.62	7.85	7.00	6.98	7.67	

Reasons for marriage higher in other colonies than in Victoria.

450. It will be observed that the mean marriage rate is slightly rates being lower in Victoria than in Western Australia and Tasmania, and much lower than in the other colonies, and as during the whole period over which the calculations extend, Victoria has certainly been second to none of the other colonies in point of wealth and prosperity, this may create surprise in the minds of those who fail to realize the fact that

marriage rates, calculated upon the total population, do not afford an indication of the amount of prosperity in a community so much as of the proportion which single men at marriageable ages bear to the population as a whole. In civilized countries, the age at which fourfifths of the males who marry enter the marriage state is between

† The numbers doubled give the persons married per 1,000 of the population.

<sup>\*</sup> For the number of marriages in the various colonies during the seventeen years ended with 1889, see General Summary of Australasian Statistics (third folding sheet) published in the second

20 and 35 years. It naturally follows, therefore, that on the number of single males at such ages the number of marriages mainly depends. Prior to the taking of the last census it was mentioned as probable that there had been a falling-off in the male population of Victoria at those ages; and, as was anticipated, the census disclosed the fact that Victoria had, in proportion to the total population, a smaller number . of males between 20 and 40 than any of the other colonies. The explanation of the higher proportion in the other colonies of males at the period named is to be found mainly in the fact that theyespecially New South Wales, Queensland, South Australia, and New Zealand-had, for many years, introduced large numbers of adults at the cost of the State, and, as is nearly always the case when immigration is subsidized, these were accompanied or followed by a steady stream of unassisted immigrants. Besides, not one of the neighbouring colonies was subjected, in the early days of its history, to so large an influx of adult male immigrants unaccompanied by persons at younger ages, followed by a cessation of immigration, as was the case in Victoria at and since the time of the early gold discoveries. As the young population has grown to a marriageable age, however, this colony has assumed a normal condition; and this circumstance has for several years past brought about a marked improvement in the marriage rate, so much so, that in this respect, Victoria was in 1889 in advance of all the neighbouring colonies.

451. In 1889 Victoria was the only colony whose marriage rate Comparison was above the mean rate during the whole period, as shown in the rates of last line of the table, whereas the rates in most of the other 1889 and colonies were considerably below the average. The marriage rate in years. 1889 was almost identical with the rate in the previous year in New Zealand, was slightly below it in Victoria, South Australia, Western Australia, and Tasmania, and much below it in New South Wales and Queensland. The marriage rate has for some years past been diminishing in New South Wales, South Australia, Tasmania, and New Zealand. For many years South Australia and New Zealand had higher marriage rates than almost any of the other colonies, but now they have lower ones than any of the others, thus affording remarkable instances of a high marriage rate coincident with an influx of adult immigrants, and a low one consequent upon such influx being stopped. A similar change, although in a less marked

of marriage colonies in former

degree, and doubtless attributable to a similar cause, has taken place in the marriage rate of New South Wales, which has fallen from nearly 9 per 1,000 in 1883 to only about  $6\frac{3}{4}$  per 1,000 in 1889.\*

Order of colonies in respect to marriage rates. 452. The following is the order of the colonies in reference to their respective marriage rates in the last year shown in the table and according to the average of the whole period of twenty-five years :--

# ORDER OF COLONIES IN REFERENCE TO MARRIAGE RATES.

Order in Latest Year.

- 1. Victoria.
- 2. Queensland.
- 3. Western Australia.
- 4. New South Wales.
- 5. Tasmania.
- 6. South Australia.
- 7. New Zealand.

Order in a Series of Years.

- 1. Queensland.
- 2. New South Wales.
- 3. South Australia.
- 4. New Zealand.
- 5. Western Australia.
- 6. Tasmania.
- 7. Victoria.

Positions of colonies as regards marriage rates.

453. Since the last publication of the Victorian Year-Book, Victoria in the list showing the order in the latest year, has risen from the second to the first place, Western Australia from the fourth to the third, and Tasmania from the sixth to the fifth, whilst Queensland, New South Wales, and South Australia all fell one place lower on the list. According to the average over a series of years, Victoria, which now stands first, occupied the lowest position on the list; whilst South Australia and New Zealand, which now stand last, occupied higher positions in regard to the marriage rate than any of the other colonies except Queensland and New South Wales.

Marriage rates in Australia and Australasia. 454. The mean marriage rate of the five colonies situated upon the Australian continent, and of those colonies with the addition of Tasmania and New Zealand, shows a falling-off since 1883 or 1884,<sup>†</sup> when it was at a maximum, and was lower in 1889 than in any year since 1880; it was, however, higher than in any other year since 1872 on the continent, but, taking Australasia as a whole, it was lower in 1889 than in any of those years except 1876, 1879, and 1880, as is shown by the following figures :—•

\* Such an event was foreshadowed by the present writer in a paper read by him before the Melbourne Social Science Congress on the 25th April, 1880, in the following words :—"A depression in the marriage rate, it may be anticipated, will before long overtake several of the neighbouring colonies wherein marriages now bear a high proportion to the population, but which proportion must inevitably decline upon the cessation of the stream of adult immigrants which now flows towards their shores."

+ In Australasia in 1883; in Australia in 1884.

Year.		Number of M 1,000 of Mea	larriages* per   n Population.			Number of Mail 1,000 of Mea	larriages* per n Population.
		Continent of Australia.	Australia with Tasmania and New Zealand.	Year.		Continent of Australia.	Australia with Tasmania and New Zealand
1873		7:35	7.38	1882		8.04	7.87
1874		7.07	$7\cdot32$	1883	• • •	8.20	8.03
1875		7.12	7.38	1884		8.22	7.72
1876		6.93	7.15	1885		8.07	7.83
1877	•••	7.05	7.18	1886	• • •	7.78	7.45
1878		7.08	7.27	1887	• • •	7.47	7.19
1879		6.88	7.01	1888	• • •	7.84	7.48
1880	* • •	7.15	7.08	1889	•••	7.46	7.18
1881	•••	7.62	7:41	Means	•••	7.49	7.41

# MARRIAGE RATES IN AUSTRALIA AND AUSTRALASIA, 1873 то 1889.

455. Returns of marriages, births, and deaths are obtainable for Marriage few British colonies outside of Australasia. The following are the marriage rates in those colonies—which, it is to be regretted, are, for the most part, of only minor importance-for which such particulars have come to hand, or can be gathered from their official reports. The low rate in Barbados is explained by the fact that the negro population as a rule ignore the marriage ceremony. The same circumstance, to a greater or less extent, doubtless also affects the marriage rate in Trinidad, and perhaps also in the Mauritius, although the low marriage rate in the latter would, to a certain extent, be accounted for by the fact that the large imported Cooly population is for the most part comprised of males, the females introduced being extremely few :---

MARRIAGE RATES IN CERTAIN BRITISH COLONIES.

certain British possessions.

Annual Rate per

Annual Rate per Voor

		rears.	j	Population.*		i ears.	Poj	pulation	; .*
Ceylon	• • •	1867-76	•••	7.3	West Indies—				
Mauritius	• • •	1871-75		2.5	St. Vincent	1872-76		6.3	
Seychelles	• • •	1875-77	•••	8.7	Barbados	1872-77	•••	3.7	
Nova Scotia		1871-75	• • •	7.7	Grenada	1871-75	• • •	5.6	
Bermudas		1871-75		8.3	Dominica	1871-75	•••	6.9	
West Indies					Trinidad	1871-75	•••	3•8	
St. Lucia		1878-79		$5\cdot 2$	l				

456. The following table gives for each of the five years ended with Marriage rates in 1888 a statement of the marriage rates in British and such Foreign European countries.

\* The numbers doubled give the *persons* married per 1,000 of the population.

The figures have been countries as the information is available for. taken from the reports of the Registrar-General of England :----

		Number of Marriages* per 1,000 of Mean Populations.							
Count	ries.		1884.	1885.	1886.	1887.	1888.	Mean of 5 Years.	
Hungary Prussia Italy German Empire Austria France Denmark England and Wa Belgium Holland Switzerland Spain Scotland Norway	        	· · · · · · ·	$ \begin{array}{c} 10.1 \\ 8.0 \\ 8.2 \\ 7.8 \\ 7.8 \\ 7.8 \\ 7.6 \\ 7.8 \\ 7.5 \\ 6.7 \\ 7.2 \\ 6.8 \\ 6.7 \\ 6.7 \\ 6.8 \\ 6.7 \\ 6.8 \\ 6.7 \\ 6.8 \\ 6.7 \\ 6.8 \\ 6.7 \\ 6.8 \\ 6.7 \\ 6.8 \\ 6.7 \\ 6.8$	9.9 8.1 7.9 7.3 7.6 7.4 7.6 7.2 6.8 6.1 6.9 6.4 6.6	9.6 8.1 7.8 7.9 7.7 7.4 7.1 7.0 6.7 6.9 6.8 6.2 6.5	8.9 8.0 7.7 7.8 7.8 7.8 7.3 7.0 7.1 7.1 7.0 6.8 6.3 6.2 0.0	$\begin{array}{c} & & & & \\ & 8 \cdot 0 \\ & 7 \cdot 8 \\ & 7 \cdot 8 \\ & 7 \cdot 9 \\ & 7 \cdot 2 \\ & 7 \cdot 1 \\ & 7 \cdot 2 \\ & 7 \cdot 1 \\ & 7 \cdot 1 \\ & 7 \cdot 3 \\ & 6 \cdot 9 \\ & 7 \cdot 0 \\ & & \\ & 6 \cdot 2 \\ & 6 \cdot 1 \end{array}$	$9.6^{+}$ 8.0 7.9 7.8 7.8 7.4 7.3 7.2 6.9 6.8 6.8 $6.5^{\circ}$ 6.4 6.4 6.4	
Sweden Ireland	•••	••••	6·5 4·5	6.6 4.3	6·4 4·2	6·2 4·4	 4·2	6.41 4.3	

MARRIAGE RATES IN EUROPEAN COUNTRIES, 1884 TO 1888.

European marriage rates in 1888 and former years.

457. It will be observed that, in four of the thirteen countries of which particulars are given for 1888, viz., Austria (slightly), Holland (slightly), Belgium, and Switzerland, the marriage rate was above the average; in seven of those countries, viz., Italy (slightly), Denmark, France, England (slightly), Scotland, Norway, and Ireland (slightly) it was below the average; and in two, viz., Prussia, and Germany, it was exactly equal to the average; also that in Austria, Belgium, and Switzerland, the rate was higher, in France and Norway lower than, and in Prussia, Germany, Scotland and Ireland, as low as, in any of the other years named.

Australasia

and

458. In the same five years, the mean marriage rate in Queensland

was above that in any of the countries named, except Hungary (four European marriage years); and in New South Wales and Victoria it was about the rates same as in Italy, Germany, or Austria, but higher than in any of compared. the other countries except Hungary and Prussia; whilst the mean rate

\* The numbers doubled give the persons married per 1,000 of the population.

† Mean of four years.

‡ In 1889, the marriage rate in England was 7.36.

§ Mean of two years, 1883 and 1884.

The low marriage rate in Ireland is partly attributed to the defective registration of Roman Catholic marriages, which amount to over 70 per cent. of the whole. It is also stated to be in part due to "the abnormal conditions arising from a large annual emigration of unmarried persons at what may be called the marrying ages."—See 15th Detailed Report of the Registrar-General of Ireland, page 6.

was higher in Western Australia than in eleven, in Tasmania than in nine, in South Australia than in eight, but in New Zealand than in only one, of these countries. The following are the rates referred to :----

### MEAN MARRIAGE RATES IN AUSTRALASIAN COLONIES, 1884 TO 1888.

t.			Number of Marriages					
				Mean Population.				
Queensland	•••	• • •	•••		• • •	8.67		
New South Wales		•••	• • •	•••	•••	7.89		
Victoria		•••	•••	• • •	•••	7.87		
Western Australia		• • •	•••			7.47		
Tasmania		• • •		••••	• • •	7.27		
South Australia	•••	•••	•••	• • •		7.06		
New Zealand	•••	• • •	•••		• • •	6.31		

459. The following, according to the reports of the Registrar-Marriage General of England, is the marriage rate of the United Kingdom United during the eighteen years ended with 1888. If, however, the registrations in Ireland are defective, as is alleged,\* some disturbance to the calculations must result therefrom. It will be observed that the rate was lower in 1888 than in any other years named except 1886 and 1887:—

MARRIAGE RATE IN THE UNITED KINGDOM, 1871 TO 1888.

		Marriag the	res per 1,000 of   Population.			Marris th	ages per 1,0 e Populatio	00 of n.
1871	• • •	• • •	8.21	1881		• • •	7.01	
1872	• • •		7.98	1882		• • •	7.17	
1873			8.03	1883			7.15	
1874 ·	• • •	• • •	7.79	1884		• • •	7.04	
1875	• • •		7.67	1885		• • •	6.72	
1876		• • •	7.70	1886	• • •	•••	6.51	
1877	• • •	· • • •	7.32	1887	• • •	• • •	6.64	
1878	• • •	• • •	7.09	1888	• • •	•••	6.65	
1879	•••	• • •	6·69				· · ·	
1880	•••		6.83	-	Mean	• • •	7.23	
				•				

460. Although rural rather than urban life tends to the promotion Marriage of marriage, it happens that, since the marriage ceremony is generally performed in towns, whatever may be the ordinary residence of the persons marrying, the marriage rate recorded there is much higher than that in the country. In Victoria, during the year 1889, it was three times as high in the metropolis and over two and a half times as high in country towns as it was in rural districts, as will be seen by the following table, which contains a statement of the proportion of marriages to the population in the three classes of districts in the year 1889 and in a previous quinquennial period :---

\* See footnote (||) on previous page.

#### VOL. I.

	Estimated	Marr	Proportion per 1,000	
Districts.	Mean Population.	Total Number.	Number per 1,000 of the Population.	of the Population, 1881-1885.
Melbourne and suburbs (Greater Melbourne)	445,220	5,318	11.94	10.49
Extra-Metropolitan towns Country districts	196,400 462,680	2,070 1,806	$\begin{array}{c} 10.54\\ 3.90\end{array}$	10.99 3.12
Total	1,104,300	9,194	8.33	7.30

# MARRIAGES IN URBAN AND COUNTRY DISTRICTS, 1889.

Marriages in each quarter. 461. Marriages in Victoria are generally most numerous in the autumn quarter, next in the spring quarter, next in the summer quarter, and least numerous in the winter quarter. In 1889, however, the numbers in the spring exceeded those in the autumn quarter. The following table shows the number and percentage of marriages in each quarter of that year, and the mean percentage in each quarter of two previous periods :—

#### MARRIAGES IN EACH QUARTER.

		Year	1889.	Percentage in-		
Seasons.	Quarter ended on the last day of—	Number of Marriages.	Percentage.	Ten Years : 1871 to 1880.	Five Years: 1881 to 1885.	
Summer Autumn Winter Spring	March June September December Year	2,207 2,379 2,132 2,476 9,194	$   \begin{array}{r}     24.00 \\     25.88 \\     23.19 \\     26.93 \\   \end{array} $ 100.00	$\begin{array}{r} 24 \cdot 43 \\ 26 \cdot 19 \\ 23 \cdot 81 \\ 25 \cdot 57 \\ \hline 100 \cdot 00 \end{array}$	23·46 26·52 23·66 26·36 100·00	

Former condition

of those marrying

462. Over a series of years rather over four-fifths of the unions

which take place are between bachelors and spinsters; but in the last two years nearly seven-eighths were between people in those conditions of life. The next most numerous are generally those between widowers and spinsters, although they have sometimes been exceeded by marriages between bachelors and widows. Marriages between widowers and widows are generally in a proportion ranging from a twentieth to a twenty-fifth, but in 1889 and the two preceding years only about a thirty-third, of the whole. The following is the number and percentage in each of these groups during 1889 and the percentage during two previous periods:—

	Year	1889.	Percentage in—		
Previous Condition.	Number of Marriages.	Percentage.	Ten Years: 1871 to 1880.	Five Years: 1881 to 1885.	
Bachelors and spinsters Bachelors and widows Widowers and spinsters Widowers and widows Total	•••	7,987 418 521 268	86·87 4·55 5·67 2·91	$   \begin{array}{r}     80.59 \\     7.10 \\     7.75 \\     4.56 \\   \end{array} $	$     \begin{array}{r}       84.67 \\       5.01 \\       6.63 \\       3.69 \\       100.00 \\     \end{array} $
Total	• • •	9,194	100.00	100.00	100.00

# FORMER CONDITION OF PERSONS MARRIED.

463. The following statement gives the proportions of marriages of Former persons of different conjugal conditions in various countries; the figures have been taken entirely from official documents published in the respective countries named :---

condition of those marrying in various countries.

# FORMER CONDITION OF PERSONS MARRYING IN DIFFERENT COUNTRIES.

		Bachelors Bachelor and and Spinsters. Widows		Widowers and Spinsters.	Widowe <b>rs</b> and Widows.		
Victoria	• • •			847	50	66	37
Austria		• •		758	62	<b>12</b> 9	51
Belgium	•••			834	50	81	35
Denmark				832	<b>5</b> 0	.96	22
England and W	ales		•••	819	44	84	53
Finland			•••	788	54	113	45
France	•••	<u>ب</u> د	•••	844	41	78	37
Greece	•••			861	39	67	33
Holland				805	44	103	48
Hungary	•••			752	50	97	101
Ireland				857	31	86	26
Italy				832	37	94	37
Massachusetts				790	48	103	<b>59</b> ~
Norway				854	34	91	21
Prussia				807	53	105	35
Roumania		·. ·		848	28	61	63
Russia in Europ	oe			772	-42	98	88
Scotland				851	29	89	31
Spain		•		811	40	100	-49
Sweden				854	34	91	21
Switzerland				816	49	104	31
Vermont				747	44	128	81

464. In 1889, 789 widowers and 686 widows re-entered the Remarriage state. During the last sixteen years more widowers have marriages in Victoria. Formerly it was different. In the eight re-married than widows. T 2

years ended with 1873 the widowers re-entering the married state numbered 4,344, and the widows 4,618, and at earlier periods in the history of the colony the preponderance of re-marriages of widows over those of widowers was even greater than this. Such a preponderance would be likely to happen only in a country in which females are much less numerous than males; and the fact of the reverse having been the case of late years would afford indirect proof, if such were needed, that the proportion of marriageable females to marriageable males in the population has increased, a circumstance which was made evident by the results of the last census.\* In England and Wales, during the ten years ended with 1885, 40 per cent. more widowers re-married than widows, the number of the former being 258,061, that of the latter 184,665. The following is a statement of the number of widowers and widows who re-married in Victoria during each of the twenty-four years ended with 1889:-

Vear		Number of Re-	marriages of-	Vear	Number of Re-marriages of-		
1 641.	Widowers. Widow		Widows.		Widowers.	Widows.	
1866		487	498	1879	637	553	
1867	•••	504 550	591	1880	603	520	
1868	•••	558	623	1881	679	551	
1869		553	563	1882 ]	628	547	
1870		547	595	1883	699	562	
1871	• • •	587	605	1884	725	615	
1872	• • •	522	552	1885	735	646	
1873	•••	586	591	1886	696	607	
1874		602	593	1887	692	552	
1875	•••	614	583	1888	823	668	
1876		678	623	1889	789	686	
1877		666	600				
1878	•••	634	585	Total	15,244	14,109	

RE-MARRIAGES, 1866 TO 1889.

465. By the figures in the following, which have been derived from marriages those in the foregoing table, it would appear that a larger proportion in various countries. of widowers re-marry in Vermont and a smaller in Greece, and a larger proportion of widows re-marry in Hungary and a smaller in Sweden and Norway, than in any other of the countries named; also, that, in Victoria, widowers re-marry less frequently than in any of those countries except Greece, but that in ten of those countries widows re-marry less frequently than in Victoria :--

Ke-

\* According to the census returns, there were in Victoria, in 1881, nearly 120 marriageable females to every 100 marriageable males.

Countries.	Widowers re-married per 1,000 marriages.	Countries.		Widows re-married per 1,000 marriages.
Vermont	209	Hungary		151
Hungarv	198	Russia in Europe		130
Russia in Europe	186	Vermont		125
Austria	180	Austria		113
Massachusetts	162	Massachusetts		107
Finland	158	Finland		99
Holland	151	England and Wales	•••	97
Spain	149	Holland	• • •	92
Prussia	140	Roumania	• • •	91
England and Wales	137	Spain		<b>89</b>
Switzerland	135	Prussia		88
Italy	131	Victoria	•••	87
Roumania	124	Belgium	•••	85
Scotland	120	Switzerland	•••	80
Denmark	118	France	• • •	78
Belgium	116	Italy	• • •	74
France	115	Denmark	• • •	72
Ireland	112	Greece		72
Sweden	112	Scotland		60
Norway	112	Ireland	•••	57
Victoria	10 <b>3</b>	Sweden	• • •	55
Greece	100	Norway	· • •	55

#### **RE-MARRIAGES IN VARIOUS** COUNTRIES.

466. Divorced persons marrying are classed as bachelors and Divorced spinsters, unless in cases where they had become widowers or widows <sup>persons,</sup> before contracting the marriage from which they were released by divorce. Eleven divorced men and ten divorced women were married in 1889; nine of the former married spinsters, and two widows; eight of the latter married bachelors, and two widowers. In the previous year, five divorced men and twelve divorced women were re-married.

467. The persons returned at the census of 1881 as living in a  $_{\text{Divorced}}$  state of divorce numbered 19, viz., 9 males and 10 females. Of the  $_{1881.}^{\text{persons}}$ , former, 4 were farmers or gardeners, 1 was a merchant, 1 a shopkeeper,

1 a cabinetmaker, 1 a bootmaker, and 1 a maltster; 5 were members of the Church of England, 1 was a Presbyterian, 1 a Roman Catholic, and 2 were Free Thinkers. Of the females, 1 was an innkeeper, 1 a farmer, 1 a tailoress, 1 a needlewoman, 1 of independent means, 2 were washerwomen, and 3 were merely performing domestic duties; 3 were members of the Church of England, 1 was a Presbyterian, 1 a Methodist, 1 a Baptist, 1 a Lutheran, and 3 were Roman Catholics.\*

\* For further particulars respecting these divorced persons, see General Report, by the Government Statist, on the Census of Victoria, 1881, paragraph 314.

Deserted husbands and wives

468. Persons whose wives or husbands have not been heard of for a period of seven years may marry again without rendering themselves liable to be prosecuted for bigamy; but such unions are subject to the serious disadvantage that the issue by the second marriage would be illegitimate, and the marriage itself void, if it should turn out that the first husband or wife was alive at the time thereof. Three deserted wives, and two deserted husbands availed themselves of this The former married bachelors; they had not provision in 1889. heard of their former husbands-one for 9 years, and two for 12 The deserted husbands married widows; they had not heard years. of their former wives for 7 and 12 years respectively. In the previous year eight deserted wives and two deserted husbands remarried.

Divorce Act 1889. 469. It may be mentioned that by the Divorce Act 1889\* (53 Vict. 1889. No. 1056), which received the Royal assent on the 13th May, 1890, it is provided that any married person domiciled in Victoria for 2 years and upwards may obtain a divorce, after which he or she may legally re-marry, on proving that he or she had, without just cause or excuse, been wilfully deserted, and continuously so deserted over a period of three years or upwards.

Marriages of Aborigines. 470. The marriages of 4 Aboriginal males with Aboriginal females are included in the returns of 1889. Two of the males and one of the females were natives of New South Wales, and the others natives of Victoria. In the previous year, 5 marriages of Aborigines took place.

Marriages of Chinese. 471. Eighteen (including 1 half-caste) Chinese males were married in Victoria in the year 1889, as against 8 in 1888, 13 in 1887, and 18 in 1886. Of the women who married Chinese in the year under review, one was a half-caste, and another was of Chinese parentage, although both born in Victoria. During the twenty-three years prior to 1889, 365 Chinamen were married in Victoria, or an average of about 16 per annum. The following table shows the nationalities of the women who formed matrimonial unions with Chinese during that period, also during the year under review :---

\* An account of the provisions of this Statute is given in the second volume under the head "Law, Crime, etc."

			Number of Marriages of Chinese Males.						
Birthplace of W	Vives.		Twenty-three years : 1866 to 1888.	Year 1889.	Total : 1866 to 1889.				
Victoria Other Australian co England and Wales Scotland Ireland Other British posse	olonies   essions	• • • • • • • • • • • •	182 59 64 15 26 1	12*  2 1 1 	194 59 66 16 27 1				
Germany	•••	•••	2	•••	$1 \\ 2$				
Spain The United States	•••	•••	1 2	•••	$egin{array}{c} 1 \\ 2 \end{array}$				
China At sea	• • •	• • •	4 8		4 9				
Not known	•••	•••		ī					
Total		• • •	365	18	383				

NATIONALITY OF WOMEN MARRYING CHINESE, 1866 TO 1889.

472. The marriage ceremony in Victoria may be performed either Marriages by the registered clergy of any religious sect, or by lay registrars. In by different sects. 1889, over .94 per cent. of the marriages were celebrated according to the former, and less than 6 per cent. according to the latter, system. Lay marriages, in both 1888 and 1889, numbered 510, and were more numerous than in 1887, when they numbered 494, or than in the previous two years, in which respectively they numbered 453 and 426. They were, however, not so numerous as in 1884, when they numbered 645; in 1883, when they numbered 565; or in 1882, when they numbered 588. The following table gives a statement of the number and percentage of marriages celebrated by each religious sect and by lay registrars during 1889, also the percentage in the quinquennial period ended with 1885, and in the decennial period ended with 1880:-

#### MARRIAGES BY DIFFERENT DENOMINATIONS.

Marriages performed according to the	Marriage	s in 1889.	Percentage of Marriages in—	
usages of the	Number.	Percentage.	Five Years : 1881 to 1885.	Ten Years: 1871 to 1880.
Church of EnglandPresbyteriansWesleyansBible ChristiansIndependents	3,077 1,542 1,432 172 290	$\begin{array}{r} 33.47 \\ 16.77 \\ 15.58 \\ 1.87 \\ 3.15 \end{array}$	$28.34 \\ 17.77 \\ 15.93 \\ 2.09 \\ 5.04$	$24.63 \\ 20.46 \\ 16.38 \\ 1.69 \\ 5.42$

\*One of the wives, although born in Victoria, was stated to be of the Chinese race, and another was a half-caste.

	nding to :	tha	Marriago	es in 1889.	Percentage of Marriages in—		
Marriages periori usages	s of the-	-		Number.	Percentage.	Five Years : 1881 to 1885.	Ten Years: 1871 to 1880.
		,* <b>**</b> *		469	5-02	·4·94	3.70
Baptists		* * *		404		-08	1.02
Lutherans		• • •	•••	00	1-1-2	-09	102
Unitarians		* * *		11	·12	-03	-02
Calvinistic Metho	odists	• • •	• • •	3	03	•07	•16
<b>Boman</b> Catholics				1.361	14.80	14.69	17.21
Jews				54	•59	•43	•42
Other sects				212	2.31	1.14	1.07
Lay registrars	• • •	•••		510	5.55	8·55	7.82
To	tal	•••		9,194	100.00	100.00	100.00

MARRIAGES BY DIFFERENT DENOMINATIONS-continued.

Duplicate marriages.

473. It should be mentioned that, occasionally, a marriage is performed twice over, viz., by a lay registrar and a clergyman, or by clergymen of two different denominations. It is not always easy to detect these cases in the registers, but the circumstance occurs too seldom to cause any serious disturbance in the marriage statistics. One such case, however, was noticed in 1889, viz., that of a couple who had been previously married—under what rites not stated—being re-united under the forms of the Presbyterian church.

Sects of Aboriginals married. 474. Of the 4 Aboriginal marriages which took place in 1889, 1 was solemnized according to the rites of the Moravians, 2 according to those of the Wesleyans, and 1 according to those of the Presbyterians.

Sects of Chinese married. 475. Of the 18 marriages of Chinese in 1889, 4 were celebrated according to the rites of the Church of England, 2 according to those of the Free Church of England, 2 according to those of the Presbyterians, 4 according to those of the Wesleyans, 1 according to those or the Independents, 2 according to those of the Baptists. 1 according to those of the Roman Catholics, and 2 were performed by local registrars.

Marriages by different sects. 476. The returns of the census of 1881 afford an opportunity of comparing the number of marriages performed according to the rites of each particular denomination with the numbers of that denomination in the population; and by taking the mean of the returns of that census and the preceding one, and of the marriages which were performed in the interval which elapsed between the two censuses, the same information is obtained extending over a period of ten years. The result is given in the following table :---

#### PROPORTION OF

# MARRIAGES TO NUMBER OF EACH

DENOMINATION.

•	Persons of	Marriages annually, 1	celebrated 880 to 1882.	Persons of each Deno-	Marriages celebrated annually, 1871 to 1880		
Religious Denomination.	each Deno- mination, 1881.	Mean Number.	Proportion per 1,000 persons living.	mination (mean of 1871 and 1881).	Mean Number.	Proportion per 1,000 persons living.	
Church of England	311,291	1.554.3	5.00	284.563	1.226.4	4.31	
Presbyterians	132,591	1,107.0	8.35	122,787	1,018.6	8.30	
Wesleyans	108,393	936·3	8.64	99,209	<b>815</b> .5	8.22	
Bible Christians	6,660	117.3	17.57	5,427	84.0	15.48	
Independents	19,878	286.3	14.40	19,034	269•8	14.17	
Baptists	20,373	234.0	11.49	18,342	184.0	10.03	
Lutherans	11,149	57.3	5.14	10,854	50.8	<b>4</b> .68	
Unitarians	942	2.0	2.12	979	•9	•92	
Society of Friends	282			308	•4	1.30	
Calvinistic Methodists	712	6·3	8.85	1,072	$8\cdot 2$	7.65	
Roman Catholics	$203,\!480$	828.3	4.07	187,050	856·8	4.58	
Jews	4,330	24.0	5.54	3,950	21.1	5.34	
Other sects	8,465	69·3		7,430	52.8	•••	
Residue	33,800*	607.7+	•••	35,932*	389.1†	• • •	
Total	862,346	5,830.1	6.76	796,937	4,978.4	6.25	

477. It will be observed that the denominations which solemnize sects which most marriages in proportion to their numbers in the population are the Bible Christian, the Independent, and the Baptist, in the order vice versa. named. In all these cases the proportion in the three years of which the census year is the middle, viz., 1880 to 1882, was higher than In proportion to their respective that shown for the decennium. numbers, the marriages performed in the three years named according to the rites of the Church of England, the Lutherans, and the Jews were more numerous, and those according to the rites of the Wesleyans, Presbyterians, and Calvinistic Methodists were much more numerous, than those performed according to the rites of the Roman Catholic Church; but, according to the average of the decennium, more marriages were solemnized according to the rites of the Roman Catholic Church than according to those of the Church of England.

perform most marriages and

478. The numbers of either sex who evinced their want of elemen-signing with marks. tary education by signing the marriage register with a mark instead of

\* Including Buddhists, Confucians, etc., those of no denomination and of no religion, and the unspecified.

† Marriages by lay registrars.

in writing were as follow in 1889, the proportion of those who signed with marks to the total numbers married being also shown :--

			Signing with marks.				
Persons Married.		Numbers Married.	Total Number.	Number in every 100 Married.			
Bridegrooms Brides		9,194 9,194	139 <b>*</b> 127	1·51 1·38			
Mean	•••	9,194	133	1.45			

SIGNING MARRIAGE REGISTER WITH MARKS, 1889.

Increased numbers signing in writing. 479. In proportion to the total numbers married, a very satisfactory increase has taken place of late years in the number of both males and females signing the marriage register in writing. With few exceptions, a constant improvement has been apparent from year to year—nearly every year, as compared with its predecessor, showing a smaller proportion of persons signing with marks. In 1889, the proportion of both men and women signing with marks was considerably lower than in any previous year, as will be seen by the following figures, which show the proportions for the last seventeen years :—

NUMBERS SIGNING WITH MARKS PER 100 MARRIED, 1873 to 1889.

Yea	r.	Men.	Women.	Mean.	Year	-	Men.	Women.	Mean.
1873	* * *	6.22	9.97	8-26	1882		2.88	3.27	3.07
1874	• • •	6.52	<b>9</b> ∙91	8·22	1883	• • •	3.09	3.47	3.28
1875	• • •	5.48	9.43	7.46	1884		2.55	2.77	2.66
1876	•••	5.31	7.50	6.41	1885	•••	2.56	2.62	2.59
1877	•••	5.04	6.02	5.23	188 <b>6</b>		2.00	1.93	1.99
1878	•••	4.12	5.30	4.71	1887		1.73	2.12	1.92
1879		<b>3·</b> 81 <sup>-</sup>	5.60	4.71	1888		1.72	1.81	1.76
1880		4.18	• 4.09	4.13	1889		1.51*	1.38	1.45
1881		2.90	4.16	3.23			- 01	200	

Signing with marks, 1853 to 1872. 480. A very much more decided improvement is shown by comparing these results with those of the twenty years prior to 1873, which embrace the whole period from 1853, when the registration

\* Of these, 4 were Chinese, who signed in the Chinese character. If these be excluded, the number of men signing with marks would be reduced to 135, and the mean of both sexes to 131, the proportion to every 100 marriages being 1.47 of the former and 1.42 of the latter.

system was inaugurated in Victoria, to the end of 1872. In this period, 86,062 marriages were registered, with the result that 7,902 of the bridegrooms and 17,824 of the brides signed the register with marks. These numbers give the following proportions as the average for the twenty years :---

NUMBERS SIGNING WITH MARKS PER 100 MARRIED, 1853 to 1872.

Men.		Women.	•	Mean.
<b>9</b> ·18	• • •	20.71		<b>14</b> ·95

481. It will be noticed that in every one of the years, except 1880, More 1886 and 1889, the proportion of men able to write has been greater than males than that of women.

482. The marriages in which marks instead of writing were made Cases of use of in 1889 numbered 266, but in only 21 of these, or about 1 in 12, did both parties use marks. In the 245 other instances either the husband or the wife signed in writing. Thus, whereas in the case of 1 marriage in 38, either the bride or the bridegroom was unable to write, it happened in the case of only 1 marriage in 438 that neither party was able to sign the marriage register in writing.

483. Of the 18 Chinese who married in 1889, 3 signed with an Signatures of Chinese. ordinary cross, 4 with a Chinese character, and 11 in writing. Of the women they married, all but 1 signed in writing.

484. In the case of the Aborigines who married in 1889, only 1 of Signatures of Aborithe 4 males signed in writing, but only 1 of the 4 females signed with gines. a mark.

435. The proportion of persons signing with marks is found to Signing with differ according to the religious denomination. Means are afforded each sect. by the following table of observing the position of the adherents of the different sects so far as the possession of a sufficient amount of rudimentary education to enable them to write their names is concerned. The figures are those of the year 1889, the average of the quinquennial period ended with 1885, and of the decennial period ended with 1880. Considerable improvement will be noticed in respect to all the principal sects :—

#### SIGNING WITH MARKS IN EACH SECT.

		Number signing with Marks in every 100 Married.								
Marriages performed according to the usages of the—		Year 1889	).	Five Years: 1881 to 1885.			18	Ten Years: 1871 to 1880.		
	Men.	Women.	Mean.	Men.	Women.	Mean.	Men.	Women.	Mean.	
Church of England Prosbyterians	1.11	1.27 .58	1.19	1.90	2.11 2.06	2.00 1.88	4·54 3·67	$6.11 \\ 5.97$	5·33 4·82	
Methodists ) Bible Christians	1.37	1.00	1.18	2.28	2.33	2.30	4.15	5.33	4.74	
Independents Bantists	·69 ·65		·34	2.36 2.17	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$2.27 \\ 2.47$	3·37 3·48	$5.49 \\ 5.22$	4·43 4·35	
Lutherans					•••	•••	1.77	4·13 6·10	2·95	
Roman Catholics	2.87	$2\cdot 28$	2.57	5.19	5.55	5.37	10.14	15.43	12.79	
Jews* Other sects	5·56 1·35	9·26 ·90	$7.41 \\ 1.12$	3.66	 4·45	4.05	7.01	·47 3·79	5·40	
Lay registrars	4.12	3.53	3.82	5 <sup>.</sup> 78	8.29	7.03	6.60	12.93	9.77	
Total	1.51†	1.38	1.45	2.78	3.22	3.00	5.31	7.93	6.62	

Roman Catholic and civil marriages 486. It will be observed that the proportion of those signing with marks is higher amongst marriages performed according to the rites of the Roman Catholic Church than amongst those celebrated by any other religious denomination, but that the numbers in 1889 show a very considerable improvement as compared with the five years ended with 1885, which show a still more marked improvement as compared with the ten years ended with 1880. The proportion so signing amongst civil marriages, although formerly lower, has of late been much higher than amongst marriages by Roman Catholics.

Marriages by Unitarians, Calvinists, and Jews.

by 487. In 39 marriages by Unitarians which took place in the s, nineteen years ended with 1889 not one instance occurred of either of the parties signing with a mark; this sect, therefore, finds no place in the above table. In 115 marriages by Calvinistic Methodists during the same period, all but two of the males signed in writing, but five of the females signed with marks. In 418 marriages of Jews which took place prior to 1889 only 7 persons signed with marks; but in that year in 54 marriages of Jews as many as 8 persons signed with marks. It has been found that, with the exception of one English Jew, these were Eastern Jews, mostly from Russia or Russian Poland.

\* The large proportion in 1889 of Jews signing with marks is explained in paragraph 487 post.
† See footnote to table following paragraph 478 ante.

488. A statement of the numbers who sign the marriage register signing with with marks is published in all the Australasian colonies except Western Australia and Tasmania, and from the figures given the following percentages for the five years 1884 to 1888 have been deduced. The colonies are placed in order according to the state of education thus displayed, the colony with the smallest proportion signing with marks being placed first, and that with the reverse last:—

SIGNING WITH MARKS IN AUSTRALASIAN COLONIES, 1884 TO 1888.

Galenz	Veer	Number	Number Signing with Marks to every 100 Married.			
Colony.	i ear.	Men.	Women.	Mean.		
(	1884	2.55	2.77	2.66		
	1885	2.56	2.62	2.59		
1. Victoria	1886	2.00	1.98	1.99		
- · · · · · · · · · · · · · · · · · · ·	1887	1.73	2.12	1.92		
	1888	1.72	1.81	1.76		
Mean of 5 years	•••	2.11	2.26	2.18		
	1884	2.82	4:45	3.63		
	1885	2.83	3.82	3.32		
2. New Zealand	1886	1.92	2.89	2.40		
	1887	1.94	3.11	2.52		
l	1888	1.66	2.52	2.09		
Mean of 5 years	•••	2.23	3.36	2.79		
(	1884	2.86	3.80	3.33		
	1885	4:00	4.30	4.12		
3. South Australia	1886	3.04	3.49	3.26		
	1887	2.18	1.80	1.99		
	1888	2.40	2.45	2.42		
Mean of 5 years		2.90	3.17	3 <sup>.</sup> 03		
· · · · · · · · · · · · · · · · · · ·	1884	<b>4</b> .68	5.79	5.24		
	1885	4.31	5.19	4.75		
4. New South Wales	1886	3.76	4.20	3.98		
· · · · · · ·	1887	3.04	3.95	3.49		
	1888	3.91	3.57	3.74		
Mean of 5 years	•••	3.94	4.54	4.24		
(	1884	4.06	7.48	5.77		
	1885	3.76	7.35	5.26		
5. Queensland	1886	4.52	6.71	5.62		
	1887	3.53	5.39	4.46		
	1888	3.01	4.98	<b>4</b> ·00		
Mean of 5 years	•••	3.78	6.38	5.08		

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Victoria the least illiterate colony. All to sign in writing is, on the average, larger in this than in any other colony. Next to Victoria in this respect is New Zealand, in which the proportion of males signing in writing was in two of the years—viz., 1886, and 1888—even larger than in this colony. In South Australia, moreover, in 1887, the proportion of females set down as having signed with marks was smaller than in any other colony. The colonies, generally, show improvement from year to year, and there is every reason to expect that in all the colonies, as the children educated under the compulsory systems established arrive at marriageable ages, it will become a rare occurrence for a marriage to be attested otherwise than in writing.

Signing with marks in various countries.

490. No returns are at hand showing the manner in which the marriage registers are signed in British colonies other than those named. The following, however, is a statement of the numbers who signed with marks in the latest year for which the information is available in the undermentioned countries, which are arranged in order; the least illiterate country being placed first and the rest in succession:—

Country	Voor	Number Signing with Marks to every 100 Married.							
Country.	1 ear.	Men.	Women.	Mean.					
Prussia Scotland England and Wales Holland France Ireland Italy	1884          1886          1887          1877          1882          1887          1887          1888	$\begin{array}{r} 3.31 \\ 4.65 \\ 9.10 \\ 7.53 \\ 14.39 \\ 22.20 \\ 21.58 \end{array}$	5.11 $8.28$ $10.60$ $14.83$ $22.62$ $24.80$ $31.73$	4·21 6·46 9·85 11·18 18·50 23·50 26·65					

SIGNING WITH MARKS IN VARIOUS COUNTRIES.

Countries compared

as to illiteracy.

491. By comparing these figures with those in the previous table

for the corresponding years, it will appear that adult education, so far as it is indicated by signature to the marriage register, is more forward in Victoria, New Zealand and South Australia than in any of the countries named; also that in New South Wales and Queensland it is more forward than in any except Prussia, in which the proportion signing with marks is much smaller than in any of the other countries named. Scotland comes next to Prussia, but it is more than half as illiterate again. Holland, which comes next to Scotland and England, would probably rank higher were it not that the latest return available dates as far as 1877, when adult education was probably not so advanced as it is now. Attention is called to the very large proportion signing with marks in Italy and Ireland.

492. The age of both bridegroom and bride was specified in the Ages of case of all but 50 of the 9,194 marriages which took place in 1889. grooms In 41 of the defective entries the age of neither party was given; in in combina. 6 cases the age of the husband was stated, but not that of the wife; and in 3 instances the age of the wife was given, but not that of the husband. The following table shows the ages of the husbands and of the wives in combination :---

AGES OF BRIDEGROOMS AND BRIDES IN COMBINATION, 18	889.
---	------

							-	Age	es of	Bride	S.	<u></u>									
Ages of Bridegrooms.	Under 15.	15 to 16.	16 to 17.	17 to 18.	18 to 19.	19 to 20.	20 to 21.	21 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	Unspecified.	Total Bridegrooms.
18 to 19 years 19 to 20	•••		 2	 8	2 11	 7	5	4 23		•••	•••	•••	••••	•••	•••	•••	• • •	•••	•••	•••	6 62
20  to  21		3	$\overline{2}$	<b>6</b>	19	24	20	41	8	1		•••				•••		•••	••••		124
21 to 25 ,,	1	3	25	91	185	227	296	1564	332	37	8	•••				• • •	• • •		•••	3*	2772
25 to 30 ,,	• • •		10	49	118	183	253	1576	1111	181	25	9	3	1	1	•••	• • •	•••	• • •	3	3523
30 to 35 ,,	• • •		5	9	35	50	71	467	522	234	47	12	5			•••	• • •	• • •		•••	1457
35 to 40 ,,			1	3	1	8	12	109	164	94	55	13	11	3	1	•••	• • •	•••	• • •		475
40 to 45 ,,				•••	4	2	2	45	56	64	38	23	13	4	• • •	•••	1	•••		• • •	252
45 to 50 ,,		• • •		1	1	1			37	39	34	19	19	7	••••	•••	•••	1	• • •	•••	177
50 to 55 ,,		Į		•••	1	••••	2	7		22	18	26	16	10	$\frac{3}{2}$	1	1	•••	• • •	•••	118
55 to 60 ,,	••••	,		•••	•••	••••	•••	3	8	9		17	16	8	7	3	3	•••	• • •	•••	86
60 to 65 ,,				••••	•••	••••		3	•••	5	6	8	10	15	3	3	•••	• • •		•••	53
65 to 70 ,,			•••	•••	• • •		•••		•••	· • • • •	3	2	2	3	5	5	4	• • •	• • •	•••	25
70 to 75 ,,			•••	••••	•••	•••	•••	1	••••	1		2		]	3	2	1	•••	•••	•••	
75 to 80 ,,				•••	•••		•••		•••	•••			3	1		• • •		• • •	1	• • •	6
80 to 85 ,,	•••	•••		•••	•••	••••	•••	•••	•••	•••		••••	•••	• • •			T	•••	• • •		
Unspecified		•••		•••				•••	•••	•••	•••	•••	•••	•••		•••	• • •	• • •	•••	41†	44
Total Brides	1	8	45	167	378	503	662	3862	2253	687	247	132	98	53	23	15	11	1	1	47	9194

Norg.-This table may be read thus :--Three men between 21 and 25 married girls between 15 and 16; eight women between 35 and 40 married men between 21 and 25, etc.

493. An examination of the 9,144 cases in which the ages of both Relative

brideand brides tion.

ages of parties are specified will show that in 3,060 instances, or 33 per cent. <sup>ages of</sup> husband and wife of the whole, both parties to the marriage were about the same age; in 812 instances, or 9 per cent. of the whole, the wife was older than the husband; and in 5,272 instances, or 58 per cent. of the whole, the husband was older than the wife.

494. Some striking inequalities of age amongst the parties married Inequalities appear in several of the columns, as, for instance, a man between of age. 65 and 70 and a man between 70 and 75 married women between

Including one under age.
Including cases in which one male and two females were under age.

21 and 25; three men between 50 and 55 married girls under 21: and three men between 45 and 50 married girls between 17 and 20. On the other hand, four women between 21 and 25 married youths of 18; a woman between 30 and 35 married a youth of 20; a woman between 55 and 60 married a man between 25 and 30; a woman between 65 and 70 married a man between 40 and 45, etc.

Extreme ages of marriage.

495. It will be noticed that six youths, aged 18, took upon themselves the cares and responsibilities of matrimony, four of their wives, however, being at least three years older than their husbands. On the other hand, it will be remarked that eight men, who had passed the age of 75-two of whom had passed the age of 80-entered the marriage state, the bride of one being of the same mature age as her husband, whilst the brides of the others were generally much younger; the youngest, however, not being less than 40.

Ageat which marriage is

496. The next table has been designed for the purpose of showing the age at which persons of either sex generally marry, the information being contracted. given for the year 1889, and for the decennial period 1871 to 1880:-

> PROPORTION OF MALES AND FEMALES MARRYING AT DIFFERENT Ages, 1871-80 and 1889.

				Bridegrooms	•	Brides.					
· A	lges.			Proportion	s per 1,000.		Proportion	s per 1,000.			
	0		1889.	Year 1889.	Ten Years, 1871–80.	Numbers, 1889.	Year 1889.	Ten Years, 1871–80.			
Under 1 15 to 1 16 to 1 17 to 1	l5 yea 16 ,, 17 ,, 18 ,,	ars , ,	···· ··· ···		 •02 •46	1     8     45     167     050	$\cdot 11$ $\cdot 88$ $4 \cdot 92$ $18 \cdot 26$	·48 2·71 12·74 36·74			
19 to 2 20 to 2 21 to 2 25 to 3	20 ,, 21 ,, 25 ,, 30	, ,	$62\\124\\2,772\\3.523$	6.78 13.55 302.95 385.03	$     \begin{array}{r}       1.57 \\       6.33 \\       16.79 \\       281.06 \\       295.83     \end{array} $	378 503 662 3,862 2,253	$\begin{array}{r} 41.33 \\ 54.99 \\ 72.37 \\ 422.22 \\ 246.31 \end{array}$	62.69 80.93 86.94 375.69 174.64			
30       to       3         35       to       4         40       to       4         45       to       5	35 ,, 40 ,, 45 ,, 50 ,,	,	1,457475252177	$\begin{array}{r} 159 \cdot 23 \\ 51 \cdot 91 \\ 27 \cdot 54 \\ 19 \cdot 34 \end{array}$	$     \begin{array}{r}       165 \cdot 38 \\       97 \cdot 22 \\       59 \cdot 54 \\       37 \cdot 58     \end{array}   $	$ \begin{array}{r} 2,200\\ 687\\ 247\\ 132\\ 98 \end{array} $	$\begin{array}{r} 240.31\\ 75.11\\ 27.00\\ 14.43\\ 10.71\end{array}$	69·13 44·26 26·44 14·99			
50 to 5 55 to 6 60 to 6 65 to 7	55 ,, 50 ,, 55 ,, 70 ,,	, , ,	118 86 53 25	$     \begin{array}{r}       12.90 \\       9.40 \\       5.79 \\       2.73 \\       2.10     \end{array} $	$20.49 \\ 9.92 \\ 4.96 \\ 1.85$	53 23 15 11	$     \begin{array}{r}       1071 \\       5.79 \\       2.51 \\       1.64 \\       1.20 \\     \end{array} $	6·79 3·03 1·16 ·40			
	otal		9,150*	2·19 1,000·00	1,000.00	9,147*	·22 1,000·00	·24 1,000·00			

\* The bridegrooms and brides of unspecified ages being omitted, these numbers are less than those in the last table, the bridegrooms by 44 and the brides by 47. The reason of the bridegrooms being fewer than the brides is that the age was not stated in the case of three more of the former than of the latter.

497. The large proportion of both sexes marrying at between 21 Frequency and 30 years of age is very marked; thus in 1889 more than twoat 21 to 30. thirds of both males and females who married were between those ages. Owing to their relatively larger numbers in the population, the proportions marrying at the ages named in the last four years were much higher than those in the decennial period; the latter amounting to only four-sevenths of the males, and only five-ninths of the females.

498. In the case of the marriages of Chinese which took place in Ages of Chinese 1889, the men without exception were older than the females with whom they formed unions. None of the former were under 22 years of age, but of the latter, two had not reached the age of 21. The following table shows the ages of the Chinese bridegrooms and of their brides in combination :---

Ages of Chinese Bridegrooms and their Brides in Combination, 1889.

Bri	Ages of	ne	Ages of Brides.														
			18.	19.	21.	22.	23.	25.	26.	28.	29.	30.	34.	40.	T Bride		
22	• • •		• • •		1		•••	•••	•••				•••	•••	1		
27	•••			•••	1	1		•••	1				•••		3		
<b>29</b>	•••	•••	•••	•••	•••	•••	1	•••	•,••	•••	•••	•••	•••	• • •	1		
31				1	•••	•••		•••	•••	•••	•••	• • •	•••	• • •	1		
33	•••		• • •	•••	•••		•••		•••	1			•••	•••	1		
37	•••	•••				•••		•••	•••			• • •	1	•••	1		
38	•••		• • •	•••	1	•••	•••	•••	•••		•••	•••		•••	1		
<b>4</b> 0	• • •		• • •		•••		1	•••	•••	•••	• • •		•••		1		
41	•••	•••	• • •	]			•••	•••	•••	•••	1	•••	•••	•	1		
<b>42</b>	• • •		•••	•••	•••	•••		•••	•••	••••	•••	1	•••	•••	1		
43	•••		•••	•••	•••	•••	1	•••		•••		•••	•••	•••	1		
44	•••		1		•••	•••	•••	•••	•••	•••		•••	•••	•••	1		
46	* • •		•••		•••			1	•••	•••	•••	•••			1		
<b>48</b>	•••			•••	•••	•••	•••	•••		•••	•••		1		1		
52	•••		•••		1								•••	•••	1		

		•••	•••	• • • •	• • •	• • •	•••	•••	• • •	•••	*	-
Total Brides 1	1	4	1	3	1	1	1	1		2	1	18

499. Of the four male Aborigines who married in 1889, two were Ages of widowers, and of their four partners, two were widows. The ages of Aborigines marrying. bridegroom and bride were set down as follows :--23 and 20, 28 and 19, 33 and 32, 45 and 39.

500. In almost all civilized countries, minors are not permitted to Age at marry without the consent of their parents or guardians, but the sons may youngest age at which persons may marry after obtaining such VOL. I. V consent varies in different countries, ranging from 14 for males and 12 for females in the United Kingdom, Switzerland, Spain, Portugal, Greece, and the Roman Catholic portion of the population of Hungary, to 21 for males and 18 for females in the United States. The figures in the following table, giving information on the subject, have been taken from *The Annual Statistician*\* for the year 1889 :---

# AGE AT WHICH MARRIAGE MAY BE CONTRACTED IN DIFFERENT COUNTRIES.

Co			Age at, and after, which persons may marry.				
Co	untry.	-	Males.	Females.			
			Years.	Years.			
Austria	***		14	14			
Belgium		•••	18	15			
France	• • •	••••	18	15			
Germany	•••	•••	18	14			
Greece	***		14	12			
Hungary (Prote	estants)		18	15			
" (Roma	n Catholics)	•••	14	12			
Portugal	•••		14	12			
Russia			18	16			
Saxony	• • •		18	16			
Spain	• • •		14	12	·		
Switzerland	•••	•••	14	12			
Turkey	• • •		Puberty [Variable]	Puberty			
United Kingdor	n		14	12			
United States			<b>21</b>	18			

Marriages of of minors.

<sup>5 of</sup> 501. The minimum age at which persons may, with consent, <sup>5 marry</sup>, is the same in Victoria as in the United Kingdom, viz., 14 for males and 12 for females; but, as a matter of fact, marriages are seldom contracted at such early ages. Six of the males, however, who married in 1889 had not completed their nineteenth year. Of the brides, one had not reached the age of 15 years, eight had not completed their sixteenth, and 45 more had not completed their seventeenth year. As many as 193 of the males, or one in every 48, and no fewer than 1,767 of the females, or nearly a fifth, had not attained the full age of 21 years.

Marriages of <sup>minors in</sup> Victoria and England. <sup>502.</sup> From the experience of Victoria during the year 1889, the five years 1881-85, and the decade, 1871-80, it would appear that, in proportion to the total numbers marrying, the males who marry under age are much less numerous in this colony than in England

\* See that work, page 307: McCarty, San Francisco, California, 1889.

and Wales. The proportion of females marrying under age, which was formerly higher in Victoria than in England, has fallen considerably, and in 1889, as well as in the two previous years, was lower than in England. This is shown by the figures in the following table:—

MARRIAGES OF MINORS IN VICTORIA AND ENGLAND AND WALES.

			In every 100 Marriages, Numbers under 21 Years of Age.									
Persons Married.				In England and								
		Year 1889.	Five Years: 1881 to 1885.	Ten Years: 1871 to 1880.	Wales. Ten Years: 1871 to 1880.							
Bridegrooms Brides	•••		$2.10 \\ 19.22$	$2.37 \\ 22.53$	2·52 28·32	$7.95 \\ 21.96$						
Mean	•••	•••	10.66	12:45	15.42	14.96						

503. As the proportion of minors at marriageable ages existing Marriage in the population may vary greatly in different countries, and in the minors. same country at different times, it will readily be understood that a comparison of the marriages of minors with the total number of marriages does not afford an infallible test of the tendency to marry under age, to determine which accurately the number of minors marrying should be compared with the number of marriageable minors in the population. This has been done for the last two census periods, and the last three years, and the result is given in the following table:—

MARRIAGES OF MINORS, 1871, 1881, AND 1887 TO 1889.

Year.		Num Marriageab	ber of le Minors.*	Number of Mar	Minors who ried.†	Proportion of Minors who Married to every 1,000 Marriageable Minors Living			
		Males Aged 17 to 21.	Females Aged 15 to 21.	Males.	Females.	Males.	Females.		
1871		19,816	30,306	85	1,305	4.29	43.05		
1881	• • •	37,675	57,863	151	1,420	4.01	24.54		
1887	• • •	47,693	64,948	147	1,525	3.08	23.48		
1888		49,260	65,270	211	1,742	4.28	26.69		
1889	•••	50,460	66,847	193	1,767	3.82	26.43		

504. According to the table, the proportion of both males and Decreasing females marrying under age became considerably reduced between tendency to 1871 and 1881; but since the latter year the proportion of females under age. so marrying was again slightly increased, whereas that of males was on

\* Census figures for 1871 and 1881, estimated for the other years. † Mean number of minors who married in the years 1870 to 1872, and 1880 to 1882, and actual number who married in the other years.

the average slightly lower than in 1881. In 1889 the proportion of male minors marrying was lower than in 1881, although in the preceding year it was as high as in 1871; whilst that of female minors marrying, although not so high as in 1871 by  $16\frac{1}{2}$  per 1,000 living, was 2 per 1,000 higher than in 1881.

Ages of Victoria and England.

505. By means of the returns of the last census, it has been posminors marryingin sible to analyze still further the marriages of minors, and to show the proportion of the males and females who contract them at each year of age to the total number of males and females living at the same age. Similar results for England and Wales are available,\* and are contrasted in the following table with the results relating to Victoria:-

		Victo	oria.		Proportion of Marriages per 1,000 Marriageable Minors.							
Age last	Marriagea	ble Minors	Minors wi (Mean o	ho Married of Three	k	Iales.	Females.					
Birthday.	y. at Census of 1031.		Years, 1880 to 1882.)		Victoria.	England and	Victoria.	England and				
	Males.	Females.	Males.	Females.	(Mean of 1880 to 1882.)	(Mean of 1870 to 1872.)	(Mean of 1880 to 1882.)	(Mean of 1870 to 1872.)				
		· ·		·								
15		10,076		11	•••		1.09	·18				
16		10,209		39		•02	3.82	1.23				
17	9,718	10,100	3	146	•31	•41	14.45	9· <b>33</b>				
18	9,763	9,966	10	282	1.02	<b>4</b> •04	28.29	36.39				
19	9,580	9,352	36	443	<b>3.</b> 76	20.34	47.37	72.46				
20	8,614	8,160	102	499	11.84	52.98	61.15	105.84				
Total	37,675	57,863	151	1,420	4.01	18.32	24.54	34.08				

Ages of Minors' Marrying in Victoria and England AND WALES.

Marriage rate of minors lower in Victoria than England.

506. It appears that in the case of both males and females the tendency to marry under age is much greater in England and Wales than in Victoria. This, as regards females, is the reverse of the result obtained by comparing the marriages of those under 21 with the total number married.<sup>‡</sup> The English proportions relating to males are higher at each age than those of Victoria, but in the first three years of minority the Victorian proportions relating to females are higher than those of England. This, however, is much more than made up in the three succeeding years.

507. The following table contains a statement of the proportion of Age of marriage in males and females marrying at different ages in various countries. various countries.

\* See 35th Annual Report of the Registrar-General of England, page xii.

† In this and the preceding table, marriageable minors have been considered to be males from 17 to 21, females 15 to 21. In England, there were 4 marriages of males at 16, but there were none at that age in Victoria. ‡ See table following paragraph 502 ante.

The figures, except those relating to Victoria, which are for the year 1889, and for the decennial period 1871-80, have been taken from the 46th Report of the Registrar-General of England\*:---

AGES	OF	MALES	AND	FEMALES	MARRYING	IN	VARIOUS
				Countrie	s.		

Comptains	Per 10,000 of All Ages Marrying, Numbers-										
Countries.	Under 20.	20 to-25.	25 to 30.	30 to 40.	40 to 50.	50 to 60.	Over 60.				
Bridegrooms.				 							
Victoria, 1889	75	3,166	3,850	2,113	467	222	107				
" 1871–80 …	84	2,979	2,958	2,626	971	304	78				
England and Wales	329	4,805	2,538	1,436	510	256	126				
Scotland	311	3,919	2,965	1,877	604	237	87				
Ireland	253	3,003	3,056	2,643	685	] 242	118				
Denmark	2,0	92	3,820	2,968	752	279	89				
Norway	173	2,681	3,530	2,459	699	4	58				
Sweden	6	2,325	3,569	2,883	778	4	39				
Russia (in Europe)	3,784	3,063	1,230	1,183	549	1	91				
Austria	2,0	84	4,172	2,311	848	415	170				
Hungary	3,1	73	4,571	1,255	604	296	101				
Switzerland	127	2,525	3,133	2,710	927	404	174				
Prussia	58	6,'	716	2,265	624	256	81				
Bavaria	19	1,875	3,674	3,002	1,2	244	186				
Saxony	38	3,432	3,823	1,767	561	278	101				
Holland	256	2,405	3,370	2,659	846	345	119				
Belgium	94	2,161	3,467	2,952	885	322	119				
France	236	2,469	3,757	2,512	622	282	122				
Italy	107	2,491	3,699	2,611	704	266	122				
BRIDES						· · · · · · ·					
Victoria, 1889	1.201	4.949	2.465	1.022	250	83	30				
1871_80	1 963	4 626	1 747	1 1 1 3 4	414	98	18				
	1,000	1,020	1,7 21	.,							
England and Wales	1,441	4,966	1,911	1,091	407	145	39				
Scotland	1,338	4,570	2,325	1,314	370	72					
Ireland	1,349	4,899	2,275	1,104	264	77	32				
Denmark	616	3,608	3,076	2,054	515		19				
Norway	824	3,919	2,889	1,749	476		43				
Sweden	555	3,413	3,089	2,225	573		45				
Russia (in Europe)†	5,801	2,120	699	616	229		35				
Austria	1,8	<b>307</b>	2,851	2,881	1,696	590	175				
Hungary	3,6	504	3,422	1,604	810	408	152				
Switzerland	879	3,876	2,498	1,886	656	173	32				
Prussia	1,030	6,	974	1,487	403	92					
Bavaria	644	3,532	2,949	2,061	7	61	53				
Saxony	1,073	4,500	2,588	1,305	406						
Holland	1,084	3,236	2,897	1,976	599	174	34				
Belgium	640	3,573	2,770	2,124	647	193 _	53				
France	2,116	3,911	2,048	1,374	377		.74				
Italy	1,692	4,384	2,195	1,254	347	101	27				

\* Table D., page x. † The figures, which are those of the Registrar-General of England, add in this line only to 9,500 instead of to 10,000.

Marriages of minors in different countries.

**2**94

508. According to the figures for 1889, fewer males marry under 20 in Victoria than in any of the other countries named, except Sweden, Prussia, Bavaria, and Saxony; but, on the other hand, more females marry under that age in Victoria than in any of those countries except England, Scotland, Ireland, France, Italy, and Russia. Attention is called to the very large proportion shown as marrying under age in the last-named country, exceeding a third of the total marriages in the case of the males, and exceeding half in the case of the females.

Husbands and wives asian colonies.

509. The following are the numbers of husbands and wives in in Austral- each Australasian colony according to the returns of the simultaneous census of 1881, those under and over 21 years of age being distinguished :---

HUSBANDS AND W	VIVES II	N EACH	AUSTRALASIAN	COLONY,	1881.
----------------	----------	--------	--------------	---------	-------

		Husbands.		Wives.			
Colony.	Under 21 Years.	Over 21 Years.	Total.	Under 21 Years.	Over 21 Years.	Total.	
Victoria New South Wales Queensland South Australia Western Australia	···· ··· ···	283 408 118 95 15	$124,371 \\109,810 \\30,004 \\43,860 \\4,260$	$124,654 \\110,218 \\30,122 \\43,955 \\4,275$	$\begin{array}{r} 3,006\\ 4,040\\ 1,285\\ 1,344\\ 207 \end{array}$	123,036 103,793 28,839 42,339 3,769	126,042 107,833 30,124 43,683 3,976
Total	•••	919	312,305	313,224	9,882	301,776	311,658
Tasmania* New Zealand Grand Total	•••	73 97	17,671 73,234	17,744 73,331	607 2,374	16,527 70,433	17,134 72 807
Grand 100al	•••	1,009	400,210	404,299	12,863	388,736	401,599

510. It is to be regretted that no figures are at hand showing the Conjugal condition conjugal condition of males and females at marriageable ages living in various countries. in countries out of Australasia; but the following table contains a statement of the proportions of those of both sexes and all ages unmarried, married, and widowed in various countries. The figures, except those in the first line, have been taken from Mulhall's Dictionary of Statistics † :---

> \* In this line the numbers under and over 21 have been partly estimated. † Page 305.

CONJUGAL CONDITION IN VARIOUS COUNTRIES-BOTH SEXES AND ALL AGES.

			Numbers in every 1,000 Living.					
Countri	les.		Unmarried.	Married.	Widowed			
Victoria (1881)	•••	•••	665	294	41			
England	• • • •	•••	602	345	53			
France	•••		511	<b>405</b>	84			
Prussia			606	336	58			
Wurtemberg	• • •		623	319	58			
Austria	• • •	1	605	<b>342</b>	53			
Hungary		• • •	532	407	61			
Italy		• • •	582	<b>352</b>	66			
Switzerland		· • •	609	319	72			
Spain			572	<b>3</b> 60	68			
Portugal	•••		628	310	62			
Holland	•••	• • •	611	328	61			
Belgium	•••		629	<b>315</b>	56			
Scandinavia	• • •	• • •	618	330	52			
Chile		• • •	688	<b>260</b>	52			

511. It appears from this table that, in Victoria, in proportion to Small prothe numbers of the population, fewer persons have been living in the married in marriage state than in any of the other countries named, except Chile; and fewer have been living in the widowed state than in any of those This is probably in part accounted for by the fact that countries. the proportion living at marriageable ages, especially of males, is smaller in Victoria than in most of those countries. It is, however, probable that the proportion of widowed persons in Victoria has considerably increased since 1881.

512. The births registered in Victoria during 1889 numbered Births, 1889. 36,359, as against 34,503 in 1888. The increase in the year under review, as compared with the previous one, was thus 1,856.

513. During the 20 years ended with 1883, the number of births Births in

portion of

Victoria.

1889 and in Victoria had remained almost stationary; but in 1884 a marked former years. increase took place, which has continued during the five subsequent years, the number of births in 1889 being the highest ever recorded.\* The increase between 1889 and 1888 was 1,856, as compared with 1,460 between 1888 and 1887.

514. In proportion to population, the births decreased steadily for Birth rate. The lowest point was reached in 1882, since a number of years. which year there has been a gradual improvement, the birth rate in

\* For number of births in each year, see Statistical Summary of Victoria (first folding sheet), published in the second volume of this work.

1889 having been higher than it had been in any year since 1876. The following are the birth rates for the last thirty years :---

			Births per I Mean popu	1,000 of   lation.				Births Mean	per 1,000 of population.
1860			42	81	1876	• • •	• • •	•••	33·61
1861			43.	46	1877	• • •	• • •		32.17
1862			44	50	1878	• • •	• • •		32.36
1863			42.	46	1879		•••		32.18
1864		• • •	43	79	1880		• • •		30.75
1865			$\dots$ 42.	40	1881		•••		31.24
1866			39.	76	1882	• • •	• • •		<b>30·05</b>
1867			39.	75	1883	• • •	•••		30.23
1868			41.	08	1884	•••	• • •		30.89
1869			37.	89	1885		•••	•••	31.27
1870			38.	07	1886	• • •	• • •	•••	31.23
1871			37.	15	1887	• • •	•••	• • •	32.40
1872			36.	33	1888	• • •	• • •		32.49
1873			36.	71	1889	•••	• • •	•••	32.92
1874			34.	46					
1875	• • •		33.	94	Μ	ean of	30 yea	rs	35.94

# ANNUAL BIRTH RATE, 1860 TO 1889.

Proportion of births to

515. Birth rates, based upon a comparison of the number of events population with the total population, are, like marriage rates calculated upon a and to mar-ried women. similar basis, apt to mislead, unless the population is in a normal It must be quite evident that, if there is not a sufficient condition. proportion of married women at the fruitful or child-bearing ages in a community, the birth rate is not likely to be high, but that an excess of such women would probably cause a high birth rate. This will be made apparent by the following table, which shows the birth rate, calculated upon the total population and upon the number of married women at the child-bearing period of life, in the last two census years :---

PROPORTION OF BIRTHS TO POPULATION AND TO MARRIED WOMEN.

		Mounied Women		Proportion of Legitimate Births.			
Year of Census.	Enumerated Population.	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	731,528 862,346	88,561 84,831	26,805 25,675	36·64 29·77	302.67 302.66		

516. It will be noticed that the married women at reproductive Reason for decline of ages were fewer by 3,730 in 1881 than in 1871, that the proportion of birth rate. births to such women, viz.,  $302\frac{2}{3}$  per 1,000, was exactly the same in both years, but that the proportion of births to the total population was considerably less in 1881 than in 1871. Thus, while the birth

<sup>\*</sup> In both cases these are the legitimate births which occurred during the twelve months of which the census was the middle.

rate based upon a comparison of the births with the married women remained perfectly steady, that rate based upon a comparison of the births with the population showed a falling-off of nearly 7 per 1,000. The reduction in the birth rate, calculated in the ordinary way, which had been going on for years, is therefore conclusively shown—at any rate so far as the period 1871 to 1881 is concerned—to be due to a deficiency in the community of married women at the fruitful period of life.

517. Returns of the births in all the Australasian colonies are Birth rates available to the end of 1889, and from these and the mean populations of the respective colonies during each year the birth rates have been calculated in the office of the Government Statist, Melbourne. The following table gives the birth rates of the different colonies for each year from 1865 to 1889, or as many years between those periods as the figures are available for :—

		Number of Births per 1,000 of Mean Populations.								
Year.	Yea <b>y</b> .		New South Wales.	Queens- land.	South Australia.	Western Australia.	Tasmania.	New Zealand.		
1865		42.40	43.21	43.65	43.90		32.56	41 <b>·1</b> 2		
1866	• • •	39.76	40.45	44.86	42.38		29.15	42.89		
1867	•••	39.75	41.94	45.66	41.87		30.34	42.18		
1868	••••	41.08	40.72	43.03	41.51		30.03	42.14		
1869		37.89	40.74	42.83	39.03		28.27	41.90		
1870		38.07	40.09	43.51	38.48		30.18	42.32		
1871		37.15	<b>39</b> .63	<b>43</b> ·25	38.34	•••	30.16	40.64		
1872		36.33	38.46	40.70	37.60	32.42	29.44	39.20		
1873	•••	36.71	39.38	40.82	36.42	31.43	29.43	39.00		
1874	• • •	34.46	39.30	<b>41·11</b>	38.22	33.71	29.72	40.27		
1875	• • •	<b>3</b> 3·94	38.53	<b>38</b> ·90	35.70	28.72	29.88	40.23		
1876		33.61	38.56	37.48	37.71	33.98	30.11	41.73		
1877	•••	32.17	37.92	36.75	37.36	33.07	30.21	41.28		
1878	•••	32.36	38.50	35.77	38.23	31.11	32.27	42.14		
1879	•••	32.18	38.99	36.74	38.96	34.38	32.05	40.32		
1880		30.75	38.80	36.92	38.94	32.35	32.91	40.78		
1881	•••	31.24	38.13	37.19	38.66	33.67	33.40	37.95		
<b>1882</b>	•••	30.05	37.37	35.85	37.40	35.84	33.20	37.32		
1883	• • •	30.23	37.49	36.92	37.37	33.87	34.25	36.28		
1884	•••	30.89	38.54	<b>36</b> ·2 <b>3</b>	38.38	33.84	35.66	<b>36·15</b>		
1885	•••	31.37	37.64	<b>37</b> .80	38.47	35.22	35.08	34.78		
1886	•••	31.23	37.03	37.84	35.70	39.43	34.15	33.12		
1887	•••	32.40	36.42	<b>3</b> 8·09	34.56	37.34	33.87	32.09		
1888	• • •	32.49	36.20	37.77	33.06	35.88	<b>3</b> 3·10	31.22		
1889	•••	32.92	33.73	36-27	32.37	37.14	31.97	30.07		
Mean	5	34.45	38.71	39.44	38.02	34.08	31.67	38 <sup>.</sup> 70		

BIRTH RATES IN AUSTRALASIAN COLONIES, 1865 TO 1889.\*

\* For the number of births in the various colonies during the seventeen years ended with 1889, see General Summary of Australasian Statistics (third folding sheet) in the second volume. See also Appendix A. to the same volume.

Low birthrates in Australasian colonies in 1889. 298

518. In 1889 the birth rate was remarkably low in most of the colonies, and was below the average in all except Western Australia and Tasmania. Even in Tasmania it was lower than in any year since 1877. In New South Wales, South Australia and New Zealand the rate was absolutely the lowest recorded during the whole period of 25 years; whilst in Queensland, it was about the same as in 1884, but lower than in any other year shown in the table except 1882 and 1878. In Victoria, the rate, although still below the average, was higher than in any year since 1876, as has been already stated. In Western Australia the birth rate was about equal to that in 1887, but was much higher than in any previous year except 1886.

Order of colonies in respect to birth rates.

519. The following is the order of the colonies in reference to their respective birth rates in the last year shown in the table and according to the average of the whole period of twenty-five years. It will be observed that Victoria stands fourth on the list for 1889 but fifth in the twenty-five-year series :—

ORDER OF AUSTRALASIAN COLONIES IN REFERENCE TO BIRTH RATES.

Order in 1889.

- 1. Western Australia.
- 2. Queensland.
- 3. New South Wales.
- 4. Victoria.
- 5. South Australia.
- 6. Tasmania.
- 7. New Zealand.

Order in a Series of Years.

- 1. Queensland.
- 2. New South Wales.
- 3. New Zealand.
- 4. South Australia.
- 5. Victoria.
- 6. Western Australia.
- 7. Tasmania.

Birth rate in Australia and Australasia.

520. On the continent of Australia, taken as a whole, and on that continent, combined with Tasmania and New Zealand, the birth rate in 1889 was not only lower than in 1888, but was absolutely the lowest recorded during the last seventeen years. The following are the figures for the period referred to :---

BIRTH RATE IN AUSTRALIA AND AUSTRALASIA, 1873 TO 1889.

Number of Birthsper1,00	<b>)0</b> ]]
of Mean Populations.	

	Year.		Continent of Australia.	Australia with Tasmania and New Zealand.	Year.		Continent of Australia.	Australia with Tasmania and New Zealand.
1873 1874 1875 1876	••••	•••	37.36 36.46 35.29 35.20	37.19 36.70 35.82 36.04	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	••• •••	34·54 35·25 35·33 34·85	34·84 34·33 35·22 34·52
1877 1878 1879 1880	••••	••••	$\begin{array}{c} 34.15 \\ 34.31 \\ 34.55 \\ 35.33 \end{array}$	35.16 35.51 35.42 36.20	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	•••	$ \begin{array}{c} 34.95 \\ 34.68 \\ 33.64 \end{array} $	34·42 34·03 32·99
<b>1</b> 881 1882	•••	•••	$35.22 \\ 34.28$	35·63 34·78	Means		35.02	35.22

521. Comparing this table with that showing the marriage rates Low birth in the same countries, it is found that a high birth rate is generally Ireland and concurrent with a high marriage rate, and vice versa. A notable exception to this is France, in which, although the marriage rate is high, the birth rate is lower than any of the countries named, except The low rate in the latter is attributed to the small Treland. proportion of women at child-bearing ages in the population,\* but the low birth rate in France cannot be accounted for by any such cause, as it is stated that the proportion of women at the reproductive period of life is higher in that than in any other European country; the chief, though indirect cause is said to be—"the sub-division of land among the peasant proprietors. The better class of the labouring population aspire to become proprietors of small holdings; by thrift and industry they accumulate capital for this purpose, and avoid by their social philosophy the division of their property amongst a large family at their decease."+

522. In the same five years the mean birth rates in Queensland Australasian and Euroand New South Wales were above those in any of the European pean birth rates comcountries named, except Hungary, Austria, Italy and Prussia-the pared. rates in the two latter being about the same as in Queensland; the mean birth rates in Western Australia, South Australia, and Tasmania were above those in any except the four countries first named, together with Germany and Spain; the mean birth rate in New Zealand was below that in any of the countries named, with the addition of Holland; the mean birth rate in Victoria was below that in any of the countries named in the table except Norway, Sweden, Belgium, Switzerland, France, and Ireland. The following are the birth rates referred to :---

MEAN BIRTH RATES IN AUSTRALASIAN COLONIES, 1884 TO 1888.

rates in France.

Number of Births per 1,000 of Mean Population.

7.55
1 00
7.17
3.34
<b>3·03</b>
4·37
3.48
1.68

\* See 15th Detailed Report of the Registrar-General of Ireland, pages 12 and 29. For many years the registration of births in Ireland was admitted to be defective, but Dr. T. W. Grimshaw, the Registrar-General of that country, in a letter addressed to the Government Statist of Victoria, dated 6th May, 1886, stated that since the passing of the Public Health Amended Vaccination and Registration Acts (1878 to 1880), this is no longer the case, and the births occuring in Ireland are now very well recorded. It may be remarked, however, that this improvement has not been accompanied by any improvement in the birth rate as calculated from the published figures. † See 41st Report of the Registrar-General of England, page xlvi.
Birth rates

523. The birth rates in certain British colonies outside Australasia possessions. including all those for which the information is available, are shown in the following table. The low birth rate in Hong Kong is probably owing to the small proportion of women in the population, the bulk of which consists of Chinese males. In Mauritius and Jamaica, considerably more than half the births were stated to be illegitimate. In some cases the figures are only for one or two years :---

C	oloni <b>es</b> .			Years.	Number of Births per 1,000 of the population.
Malt <b>a</b>	•••		•••	1886	40.0
Cevlon			٩	1886 - 7	30.0
Straits Settlem	ents			1882 - 4	19.0
Hong Kong				1882 - 6	8.2
Mauritius	. <b></b>	· <b></b>		1886	36.3
<b>Sevc</b> helles	•••			1886	<b>3</b> 9· <b>8</b>
Nova Scotia	* • •	• œ .	• • •	1871-5	32.0
Bermudas	• • •	• • •		1884-5	35.7
British Guiana		• • •		1886	35.2
West Indies—					
Bahamas	• • 1	• • 1		1874-5	39.0
Jamaica	***	• • •		1886-7	<b>3</b> 6·0
St. Lucia	•••			1869-87	41.8
St. Vincent				1870-9	46.0
Barbados	•••			1886	41.5
Grenada				1871-5	45.2
Tobago	•••	• 3 5	•••	1886	<b>3</b> 6·0
Antigua	•••	•••		1875-6	40.4
Montserrat	***	•••	•••	1886	40.4
Dominica		•••		1871-6	31.0
Trinidad			••••	1886	35.9

BIRTH RATES IN BRITISH POSSESSIONS.

Birth rates in European countries.

524. A statement of the birth rates in British and certain Foreign countries for each of the five years ended with 1888, is given in the following table. The figures have been taken from the reports of the Registrar-General of England or other official sources :---

BIRTH RATES IN EUROPEAN COUNTRIES, 1884 TO 1888.

Countries.		Nu	Number of Births per 1,000 of Mean Population.					
		1884.	1885.	1886.	1887.	1888.	Mean of 5 years.	
Hungary Austria Italy Prussia German Empire Spain Holland	···· ··· ···· ··· ··· ··· ··· ··· ···	$\begin{array}{c} 46.0\\ 38.4\\ 38.7\\ 37.4\\ 37.2\\ 37.1\\ 34.9\end{array}$	 37·4 38·1 37·6 37·0  34·4	$\begin{array}{c} 45.5\\ 38.0\\ 36.4\\ 37.7\\ 37.1\\ \dots\\ 34.6\end{array}$	38·2 38·3 37·8 36·9  33·7	 37·9 36·6 37·7 36·7  33·7	45·8* 38·0 37·6 37·6 37·0 36·5† 34·3	

\* Mean of two years.

† Mean of two years, 1883 and 1884.

BIRTH RATES IN EUROPEAN COUNTRIES, 1884 TO 1888—continued.

	Number of Births per 1,000 of Mean Population.						
Countries.		1884.	1885.	1886.	1887.	1888.	Mean of 5 years.
England and Wales	•••	<b>33</b> ·4	32.5	32.4	<b>3</b> 1·4	30.6	32.1
Scotland		33.4	<b>32·</b> 3	32.4	31.2	30.5	32.0
Norway	•••	31.0	31.3	30.9	30.8	30.8	31.0
Sweden	•••	30.0	29.6	29.8	29.7		29.8*
Belgium	•••	30.5	29.9	29.6	29.4	29.1	29.7
Switzerland	•••	28.1	27.5	27.5	27.9	27.7	27.7
France	••••	24.8	24.3	23.9	23.5	23.1	23.9
Ireland	••••	24.0	23.5	23.3	23•2	22.9	23.4

525. According to the reports of the Registrar-General of England, Birth rate in United the birth-rate of the United Kingdom in 1888 was lower than in any Kingdom. year since 1870, and, for the first time, was less than 30 per 1,000 persons living, as will be seen by the following figures :---

BIRTH RATE IN THE UNITED KINGDOM, 1871 TO 1888.

		Births per 1,000 of the Population.			Births the I	per 1,000 of Population.
1871		35.0	1881	• • •	• • •	32.5
1872	• • •	34.4	1882	•••		32·2
1873		$\dots$ 34·1	1883			31.8
1874	• • •	34.5	1884	•••		32.1
1875		34.0	1885	• • •		31.3
1876		34.9	1886			<b>31·3</b>
1877	•••	34.5	1887			<b>30·3</b>
1878		34.1	1888			29.6
1879		33.5				
1880		32.7	Mean	•••		32.9

526. The following table shows the births and birth rates, together Birth rates with the estimated mean population in the metropolis, the extrametropolitan towns, and the country districts of Victoria during 1889; also the average birth rates in the same divisions during the five years ended with 1885 :---

in town and country, 1889.

BIRTHS IN URBAN AND COUNTRY DISTRICTS, 1889.

		Births.			
Districts.	Estimated Mean Population,	Total Number	Number per 1,000 of the Population.		
	1889.	1889.	1889.	Annual Mean, 1881 to 1885.	
Melbourne and suburbs (Greater Melbourne) Extra-Metropolitan towns Country Districts	<b>445,220</b> 196,400 462,680	16,934 6,547 12,878	38·04 33·34 27·83	$33.50 \\ 32.54 \\ 27.82$	
Total	1,104,300	36,359	32.92	30.74	

\* Mean of four years.

Birth rates in town and country, 1873 to 1889. 527. The next table shows the number of births per 1,000 of the population of the same three divisions of the colony during each of the last seventeen years :---

BIRTH	RATES	IN	URBAN	AND COUNTRY	DISTRICTS,	1919	$\mathbf{TO}$	1009.
						·		

 $\sim$ 

---- 1079 --- 1000

	ĺ	Ň	lumber of Births per 1	,000 of the Populatio	n.
Year.	Year. Greater Melbourne.		Extra-Metropolitan Towns.	Country Districts.	Total of Victoria.
1873		<b>34</b> ·36	40.18	36.32	<b>36</b> .71
1874		32.98	39.81	32.46	34:46
1875		33.63	38.63	31.54	<b>3</b> 3·94
1876		33.20	37.80	31.61	<b>33·61</b>
1877		33.09	34.51	30.30	32.17
1878	•••	33.67	35.42	29.89	<b>3</b> 2·36
1879	• • •	33.32	35 <sup>.</sup> 65	29.63	32.18
1880	• • •	31.19	34.21	28.72	30.75
1881	• • •	32.42	34.76	28.70	31.24
188%	• • •	32.85	81.35	27.43	30.02
1883	• • •	33.15	32.07	27.22	30.23
1884		33.81	32.80	27.78	30.89
1885	•	34.94	31.87	28.00	31.27
1886	•••	34.82	31.76	27.87	31.23
1887	• • •	37.94	33.30	27.72	32.40
1888	• • •	37.30	32.23	28.09	32.49
1889	• • •	38.04	33.34	27.83	32.92

Results compared

528. It will be noticed that in the first two years of the period to which the table refers the birth rate of the country districts was about equal to that of the metropolis, whilst the birth rate of the extrametropolitan towns was very much higher than either. Since 1874, however, the metropolitan rate has been much above that of the country districts, but until 1882 was still below that of the extrametropolitan towns. In 1882 and the subsequent years, however, owing to a general falling-off in the birth rate of the extra-metropolitan towns and in the country districts, and a gradual increase in that of the metropolis, the rate in the last-named division was much above that in other urban districts. It will also be noticed that, in 1889, the birth rate in the metropolis was higher than in any previous year, and in the extra-metropolitan towns it was higher than in any year since 1881, but only slightly higher than in 1887; whilst in the country districts it was lower than in 1888, but was about equal to the average of the last six years.

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Birth rates in metropolitan sub. rate during 1889; also the mean annual birth rate during the five districts. years, 1881 to 1885, in the different municipalities, etc., forming

the component parts of the district of Greater Melbourne, are shown in the following table :---

			Births.		
Sub-districts.	Estimated Mean Population,	Total	Number per 1,000 of the Population.		
	1003.	1889.	1889.	Annual Mean, 1881 to 1885.	
Melbourne City	73,890	1.762	23.85	25.49	
North Melbourne Town	21.475	965	44.94	38.32	
Fitzroy City	31,780	1,153	36·28	34.70	
Collingwood City	33,790	1,349	39.92	37.35	
Richmond City	36,610	1,553	42.42	35.93	
Brunswick Town	17,915	870	48.56	42.27	
Northcote Borough	5,800	273	47.07	32.66	
Prahran City	35,600	1,337	37.56	31.93	
South Melbourne City	41,820	1,399	33.45	34.87	
Port Melbourne Borough	12,480	517	41.43	41.18	
St. Kilda Borough	18,187	528	29.03	25.35	
Brighton Town	8,596	335	38.97	28.97	
Essendon Town*	10,215	385	37.69		
Flemington & Kensington Borough	8,664	373	43.05	32:88	
Hawthorn Town	15,440	587	38.02	29.82	
Kew Borough	5,620	183	32.26	24.20	
Footscray Town	14,940	757	50.67	42.50	
Williamstown Town	13,620	540	39.65	35.35	
Remainder of district	33,410	1,312	39.27	29.72	
Hospitals, Asylums, etc.†	3,890	756	1.70±		
Shipping in Hobson's Bay and River	1,478	•••			
Total	445,220	16,934	38.04	33.20	

BIRTHS IN GREATER MELBOURNE.

Note.-It should be specially noted that the births in Public Institutions are eliminated from the individual sub-districts, although included in the total line.

530. It will be observed that during the five years ended with 1885 Birth rates the births in three municipalities, viz., Brunswick, Port Melbourne, and Footscray, averaged above 40 per 1,000 of the population; that in four municipalities, viz., North Melbourne, Collingwood, Richmond, and Williamstown, they were between 35 and 40 per 1,000; in five municipalities, viz., Fitzroy, Northcote, Prahran, South Melbourne, and Essendon and Flemington, they were between 30 and 35 per 1,000; and that in five municipalities, viz., Melbourne City, St. Kilda, Brighton, Hawthorn, and Kew, as also in "Remainder of District,"

in sub-districts, 1881 to 1885.

\* Essendon (Borough) was proclaimed a Town on the 7th January, 1890.

† The population given is that of all the institutions, but the Lying-in Hospital is the only one in which births occurred.

‡ Per 1,000 of the population of the whole of Melbourne and Suburbs.

they were below 30 per 1,000. The lowest rate was in Kew, viz., only a fraction over 24 per 1,000.

Birth rates in sub-dis-

531. During 1889, the birth rates in all the sub-districts except tricts, 1889. Melbourne and South Melbourne cities, were higher than they were in the five years ended with 1885, but this was more particularly noticeable in North Melbourne, Richmond, Brunswick, Northcote. Prahran, Brighton, Essendon and Flemington, Hawthorn, Kew, Footscray, and the "Remainder of District." The sub-district with the highest birth rate in 1889 was Footscray, with 51 per 1,000, which was followed by Brunswick, Northcote, North Melbourne, Flemington, Richmond, and Port Melbourne; in all of which the rates were above 40 per 1,000; those with the lowest rates were Melbourne City and St. Kilda, in which the rates were below 30 per 1,000.

Births in Australasian capitals.

532. In 1889, the birth rate in Melbourne was lower than that in Brisbane or Perth, but above that in Sydney, Adelaide, Wellington, or Hobart, as is shown in the following table, which gives, for that year, a statement of the estimated population and the number of births, and number per 1,000 of the population, in each of those capital cities :---

					Birth	s, 1889.
	Capital C	ities.*		Estimated Mean Population.	Total Number.	Number per 1,000 of the Population.
Brishane				A1 300	3 063	19.41
Perth	• • •	• • •	•••	9,000	363	40.33
Melbourne	•••			445,220	16.934	38.04
Sydney	•••	• • •	• • •	374,207	13,344	35.66
Adelaide	•••			120.600	4,239	35.15

BIRTHS IN AUSTRALASIAN CAPITAL CITIES, 1889.

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Wellington Hobart	• •••	•••	32,050 35,043	981 1,054	<b>3</b> 0·61 <b>3</b> 0·08
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533. The average birth rate in the Australasian capital cities in Birth rate in London 1889 was 36.2, that being a fraction higher than the rate in London, according to the average of the ten years 1876-85, viz., 34.7, which was a fraction higher than that of England and Wales (34.4) during the same period. The rate in London was thus higher than that in

\* With suburbs.

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Wellington or Hobart, but below that in any of the other Australasian cities named in the last table.

534. In the five years ended with 1885 the mean birth rate of the Birth rates principal towns of Scotland was 36.07; of the large towns, 35.52; towns. and of the small towns, 33.50. All these rates are much below the mean birth rate of the Australasian capital cities or than the birth rate of Melbourne.

535. By comparing the following statement of the birth rates in Birth rates British towns during 1887 with the figures in the last column of the in British towns. last table, it will be found that the birth rate is higher in Brisbane than in any of those towns; in Perth, than in any except Cardiff; in Melbourne, than in any except Cardiff, Newcastle, and Preston; and Sydney and Adelaide, than in any except those towns and Glasgow, Portsmouth, Manchester, and Blackburn; whilst the birth rates in Wellington and Hobart are lower than in any of the towns in the list except Derby, Bristol, Edinburgh, Halifax, Dublin, Bradford, Huddersfield, and Brighton :--

	Births per 1,000 of the Population.		Birth the	ns per 1,000 Population	of
Cardiff	41.1	28 British Towns		$\overline{32} \cdot 2$	
Newcastle	39.1	Salford	•••	<b>31</b> ·9	
Preston	38.5	Birmingham	e-e-6	31.8	
Glasgow	37.0	London	•••	31.7	
Portsmouth	36.8	Plymouth	•••	31 <b>·5</b>	
Manchester	35.9	Oldham		31 <b>3</b>	
Blackburn	35.8	Liverpool		31.5	
Sunderland	34.6	Derby		<b>3</b> 0·0	
Norwich	33.9	Bristol	•••	<b>29</b> ⁼ <b>7</b>	
Nottingham	33.3	Edinburgh	• • •	29.3	
Wolverhamnton	33.2	Halifax		28.4	
Sheffield	32.9	Dublin	•••	<b>28</b> 0	

BIRTH RATES IN BRITISH TOWNS, 1887.

Leicester	•••	32.8	Bradford	• • •	27.7
Bolton	• • •	32.5	Huddersfield	• • •	27.7
Birkenhead	•••	32.5	Brighton	• • •	25.8

536. Comparing the birth rates in the following Foreign towns Birth rates (including two in British India), with those in the capital cities of in Foreign Australasia, it will be found that the birth rate in Brisbane is above that in any of the towns named; the birth rate in Perth is above that in all but 3, in Melbourne above all but 8, in Sydney and Adelaide above all but 12, in Wellington above all but 16, and in Hobart above all but 17, of the towns:—

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# BIRTH RATES IN FOREIGN TOWNS, 1880.

	Birt of I	hs per 1,000 Population.		Births per 1, of Population		
Alexandria Madras (1887) Buda-Pesth Hamburg (State) The Hague Rotterdam Vienna Munich Bome	OI F	$\begin{array}{c c} 42.9\\ 41.2\\ 40.6\\ 39.5\\ 39.3\\ 38.3\\ 38.3\\ 38.3\\ 38.2\\ 37.3\\ \end{array}$	Dresden Christiania Berlin (1889) Brussels New York Turin Boston (1883) Paris (1887) Venice	•••• ••• ••• ••• •••	$   \begin{array}{r}     34.5 \\     33.7 \\     32.8 \\     31.2 \\     30.4* \\     29.8 \\     28.3 \\     27.2 \\     23.9 \\   \end{array} $	
Copenhagen Breslau Amsterdam		36·8 36·7 36·6	Geneva Bombay altimore (1889)	•••	22·9 20·0 18 <b>·7</b>	

Birth rates in Victorian towns.

537. The following are the birth rates in six Victorian towns during 1889; the rate in the metropolis being, as will be observed, below that in Stawell, but above that in Sandhurst, Geelong, Ballarat, or Castlemaine:—

### BIRTH RATES IN SIX VICTORIAN TOWNS, 1889.

				Births per 1,000 of Population.		
Stawell Melbourne Sandhurst	···· ···	 	$51.62 \\ 38.04 \\ 37.84 $	Geelong Ballarat Castlemaine	•••	$37.18 \\ 32.15 \\ 24.84$

Births of males and females. 538. The births of males in Victoria during 1889 numbered 18,713, those of females 17,646. These numbers furnish a proportion of 106.05 boys to 100 girls, which is an exceptionally high proportion, it having been exceeded only twice in the last 17 years, viz., in 1878, when the proportion was as high as 107.19, and in 1885, when it was 106.44. In 1888, the proportion was only 104.33, and in 1887, 104.39; whilst in the ten years 1871-80, 137,275 births of males and 131,435 births of females were registered, giving a proportion of 104.45 have to 100 girls.

### 104.45 boys to 100 girls.

Births of males and females in Australasian colonies. 539. In every country in which births are registered, it is found that more boys are born than girls. This was the case in all the Australasian colonies during the period of seventeen years ended with 1889, although not in every one of those years so far as Western Australia and Tasmania are concerned. The following are the

\* The number of births registered in New York would give a proportion of 22.8 per 1,000 of the population, but it is officially stated that the registered births are 25 per cent. below the actual number which take place, so that the correct proportion is as here stated.

+ See table following paragraph 539 post.

numbers of boys per 100 girls born in the respective colonies during each year of the period referred to :---

PROPORTION OF MALE TO FEMALE BIRTHS IN AUSTRALASIAN Colonies, 1873 to 1889.

			Number of ]	Boys to 100 (	Girls Born.		
Year.	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	Ne <b>w</b> Zealan <b>d.</b>
1873	102.65	104.38 104.31	106.13 105.74	102 <b>·77</b> 103·44	109·04 103·25	98·44	103.48
1874	103.94 104.95 105.52	102.08	10074 104.01 105.90	103.85	98:95	107.02	100.83 107.80
1876 1877	105.76	102.47 106.34 106.99	$105^{\circ}26$ $106^{\circ}78$ $102^{\circ}20$	$101^{008}$ $102^{091}$	106.76 101.32	111.48 105.04	106.01 104.59
1878 1879	107·19 104·69	105.71	103.89 103.36 103.62	$107^{14}$ 102.53 110.08	101.15 117.59 02.27	105.52 99.11	101.57 105.93
1880 1881	104.44 104.99	$104^{.99}$ $105^{.59}$	103.63 106.64 107.55	106.48	92 <sup>.37</sup> 108 <sup>.</sup> 07	101.56 107.41	104.71 104.90
1882 1883	103.63	$103^{\circ}23$ $104^{\circ}89$ $105^{\circ}27$	107.55 106.17 109.95	106'36 103'29	110.64 104.64 100.49	104.81 110.42	104.40 105.17
1884 1885	105.98	105.37 104.88 106.25	$102^{\circ}25$ $102^{\circ}50$ $102^{\circ}51$	101.57	106'42 108:00	103.37 104.36 109.00	$104^{\circ}28$ 103 $\cdot59$
1886 1887	104.53	100.35 103.09	102.31 105.24 105.05	104 48 109.70 100.88	115.90 103.26	108.99 106.63	104.72 103.35
1889	$104^{\circ}33$ $106^{\circ}05$	103.74	105.05	109.82 105.05	107.38	105.13	104-10
			l		l	l	J

540. In the Australasian colonies, taken as a whole, the proportion order of during the five years ended with 1889 was 105.5 male to 100 female respect to In the different colonies, the proportions ranged from 108.4 those born. infants. males per 100 females in Western Australia to 104.4 males per 100 females in New Zealand and Queensland. The following is the order of the colonies in respect to these proportions :---

colonies in sexesof

# ORDER OF COLONIES IN REFERENCE TO PROPORTION OF MALE TO FEMALE BIRTHS, 1885 TO 1889.

	Boys to 100 Girls.	1	Boys to 100 Girls.
Western Australia	108.36	Queensland	104.49
South Australia	106.12	New Zealand	$\dots$ 104·43
Victoria	$\dots$ 105.15		
New South Wales	$\dots 105.10$	Mean	105.49
Tasmania	104.76	1	

541. The proportions of male to female births in the countries Births of males and included in the following list have been derived from official sources. females in certain The averages for the Australasian colonies extend over the ten years countries. W 2

1878 to 1887, and those for the other countries named extend over periods of various lengths :---

# PROPORTION OF MALE TO FEMALE BIRTHS IN VARIOUS COUNTRIES.

Boys to 100 Girls.

Boys to 100 Girls.

Victoria New South Wales Sweden Denmark Cussia in Europe Vinland Vermont Rhode Island Queensland New Zealand New Zealand Russian Poland	$   \begin{array}{r}     105 \cdot 1 \\     105 \cdot 1 \\     105 \cdot 0 \\     104 \cdot 4 \\     104 \cdot 3 \\     104 \cdot 3 \\     104 \cdot 1   \end{array} $
Russian Poland	104.1
	ictoria ew South Wales weden enmark ussia in Europe finland fermont hode Island ueensland lew Zealand lew Zealand ussian Poland

Australasian and other countries compared.

542. It will be observed that the proportion of boys born to girls is in Western Australia below that in 5, and in South Australia below that in 14 countries out of Australasia; whilst the proportion in Tasmania, Victoria, and New South Wales, is above that in only 8, and in Queensland and New Zealand, above that in only 2 of such countries.

Low proportion of boys . born in 1 England.

543. In England and Wales the proportion of boys born to girls is not only lower than that in any other European country, except Russian Poland (of which the statistics are of doubtful authenticity), but it has for years past had a tendency to diminish. The proportion given in the table (104.3) is for the fifty years ended with 1887, but in the ten years ended with that year, it was only 103.8. The Registrar of England states he is unable to offer any explanation of

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#### that "curious fact.""

Twins and triplets. 544. In 1889, 381 twin births and 1 triple birth were registered, as against 374 twin births and 3 triple births in 1888. In the five years ended with 1885, 1,105 cases of twins and 10 cases of triplets were recorded, the total number of births in the same period having been 140,258. There were thus 139,133 confinements in the five years, and it follows that 1 mother in every 126 gave birth to twins, and 1 mother in every 13,913 was delivered of three children at a

\* See 43rd Report of the Registrar-General of England, page xvi.

Moreover, during the decade 1871 to 1880, 1 mother in every birth. 111, on the average, gave birth to twins, and one in every 12,796 was delivered of three children at a birth.

545. It appears that only three of the Australasian colonies besides Twins and triplets in Victoria distinguish the double and treble births in their returns. Austral-The following are the numbers of such births in each of the four colonies. colonies during each of the six years ended with 1888:-

T.	Vict	oria.	New Sou	th Wales.	Queer	nsland.	New Zealand.		
Year.	Twins.	Triplets.	Twins.	Triplets.	Twins.	Triplets.	Twins.	Triplets.	
1883	183		287	2	103			•••	
1884	239	4	288	4	94		188	2	
1885	237	1	306	2	115		161	1	
1886	236	•••	330	1	114	1	165	•••	
1887	285	3	310	1	105	•••	185	3	
1888	374	3	363	2*	130	1	192	1	

TWINS AND TRIPLETS IN AUSTRALASIAN COLONIES, 1883 TO 1888.

546. The following figures purport to express the proportions of Twins and twins and triplets to the total births in different countries over a series of years; but as they have not in all cases been derived from official sources, they must be taken only for what they may be worth. The countries are arranged in order, according to the proportion of the births said to occur in each :---

TWINS AND TRIPLETS IN VARIOUS COUNTRIES.

and the second sec	Per 1,00	0 Births.		Per 1,000 Births. Cases of Cases of Twins. Triplets.		
Countries.	Cases of Twins.	Cases of Triplets.	Countries.	Cases of Twins.	Cases of Triplets.	

Ireland		17.6		Norway	11.8	•15
Iceland	•••	14.2	•33	Scotland	11.7	•••
Denmark	•••	13.7	•24	England	11.2	
Sweden		13.6	·18	France	10.1	•12
Austria		13.4	•18	Belgium	9.1	•10
Germany		12.9	•13	Queensland	9.1	·012
Holland		12.8		New Zealand	<b>8</b> ·9 <b>6</b>	•077
Russia		12.1	•••	New South Wales	8.75	•058
Switzerland		12.0		Spain	8.4	
Italy		11.8	•14	Victoria	7.85	·05 <b>3</b>
<b>v</b>						-1

Note.-Some of the figures in this table have been taken from Mulhall's Dictionary of Statistics, page 50.

\* Including one case of quartettes.

Results in different countries compared. 547. In proportion to the total number of births, fewer births of twins appear to occur in Victoria than in any of the other countries named; moreover, all the Australasian colonies stand low on the list. Ireland, it will be observed, stands at the head of the list, whilst England and Scotland have—except the Australasian colonies—only three countries below them. There are no records of treble births in Ireland, Holland, Russia, Switzerland, Scotland, England, or Spain, although doubtless some occur in those countries, where it is possible they are included with the twin births.

Illegitimate births.

548. The illegitimate children born in 1889 numbered 1,809, or 1 to every 20 births registered, as against a proportion of 1 to every 21 in each of the three preceding years. In the five years, 1881-85, out of 140,258 infants born, 6,491 were traced as having been born out of wedlock, which numbers furnish a proportion of 1 illegitimate child to every 22 births, as compared with an average during the ten years ended with 1880 of 1 to every 27 births.\*

Women living in concubinage.

549. It was shown in a previous tablet that the legitimate births registered in each of the last two census years were in the proportion of  $302\frac{2}{3}$  to every 1,000 married women living at the reproductive period of life. It follows, therefore, from the number of legitimate births registered in 1889, that, approximately, 114,200 married women at the fruitful or child-bearing age were living in the colony during that year. Assuming that the illegitimate births bear the same proportion to unmarried women, it also follows, from the number of such births in 1889, that, exclusive of public prostitutes (who, as they rarely have children, are omitted from the computation), at least 5,977 single women at the fruitful or child-bearing ages were living in concubinage. If from the total number of women in the colony between the ages of 15 and 45-estimated to be nearly 253,700-be deducted the approximate number of married women above referred to, viz., 114,200, the difference will give 139,500 as the number of unmarried women and widows at those ages. It therefore follows that 1 out of every 23 of these was living immorally.

Illegitimacy and concubinage, 1873 to 1889. 550. The following table gives a statement of the number of illegitimate births and their proportion to the total number registered;

\* For many reasons, statistics of illegitimacy generally understate the truth.—See remarks upon the subject in the Victorian Year-Book, 1877-8, paragraph 259.
† See table following paragraph 515 ante.

also the estimated number of women living in concubinage, and their proportion to the total number of single women at reproductive ages living, in Victoria, according to the returns of the last seventeen years :---

Year.			Illegitim	nate Births.	Women Living in Concubinage (exclusive of Public Prostitutes).			
		Total Number.	Percentage of Total Births.	Estimated Total Number.	Number per 100 Single Women between 15 and 45 Years of Age Living in Victoria.			
1873	• • •	•••	893	3.18	2,951	4.24		
1874			<b>984</b>	3.67	3,251	4.41		
1875			779	2.92	2,573	3.36		
1876			975	3.64	3,221	4.02		
1877			1,010	3.88	3,337	3.85		
1878	• • •		1,103	4.15	3,644	4.20		
1879			1,304	4.86	4,308	4.78		
1880		•••	1,254	4.80	4,143	4.39		
1881		•••	1,382	5.09	4,551	4.49		
<b>1882</b>	• • •	•••	1,271	4.75	4,200	<b>3</b> ·91		
1883	• • •	••••	1,292	4 69	4,268	3.72		
1884	•••	•••	1,238	4.29	4,090	3.46		
1885	• • •	•••	1,308	<b>4</b> ·36	4,320	3.24		
1886		•••	1,465	4.75	4,840	3 87		
1887	• • •	•••	1,580	4.78	5,214	4.12		
1888		• • •	1,658	4.8]	5 475	4.12		
1889	•••		1,809	4•98	5,977	4.28		
Μ	eans		1,253	<b>4</b> ·33	4,139	4.06		

ILLEGITIMACY AND CONCUBINAGE, 1873 TO 1889.

551. All the Australasian colonies, except Western Australia, now Illegitimacy publish statistics of illegitimacy. According to these, which possibly may not in every case represent the whole truth,\* illegitimacy, over a series of years, was most rife in New South Wales, next in Victoria, next in Tasmania, next in Queensland, and least of all in South Australia and New Zealand, and in 1889 the same order prevailed except that the rate in Tasmania was lower than in Queensland. ln most of the colonies, so far as figures are available, illegitimacy appears to have a tendency to increase. The following table shows the percentage of illegitimate to the total births, in the five colonies which publish the information, during a series of years :---

in Australasian colonies.

\* See footnote to paragraph 548 ante.

•		i		Illegitimate	Births to e	very 100 Chil	dren Born.	
	Year.		Victoria.	New South Wales.	Queens- land.	South Australia.	Tasmania.	Ne <b>w</b> Zealand.
1872			2.99	4.03	2.92	•••	• • •	•••
1873			3.18	4.15	2.71		• • •	1.42
1874			3.67	4.22	2.76		• • •	1.30
1875			2.92	4.20	3.43	•••	• • •	1.36
1876		-	3.64	4.08	3.21	•••	• • •	2.23
1877			3.88	4.14	3.64	••••		2.08
1878			4.12	4.03	3.68	•••	• • •	2.41
1879			<b>4·8</b> 6	4.51	<b>4</b> ·31	•••	• •	2.30
1880			<b>4</b> ·80	4.35	4.31	•••	•••	2.43
1881			5.09	4.26	4.20	2.25	• • •	<b>2·85</b>
1882			4.75	4.24	<b>4·4</b> 0	2.25	<b>4</b> <sup>.</sup> 40	2.87
1883	· · •		4.69	4.24	3.66	1.75	3.96	2.78
1884			4.29	4.40	4.05	2.10	4:46	2.96
1885			<b>4</b> ·36	4.60	4.08	2.42	4.55	3·20
1886	• • •		4.75	4.65	3.97	2.38	4.13	3.12
1887	• • •		4.78	4.59	<b>4</b> ·49	2.49	$3\cdot 40$	3·22
1888	•••	• • •	4.81	5.08	<b>4</b> ·13	2.67	3.62	3.02
$\mathbf{N}$	[eans		4.21	4.34	3.76	2.29	<b>4</b> ·07	2.47

# ILLEGITIMACY IN AUSTRALASIAN COLONIES, 1872 to 1888.

Concubinage in Australasian colonies. 552. A calculation, based upon the illegitimate births which occured in the census year, shows that of the four colonies which then published statistics of these occurrences concubinage was most rife in Queensland, next in New South Wales, and next in Victoria and New Zealand, there being only a slight difference between the two lastnamed colonies. In the following table the colony in which the largest proportion of concubinage existed is placed first, and that in which the smallest proportion existed last:—

### CONCUBINAGE IN AUSTRALASIAN COLONIES, 1881.

Colony	Single Women between	Illegitimate	Single Wo Concubinag Public H	men living in ce (exclusive of Prostitutes).	
	15 and 45 Years of age.	Births, 1881.	Total Number.	Number per 100 Single Women, between 15 and 45.	
<ol> <li>Queensland</li> <li>New South Wales</li> <li>Victoria</li> <li>New Zealand</li> </ol>	$15,441 \\71,085 \\101,451 \\38,659$	$\begin{array}{r} 345 \\ 1,263 \\ 1,382 \\ 534 \end{array}$	1,059 3,665 4,551 1,686	6·86 5·16 4·49 4·36	

Proportion 553. The figures in the last column show the proportions which nage in the single women leading a sexually immoral life, without being public prostitutes, bore to the whole number of single women at the

fruitful period of life in each of the four colonies. These proportions will, perhaps, be better understood if expressed in another manner as follow :—

In Queensland	1	single	woman	in	13	was	living	immorally.
In New South Wales		"	"		19		,,	"
In Victoria		>>	>>		<b>22</b>		"	"
In New Zealand		<b>, ,</b>	>>		23		,,	"

554. Illegitimacy in England and Wales appears to be commoner Illegitimacy in United than, and in Scotland twice as rife as, it is in any of the Australasian Kingdom. colonies named. In Ireland, on the other hand, it seems to be less prevalent than in any of those colonies except South Australia or New Zealand. This will be observed by comparing the following table with the previous one :---

ILLEGITIMACY IN ENGLAND, SCOTLAND, AND IRELAND, 1871 TO 1888.

		Illegitimate Births to every 100 Children born.				
Year.		England and Wales.	Scotland.	Ireland.		
1871 1872	•••	5·6 5·4	9·5 9·1	2.7 2.5		
1873	•••	5.2	9·0	2.4		
1874	•••	5.0	8 <b>•7</b>	<b>2·3</b>		
<b>1875</b>		4.8	8.6	$2\cdot 3$		
1876	• • •	4.7	8.6	2.3		
1877		<b>4</b> ·7	8.4	2.4		
1878		4.7	8.4	$2^{\cdot}3$		
1879		4.8	8.2	2.2		
<b>1880</b>	•••	4.8	8.4	2.2		
1881	• • •	<b>4</b> ·9	8.3	2.2		
188 <b>2</b>		<b>4</b> ·9	8.1	2.7		
1883	•••	<b>4</b> ·8	<b>8·1</b>	2.6		
1884	• • •	4:7	8.1	2.7		
1885	•••	4.8	8.2	2.8		
1886	• • •	4.7	8.2	2.7		
1887		<b>4</b> ·8	<b>8·3</b>	2.8		
1888	• • •	4.6	•••	2.9		
Means	•••	4.9	8.2	2.2		

555. The following figures, taken from various sources, show Illegitimacy certain countries arranged in order according to the extent of countries. illegitimacy prevailing in each, the proportion of illegitimate births being also shown:—

Country.		Illegitimat Births to every Children Bor	e 7 <b>100</b> 	Country.		Illeg Births to Childr	itimate 5 every 1 en Born.	.00
Austria	<b>、</b> - ●	12.9		England	•••		$4\cdot9$	
Denmark	•••	11.2		Switzerland	• • •	• • •	4.6	
Sweden		10.2		New South	Wales		<b>4·3</b>	
Scotland		8.5		Victoria		• • •	$4\cdot 2$	
Norway		8.5		Tasmania	- • •		4.3	
Germany		8.4		Queensland		• • •	3.7	
France		8.1		Holland		• • •	3.5	
Belgium	••••	7.0		Russia	• • •		<b>3</b> ·1	
Ifalv	•••	6.8		Ireland			2.5	
Portugal	• · *	5.6		New Zealan	d		2.4	
Spain	• • •	5.5		Greece	• • •	• •	·1·6	
T								

### ILLEGITIMACY IN VARIOUS COUNTRIES.

Position of Victoria in respect to illegitimacy.

556. According to the figures, more illegitimacy prevails in Austria and less in Greece than in any other countries. In Victoria, illegitimacy appears to be less prevalent than in fourteen and more so than in six of the countries.

Illegitimacy in town and country.

557. It will be readily supposed that a larger proportion of illegitimacy prevails in Melbourne and suburbs than in any other district of Victoria, and that the proportion in the country districts is the smallest of all. In 1889, in the metropolitan district about 1 birth in 14, in the extra-metropolitan towns 1 birth in 23, but in country districts only 1 birth in 39 was registered as illegitimate. In the previous year the proportions were 1 in 15, 1 in 22, and 1 in 42 respectively.

Illegitimacy in large cities.

558. By the following figures, which, with the exception of those for Melbourne, have been taken from the annual report for 1886 of the Statistical Department of the Argentine Republic,\* it would appear that illegitimacy is less rife in the capital of this colony than in any of the foreign cities named :—

ILLEGITIMACY IN LARGE CITIES.

Illegitimate

Illegitimate

		Births to Chile	o every 1,000 dren Born.			Births to Chilo	every l lren Bor	1,000 n
Vienna	•••	• • •	449	Leipsic			211	
Prague	• • •	• • •	439	Dresden			208	
Munich	•••	•••	439	Milan			204	
${f Stockholm}$	•••	•••	396	Rome	• • •		194	
$\mathbf{Moscow}$	•••	• • •	300	Venice		• • •	189	
Buda-Pesth	• • •	•••	299	$\mathbf{Breslau}$	•••		186	
Copenhagen	•••	• • •	279	Bucharest	• • •		175	
Paris	• • •		268	Liége			174	
St. Petersbu	ırg	• • •	236	Christiana		• • •	162	
Trieste	•••	• • •	211	Stuttgart	•••		160	

\* Procedimientos del Departamento Nacional de Estadistica, 1886, page 87. Buenos Aires, 1887.

		Illegitimate Births to every 1,000 Children Born.		Illegitimate Births to every 1,000 Children Born.
Berlin	• • •	154	Palermo	101
Ghent	• • •	144	The Hague	90
Hamburg		$\dots$ 138	Naples	89
Frankfort	• • •	$\dots$ 132	Rotterdam	76
Turin	•••	$\dots$ 132	Buenos Aires	$\dots$ 74
Antwerp	• • •	$\dots$ 129	•	_
Cologne	•••	124	Melbourne	69

#### ILLEGITIMACY IN LARGE CITIES-continued.

559. To ascertain the relative fruitfulness of women in different Fecundity of countries, it is necessary to compare the number of married women Australat the reproductive ages with the legitimate births. This can be done done colonies. in the case of Victoria, New South Wales, Queensland, South Australia, and New Zealand; but not in that of the other two Australasian colonies, as in the returns of the latter no distinction was made at the time the census was taken between the infants born in and those born out of wedlock. By means of such a comparison in regard to the five colonies named, it would appear that the highest degree of fecundity exists in New South Wales, and the lowest in Victoria, this being probably owing to the fact that the married women are, on the average, younger in the former and older in the latter than in the other two colonies. The following table shows the number of married women under 45 years of age, the number of legitimate births in the census year, and the proportion of such births to such women in each of the four colonies :---

PROPORTION OF BIRTHS TO MARRIED WOMEN IN AUSTRALASIAN COLONIES.\*

	Married Women	Legitimate	Births, 1881.
Colony.	under 45 Years of age.	Total Number.	Number per 100 Married Women under 45.

1. New South Wales	s		80,473	27,730	34.46
2. South Australia	•••	••••	31,799	10,467	32.92
3. Queensland	•••		24,183	7,875	32.56
4. New Zealand	•••	•••	57,464	18,198	31.67
5. Victoria	• • •		84,831	25,763†	30.37 🕇
		1			

560. Another method of determining the fecundity of women is Children to a marriage to find the average number of children born to a marriage, which may in Victoria.

\* The Government Statistician of Tasmania gives the proportion of births—including illegitimate births—to married women under 45 years in that colony in 1881 as 347 per 1,000, as compared with 326 per 1,000 in New Zealand, and 309 per 1,000 in Victoria, during the same year.

† In consequence of the births here quoted being those for the calendar year, these figures differ slightly from those in table following paragraph 515 ante.

be ascertained approximately by dividing the legitimate births in any year by the number of marriages in the preceding year. The following is the result of such a calculation for Victoria during the sixteen years ended with 1889:-

	Year.		Legitimate Births.	Marriages in Year prior to that named in first Column.	Average Number of Children to a Marriage.
 1874	•••		25,816	4,974	5.19
1875			25,941	4,925	5.27
1876			25,794	4,985	<b>5</b> ·17
1877			25,000	4.949	5.05
1878	•••	•••	25.478	5.103	4.99
1879	• • •	•••	25,535	5.092	5.01
1880	•••	•••	24 894	4,986	4.99
1881	* • •	• • •	25,001	5 286	4.87
1001	* * *	***	25,700	5 896	42
1004	* • •	•••	20,470	6 200	
1004	* • *	•••		0,303	4.00
1884	• • •	• • •	27,612	0,771	4.00
1885	•••	•••	28,667	7,218	3.97
1886	• • •		29,359	7,395	<b>3</b> ·97
1887	• • •	•••	31,463	7,737	4.07
1888	•••		32,845	7.768	4.23
1889	•••		34,550	8,946	3.86
	Sums and Mean		440,442	98,340	4.48

CHILDREN TO A MARRIAGE, 1874 TO 1889.

Decrease in children to in Victoria.

561. The figures show a steady diminution in the proportion of a marriage children born, amounting-notwithstanding a slight revival in 1887 and 1888-in the sixteen years to a child and a third per marriage, or four children to every three marriages. It is evident that if the births increased with the marriages as they should do, the proportions would remain steady; but this is shown not to be the case. There are, however, many matters affecting the birth rates of infants respecting which it is not possible to obtain precise information. The falling-off shown by the figures in the last column of the table is a result which, although perhaps it cannot be proved, may be conjectured to be owing to the increasing desire on the part of married women to evade the cares of maternity, and the steps taken by them-often, no doubt, with the concurrence of their husbands-to prevent its occurrence.

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562. According to this mode of reckoning, it would appear that Children to a marriage there are, upon the average, fewer children to a marriage in Victoria in Australasian than in any of the other Australasian colonies respecting which colonies. particulars are at hand. For Western Australia the information cannot be given, as their returns make no distinction between illegitimate children and children born in wedlock :---

	Average Number of Children to a Marriage.									
Year.	Victoria.	New South Wales.	Queensland.	South Australia.	Tasmania.	New Zealand.				
1880	<b>4·99</b>	5.00	<b>4</b> ·89	4.61		5.54				
1881	4.87	5.48	5.09	4.57	•••	5.72				
1882	4.32	<b>4·53</b>	4.78	4.59	4.51	5.63				
1883	<b>4·16</b>	4.31	4.68	4.34	4.22	5.18				
1884	4.08	4.38	4.28	4.22	3.91	5.33				
1885	3.97	4.68	4.39	<b>4·60</b>	4.62	5.18				
1886	3.97	4.54	4.25	4•46	4.21	4.90				
1887	<b>4·07</b>	4.55	4.63	5.34	4.64	5.31				
1888	<b>4·23</b>	<b>4</b> ·82	<b>4</b> ·69	5.17	4.90	5.14				
Means	<b>4</b> ·29	4.70	4.63	4.69	4.43	5.33				
		1								

### CHILDREN TO A MARRIAGE IN AUSTRALASIAN COLONIES, 1880 то 1888.

563. It seems that in all the colonies except Tasmania and South Decrease in Australia there is a tendency for the average number of children to a marriage in each a marriage to decrease in numbers, the proportions in the later colony. years not having been so high as in the earlier years shown in the table. In 1888, however, the proportion was slightly above the average in New South Wales, Queensland, and Tasmania, and very slightly below it in Victoria and New Zealand.

564. The following statement of the average number of children children to a marriage born to a marriage in certain countries has been derived from various in various countries. sources. The figures are generally for a series of years. The country having the highest average is placed first in order, and the remainder in succession :---

	Children to each Marriage.		Cl	hildren to each Marriage.
Ireland	5.46	Holland	•••	<b>4·</b> 34
New Zealand	5.33	Victoria	• • •	4.29
New South Wales	<b></b> 4·70	Belgium	•••	4.21
Queensland	4.63	England	•••	4.16
Italy	4.56	Sweden	• • •	<b>4·01</b>
Scotland	4.43	Denmark	• • •	3.55
Tasmania	4.43	France	•••	2.98

CHILDREN TO A MARRIAGE IN VARIOUS COUNTRIES.

565. Ireland is at the head of the list, and New Zealand follows Position of Victoria in immediately after, but it may be questioned whether the high proporreference to births to tion in the former does not in some degree result from the fact that a marriage. the registration of marriages there \* is more defective than that of

\* See footnote (||) to table following paragraph 456 ante.

births. It will be observed that Ireland, Italy, Scotland, and Holland are the only countries out of Australasia which stand above Victoria.

Surviving children to a family.

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566. The foregoing calculations relate to the average number of children born to each married couple, but the eminent statistician, M. Jacques Bertillon, in a paper read before the Statistical Society of Paris on the 10th May, 1888,\* has given the following as the average number of children actually surviving in each family in the Department of the Seine at the time the French census of 1886 was taken :---

In every 1,000 families there were-

328 with no child surviving 270" 1 " " 2 children 198" " 106 ,, 3 " ,, 54 ,,  $\mathbf{4}$ " " 25 ,, 5 " ,,, 12 ,, 6 " " 7 7 or more "

Sterile families.

567. With reference to the startling fact that nearly a third of the families referred to were completely sterile, it will be remembered that this group contains a certain number of couples too recently married to have children; still the proportion appears enormous. It is to be regretted that similar figures relating to other countries are not available for purposes of comparison.

Births in each quarter.

568. According to the registrations, births in Victoria are always most numerous in the winter quarter, and next so in the autumn quarter. The proportion of births in the spring and summer quarters varies in different years, the advantage being generally in favour of The following are the numbers and percentage for 1889, the former. and the percentage for a previous quinquennial and a decennial period :---

#### BIRTHS IN EACH QUARTER.

				Year 1889.		Percentage in-	
Season	s.	last day of	-	Number of Births. Percenta		Five Years : 1881 to 1885.	Ten Years: 1871 to 1880.
Summer Autumn Winter Spring	···· ··· ···	March June September December	···· ····	8,828 8,918 9,912 8,701	$\begin{array}{r} 24.28 \\ 24.53 \\ 27.26 \\ 23.93 \end{array}$	$\begin{array}{r} 23.57 \\ 25.64 \\ 26.62 \\ 24.17 \end{array}$	23·74 25·10 27·15 24·01
		Year	••••	36,359	100.00	100.00	100.00

\* See Journal de la Société de Statistique de Paris, 1888, page 174, et seq.

569. In the following table the average proportion of births Births in occurring in each quarter in Victoria during a series of years is duarter in compared with that proportion in the opposite, and consequently (so far as seasons are concerned) corresponding quarter in certain countries of the northern hemisphere. The figures for such countries have been taken from Mr. Mulhall's work\*:---

PERCENTAGE OF B	SIRTHS IN EACH	QUARTER IN	VARIOUS	COUNTRIES
-----------------	----------------	------------	---------	-----------

		Quarter ending on the last day of—						
Countries.		March in Victoria, September in the other Countries.	June in Victoria, December in the other Countries.	September in Victoria, March in the other Countries.	December in Victoria, June in the other Countries.			
Victoria	•••	Per Cent. 23.6	Per Cent. 25·6	Per cent. 26·6	Per Cent. 24·2			
England		24.0	23.8	26.2	26.0			
France	• • •	24.0	24.1	27.0	24.9			
Germany	• • •	25.0	24.9	25.9	24:2			
Sweden	••••	23.7	25·7	26.8	23.8			
Italy	• • •	23.7	24.7	27.5	24.1			
Russia	• • •	24.7	23.7	25.6	26.0			
		1		<u>.</u>				

570. It appears that in most countries the largest number of births Quarters in take place in what may be called the winter quarter (ending September in Victoria, March in the other countries named), the exception being Russia, in which most births occur in the quarter ending June. Fewest births occur in what may be called the summer quarter (ending March in Victoria, September in the other countries named), except in Germany, where the proportion in the quarter ending June is the smallest, and in England and Russia, where it is the smallest in the quarter ending December.

571. The deaths registered in 1889 numbered 19,392, as against Deaths,1889. 16,287 in 1888. The increase in the year under notice was thus 3,105,

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or 19 per cent.

572. In 1889 for the first time, the deaths exceeded 19,000; Deaths, 1889 whereas in 1887 and 1888 they did not much exceed 16,000; in <sup>and former</sup><sub>years</sub>. 1886 they numbered less than 15,000, but in only one prior year, viz., 1875, did they reach that number.<sup>†</sup> The high mortality in the lastnamed year, in which 15,287 deaths were recorded, was due to the prevalence of measles and scarlatina in an epidemic form.

\* Dictionary of Statistics, page 49.

† For the number of deaths during each year since the first settlement of Port Phillip, see Statistical Summary of Victoria (first folding sheet) in the second volume.

Excess of births over deaths.

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573. The births in 1889 exceeded the deaths by 16,967 or 88 per cent., the corresponding proportion being 112 per cent. in the previous year. The proportion in 1889 was much the lowest recorded in any of the last twenty-four years, except 1875, when it was as low as 75 per cent. In the five years ended with 1885 the proportion averaged 110 per cent.; and in the ten years ended with 1880 it averaged 119 per cent.; whilst during the whole period of twenty-four years ended with 1889 the average was 117 per cent. The following were the births and deaths in each of those twenty-four years, and the excess of the former over the latter :—

Excess of Births over Deaths, 1866 to 1889.

Voor		- 	Deaths	Excess of Births over Deaths.			
I car.		Births.	Deaths.	Numerical.	Centesimal.		
<b></b>			_		Per Cent.		
1866		<b>25,</b> 010	12,286	12,724	104		
1867		25,608	11,733	13,875	118		
1868		27,243	10,067	17,176	171		
1869		26,040	10,630	15,410	145		
1870		27,151	10,420	16,731	161		
1871	•••	27,382	9,918	17,464	176		
1872		27,361	10,831	16,530	153		
1873	•••	<b>28,</b> 100	11,501	16,599	144		
1874	•••	26,800	12,222	14,578	119		
1875		26,720	15,287	11,433	75		
1876		26,769	13,561	13,208	97		
1877		<b>2</b> 6,010	12,776	13,234	104		
1878		26,581	12,702	13,879	109		
1879	•••	26,839	12,120	14,719	121		
1880	••••	26,148	11,652	14,496	124		
1881		27,145	12,302	14,843	121		
$\boldsymbol{1882}$	•••	26,747	13,634	13,113	96		
<b>18</b> 8 <b>3</b>		27,541	13,006	14,535	112		
<b>1884</b>	•••	28,850	13,505	15,345	114		
1885		29,975	14,364	15,611	109		
1886	••••	30,824	14,952	15,872	106		
1887	• • •	33,043	16,005	17.038	106		
1888	•••	34,503	16,287	18,216	112		
1889	[	36,359	19,392	16,967	88		
Total in 24	years	674,749	311,153	363,596	117		

574. It will be noticed that the births more than doubled the Years in which deaths in all the years except 1875, 1876, 1882, and 1889. births doubled deaths. 575. Of the Australasian colonies, New Zealand is the one in which Excess of the births have always exceeded the deaths by the highest proportion. births over deaths in This is due to the high birth rate and low death rate prevailing in Australasian that colony, the latter being no doubt promoted by the salubrity of the colonies.

climate of New Zealand, but still more so by the circumstance of the population being spread over the country or dispersed throughout a number of small towns, instead of being to a great extent crowded into a few large cities, as is too much the case in the other colonies. The position of Victoria in regard to the proportionate increase of births over deaths is below any of the other colonies. The following table shows the percentage of excess of births over deaths in each of the Australasian colonies during the respective years 1880 to 1889, The colonies are arranged in order, that with the both inclusive. highest mean percentage being placed first, and that with the lowest last :---

EXCESS OF BIRTHS OVER DEATHS IN AUSTRALASIAN COLONIES, 1880 то 1889.

	Excess per Cent. of Births over Deaths.										
Colony.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	Mean of 10 year.
New Zealand	256	241	233	217	246	224	215	212	231	220	230
South Australia	162	167	147	152	147	202	164	175	180	195	169
New South Wales	151	151	132	155	139	129	149	177	168	151	150
Queensland	172	148	99	96	56	87	126	162	158	135	124
Tasmania	104	126	112	101	130	128	134	119	135	127	122
Western Australia	144	144	153	89	55	100	82	122	126	161	118
Victoria	124	121	96	112	114	109	106	106	112	88	109
	ł		ł	1.	)					{ 	

576. In 1889 the percentage of excess of births over deaths in Excess of Melbourne was below that in any of the Australasian capital cities deaths in except Hobart, as will be seen by the following figures :---

births over Australasian capitals.

EXCESS OF BIRTHS OVER DEATHS IN AUSTRALASIAN CAPITAL CITIES, 1889.

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			ł	er cent.	
1.	Brisbane	• •		152	
2.	Wellington			142	
3.	Adelaide	• •		128	
4.	Sydney	•		111	

			r er cen
5.	Perth	• • •	103
6.	${f Melbourne}$	•••	63
7.	Hobart	• • •	51

577. The following table shows the percentage of excess of births Excess of births over over deaths in certain European countries during each of the five deaths in European years ended with 1888. The countries are arranged in order according countries. to the means of the quinquennial period shown in the last column, the country with the highest mean being placed first, and the rest in succession :---

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Countries.		Excess per cent. of Births over Deaths.							
		1884.	1885.	1886.	1887.	1888.	Mean of 5 years.		
Norway Denmark Sweden Scotland England and Wales The Netherlands Prussia German Empire Belgium Hungary Italy Switzerland Ireland	···· ···· ···· ···· ····	$89\\82\\71\\72\\71\\57\\46\\43\\46\\47\\45\\40\\36$	$91\\82\\66\\69\\71\\64\\48\\44\\49\\41\\43\\31\\28$	92797974695845424041293430	92 75 84 67 67 71 58 53 52 31 38 38 27	$82 \\ 61 \\ \\ 73 \\ 72 \\ 66 \\ 64 \\ 54 \\ 45 \\ \\ 36 \\ 39 \\ 28$	89 76 75* 71 70 63 52 47 46 40* 38 36 30		
Austria		31	$\frac{1}{25}$	29	32	30	29		
France	•••	9	10	6	7	5	7		

EXCESS OF BIRTHS OVER DEATHS IN EUROPEAN COUNTRIES. 1884 то 1888.

Excess of births over deaths in Australia and elsewhere.

578. It will be observed that deaths bear a much larger proportion to births in all the countries named than they do in any of the Australasian colonies, part of which difference is probably due to the Australian climate being more healthy and the circumstances of the colonies more favourable to longevity, and part to the fact that the countries named contain a larger proportion than the colonies of the young and the very old. In not one of those countries did the births double the deaths in any year of the period. On the other hand, in the Australasian colonies, it is the exception for the births not to double the deaths, and in one of them (New Zealand) it is the exception for the births not to be three times as numerous as the deaths.

Natural increase of

579. In 1889 the population of Victoria increased at the rate of population. 1.56 per cent. by excess of births over deaths, at which rate, irrespective of immigration, the population would double itself in 45 years. This proportion, however, was the lowest, with one exception, during the last ten years, as will be seen by the following figures :---

INCREASE OF POPULATION BY EXCESS OF BIRTHS OVER DEATHS, 1880 то 1889.

		Per Cent.				Per Cent.
1880	• • •	1.70	1886			1.63
<b>1</b> 881	• • •	1.73	1887			1.70
1882	• • •	1.49	$1888\ldots$	• • •		1.76
1883	•••	1.61	$1889\dots$	• • •		1.56
1884	•••	1.66				
1885	•••	1.65		Mean	• • •	1.65

\* Mean of 4 years.

† See paragraph 575 ante.

580. Comparing the mean of the nine years ended with 1889 with Natural increase in similar means for the other Australasian colonies during the same Australasian period the figures are as follow :—

MEAN ANNUAL INCREASE BY EXCESS OF BIRTHS OVER DEATHS IN AUSTRALASIAN COLONIES, 1881-1889.

	Per Cent.		Per Cent.
1. New Zealand	2.40	5. Western Australia	1.94
2. South Australia	$\dots 2.29$	6. Tasmania	1.90
3. New South Wales	2.26	7. Victoria	1.64
4. Queensland	2.06		

581. Sir Rawson W. Rawson, in the opening address delivered Natural by him as President of the Statistical Society of London in 1885, <sup>increase in</sup> gave the following as the mean annual rates of increase by excess of births over deaths in various countries, the averages extending generally over the nineteen years ended with 1883. The countries have here been arranged in order according to the rate of increase shown in each country:—

MEAN ANNUAL RATE OF INCREASE BY EXCESS OF BIRTHS OVER DEATHS IN VARIOUS COUNTRIES.

	F	Per Cent.	1	Per Cent
Servia	•••	1.69	Ireland	•86
Poland (Russian)	• • •	1.51	Finland	·85
England and Wales	•••	1.37	Alsace-Lorraine	•80
Russia in Europe	•••	1.37	Italy	-77
Norway	•••	1.36	Greece	·76
Saxony	•••	1.34	Connecticut	•76
Scotland	•••	1.33	Austria	·74
German Empire	•••	$1\cdot 24$	Switzerland	·71
Prussia	•••	1.23	Rhode Island	•69
Thuringia	•••	1.19	Vermont	·67
Denmark	•••	1.16	Croatia and Slavonia	·66
Sweden	<b>*</b>	1.13	Massachusetts	•65
Holland	•••	1.13	Spain	•48
Würtemberg	•••	1.11	Hungary	•48
Baden	• • •	1.02	Roumania	•32
Belgium	• • •	·91	France	•16
Bavaria	• • •	·89	1	

582. According to the figures, the rate of natural increase (excess Results in of births over deaths) is a fraction higher in Servia than in Victoria, but with this exception, the rate in every one of the Australasian colonies is higher than in any of the countries named. It will be noticed that England and Wales stands near the head of the list, Scotland lower, and Ireland very much lower, also that in France the rate of natural increase is much below that in any other country. 583. In Victoria, deaths of males in 1889 numbered 11,064, and Deaths of deaths of females, 8,328. These numbers furnish a proportion of males and females. Nearly 75 females to every 100 males, as against 74 per cent. in the X 2

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three years 1886-8, and in the five years 1881-5, and a proportion of 75 females to every 100 males in the ten years 1871-80. Females in the total population were in the proportion of 88 to every 100 males during the last three years and during the quinquennium referred to, and of about 87 during the decennium; therefore at each period more males and fewer females died than their relative numbers in the population might have given reason to expect.

Annual death rate. 584. The following table shows the estimated mean population of either sex, the number of deaths of either sex, and the death rate of males and females, and of both sexes, during each of the last twenty-nine years:—

Year.	Estin Mean Poj	nated pulation.	Num Dea	ber of .ths.	Deaths per 1,000 of the Mean Population.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.*
<b>18</b> 61 <b>18</b> 62	<b>3</b> 24,988 322,916	214,836 225,164	<b>6,124</b> 5,900	4,398 4,180	$18.84 \\ 18.27$	$20.47 \\ 18.56$	19 <sup>.</sup> 49 18 <sup>.</sup> 39
<b>18</b> 63	<b>3</b> 25,680	237,280	5,646	3,856	17.34	16.25	16·88
<b>18</b> 64	335,272	251,178	5,202	3,685	15.51	14.67	15.15
1865	347,083	264,135	6,158	4,303	17.74	16·29	17.11
1866	353,941	275,097	7,016	5,270	19.82	19.16	19.53
1867	359,642	284,634	6,613	5,120	18.39	17.99	18.21
<b>18</b> 68	367,752	295,340	5.865	4,202	15.95	<b>14</b> ·2 <b>3</b>	15.18
<b>18</b> 69	379,396	307,806	6,221	4,409	16.40	14.32	15.47
<b>187</b> 0	392,159	321,036	6,114	4,306	15.59	13.41	14.61
1871	403,319	333,686	5,845	4,073	14.49	12.21	13.46
<b>187</b> 2	409,081	344,117	6,308	4,523	15.42	13.14	14.38
1873	<b>4</b> 12,597	352,914	6,565	4,936	15.91	<b>13</b> ·99	15.02
1874	416,725	360,931	6,994	5,228	16.78	14.48	15.72
1875	419,779	367,558	8,563	6,724 •	20.40	<b>18</b> ·29	19.42
1876	422,931	373,627	7,716	5,845	18.24	15.64	17.02
1877	427,727	380,878	7,345	5,431	17.17	14.26	15.80
1878 (	433,153	388,313	7,179	5,523	16.57	14.22	15.46
1879	438,563	<b>395,467</b>	7,033	5,087	16.04	12.86	14.53
1880	446,445	<b>4</b> 0 <b>3</b> ,898	6,610	5,042	14.81	12.48	13.70
1881	456,107	412,835	7,024	5,278	15.40	$12.78^{-1}$	<b>14·16</b>
1882	467,630	422,590	7,900	5,734	<b>16·89</b>	13.57	15.32
1883	478,865	432,11 <b>7</b>	7,410	5,596	15.47	12.95	14.28
1884	491,720	442,174	7,675	5,830	15.60	13.18	14·46
1885	505,716	452,879	8,300	6,064	16.41	13.39	14.98
1886	522,203	464,891	8,575	6,377	16.42	13.72	15.15
1887	541,070	478,630	9,213	6.792	17.03	14.19	15.70
1888	565,065	496,985	9,385	6,902	16.61	13.89	15.34
1889	587,550	516,750	11,064	8,328	18.83	16.12	17.56
Average of twenty-nine years						14.58	15.78

ANNUAL DEATH RATE, 1861 TO 1889.

NOTE.—In 1861, 1866, and 1875, and to a certain extent in the preceding and in the succeeding years, the death rate was swelled by epidemics of measles and scarlatina.

\* The total mean population and the total deaths in each year may be obtained by taking the sum of the figures in the male and female columns.

585. It will be noticed that in all the years, except 1861 and Male and female 1862, death bore more hardly upon males than upon females. The death rate compared. figures in the lowest line of the table show that, over a period of twenty-nine years, the deaths of males per 1,000 of the same sex living exceeded by 2 the deaths of females per 1,000 of that sex living.

586. In countries in which the climate is healthy, hygiene properly Normal death rate. attended to, and the population in a normal condition as regards age, the ordinary mortality incident to human nature would probably cause the death rate to be in the proportion of about 17 per 1,000 persons living. It should, however, be borne in mind that death rates based merely upon the total population, in common with birth and marriage rates, calculated upon a like basis, are not always fair tests of the state of a community. If the proportion of very young or old people is high, the death rate will also be high; but if, on the other hand, the number of persons at the middle ages is excessive, the death rate will It will be remarked that the mortality exceeded 17 per 1,000 be low. eight times in the twenty-nine years named in the table, but over the whole period it has averaged below 16 per 1,000. In the last thirteen years it has only once been so high as 16 per 1,000, whilst in six of those years it was below 15 per 1,000, in one being even below 14 per 1,000.

587. In 1871 the death rate of both males and females was the Low mortality in lowest recorded during the whole period of twenty-eight years, after census years 1871 which and the death rate in 1880 the next lowest death rate was in and 1881. 1881; it thus happened that the last two census years, viz., 1871 and 1881, were years of exceptionally low mortality. Such a circumstance occurring at two successive census periods is apt to mislead those who attempt, without due allowance, to base conclusions upon the relation which exists between the number of deaths and the

population of the colony, as derived from the results of the census years alone.

588. In 1889, the death rate of males was about the same as in Death rate 1889 and 1861, but was higher than in any other year since 1860, except 1866 previous years. and 1875; that of females was lower than in the years 1861 to 1863, 1865 to 1867, or than in 1875, but higher than in the other years of Taking the mean of the two sexes, the death rate in 1889 the period. was nearly 2 per 1,000 above the average, and was higher than that in any previous years of the period referred to in the table, except 1861, 1862, 1866, 1867, and 1875.

589. The proportion which the deaths that occurred in each Australasian colony bore to the total population of that colony during each of the twenty-five years from 1865 to 1889 will be found in the following table :--

DEATH RATES IN AUSTRALASIAN COLONIES, 1865 TO 1889.\*

	Number of Deaths per 1,000 of Mean Populations.								
Y <b>e</b> ar.	Victoria.	New South Wales.	Queensland	South Australia.	Western Australia.	Tasmania.	New Zealand.		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 16.97\\ 19.37\\ 19.37\\ 18.06\\ 15.00\\ 15.47\\ 14.61\\ 13.46\\ 14.38\\ 15.02\\ 15.72\\ 19.42\\ 17.02\\ 15.72\\ 19.42\\ 17.02\\ 15.80\\ 15.46\\ 14.53\\ 13.70\\ 14.16\\ 15.32\\ 14.28\\ 14.46\\ 14.98\\ 15.15\\ 15.70\\ 15$	$\begin{array}{c} 16.49\\ 17.57\\ 19.76\\ 15.92\\ 14.17\\ 13.38\\ 12.61\\ 14.18\\ 13.98\\ 15.33\\ 18.42\\ 18.53\\ 15.69\\ 16.36\\ 14.76\\ 15.47\\ 15.17\\ 16.12\\ 14.68\\ 16.14\\ 16.42\\ 14.89\\ 13.15\\ 10.54\end{array}$	$\begin{array}{c} 21 \cdot 42 \\ 25 \cdot 67 \\ 17 \cdot 80 \\ 17 \cdot 36 \\ 16 \cdot 20 \\ 14 \cdot 59 \\ 14 \cdot 59 \\ 14 \cdot 83 \\ 14 \cdot 97 \\ 16 \cdot 06 \\ 17 \cdot 98 \\ 23 \cdot 80 \\ 18 \cdot 82 \\ 17 \cdot 29 \\ 20 \cdot 41 \\ 14 \cdot 97 \\ 13 \cdot 59 \\ 15 \cdot 02 \\ 17 \cdot 99 \\ 18 \cdot 82 \\ 22 \cdot 97 \\ 20 \cdot 19 \\ 16 \cdot 77 \\ 14 \cdot 56 \\ 14 \cdot 56 \end{array}$	$14.30 \\ 17.20 \\ 17.48 \\ 14.41 \\ 12.37 \\ 13.94 \\ 12.87 \\ 15.33 \\ 13.48 \\ 17.05 \\ 19.45 \\ 16.28 \\ 13.99 \\ 15.44 \\ 14.09 \\ 14.85 \\ 14.49 \\ 15.15 \\ 14.83 \\ 15.52 \\ 12.73 \\ 13.52 \\ 12.59 \\ 12.5$	$\begin{array}{c} \dots \\ 14 \cdot 02 \\ 16 \cdot 24 \\ 18 \cdot 74 \\ 17 \cdot 88 \\ 14 \cdot 18 \\ 15 \cdot 70 \\ 14 \cdot 07 \\ 14 \cdot 07$	$13.40 \\13.79 \\14.48 \\14.70 \\13.20 \\13.88 \\13.38 \\13.38 \\13.79 \\14.52 \\16.21 \\20.00 \\16.54 \\19.17 \\15.66 \\15.18 \\16.12 \\14.77 \\15.79 \\17.06 \\15.50 \\15.40 \\14.58 \\15.45 \\$	$15 \cdot 13$ $12 \cdot 86$ $12 \cdot 78$ $11 \cdot 94$ $11 \cdot 73$ $11 \cdot 13$ $10 \cdot 13$ $11 \cdot 68$ $12 \cdot 67$ $13 \cdot 05$ $15 \cdot 92$ $12 \cdot 66$ $11 \cdot 47$ $11 \cdot 01$ $12 \cdot 46$ $11 \cdot 46$ $11 \cdot 13$ $11 \cdot 19$ $11 \cdot 45$ $10 \cdot 39$ $10 \cdot 74$ $10 \cdot 54$ $10 \cdot 29$		
1889	15.34 17.56			10.89	15.91 14.19	14·11 14·10	9·43 9·40		
Means	15.64	15.42	17.69	14.27	16.25	15.23	11.71		

Fluctuations in the death rate coinci- colonies have occurred from year to year. Thus a high rate of mordent in tality prevailed, more especially in the continental colonies, in 1866 different colonies. and 1867 (in Queensland extending also to 1868), which was caused by the presence of an epidemic of measles and scarlatina; Tasmania and New Zealand appear on this occasion to have almost entirely escaped, as their death rates were but little affected. Moreover, in 1875-6 a high death rate—caused by the same complaints—also occurred in all the colonies of the group. In like manner, low death

590. Considerable fluctuations in the death rates of the different

)eath rates in Australasian colonies.

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<sup>\*</sup> For the number of deaths in the various colonies during the last seventeen of the years named, ee General Summary of Australasian Statistics (third folding sheet) in the second volume.

rates prevailed in all the colonies about 1870 and 1871, extending in the case of some of them to 1872; also about 1880 and 1881. In Queensland and Western Australia a period of high mortality occurred also in 1884, but this did not extend to the other colonies, in most of which for several years past the mortality has been comparatively low. Again, in 1889, an exceptionally low rate of mortality prevailed in all the colonies except Victoria, in South Australia and New Zealand the rate having been absolutely the lowest during the whole period of 25 years.

591. In the twenty-five years over which the observations extend, Normal death rate the normal death rate of 17 per 1,000 persons living was reached in in colonies. Queensland thirteen times, in Victoria five times, in New South Wales and South Australia four times, in Tasmania three times, and in New Zealand not at all. In the last eighteen of those years it was reached six times in Western Australia. Queensland is the only one of the colonies in which, over a series of years, the death rate has exceeded 17 per 1,000.

592. According to the average of a series of years, the death rate Order of of Queensland was much higher, and that of New Zealand much respect to lower, than that of any of the other colonies; the death rate of Western Australia comes next to that of Queensland; the average death rates differ but slightly from one another in Victoria, New South Wales, and Tasmania; but the average death rate in South Australia is lower than that of these three. In 1889, the death rate of Victoria appears to have been considerably higher than that of any of the other colonies. The following is the order of the colonies in reference to their respective death rates; the colony with the highest rate being placed first, and that with the lowest last :---

ORDER OF AUSTRALASIAN COLONIES IN REFERENCE TO DEATH RATES.

colonies in death rates.

Order in 1889.

- 1. Victoria.
- 2. Queensland.
- 3. Western Australia.
- 4. Tasmania.
- 5. New South Wales.
- 6. South Australia.
- 7. New Zealand.

Order over a Series of Years.

- 1. Queensland.
- 2. Western Australia.
- 3. Victoria.
- 4. New South Wales.
- 5. Tasmania.
- 6. South Australia.
- 7. New Zealand.

593. The death rate of the colonies situated upon the continent of Death rate in Australia Australia taken in combination, and the death rate of those colonies and Australasia. with the addition of Tasmania and New Zealand, are shown in the following table for the seventeen years ended with 1889:-

Year.		Number of D of Mean P	eaths per 1,000 opulation.			Number of Deaths per 1,000 of Mean Population.		
		Continent of Australia.	ontinent of Australia with Australia. New Zealand.		Continent of Australia.	Australia with Tasmania and New Zealand.		
$1873 \\1874 \\1875 \\1876 \\1876 \\1877 \\1878 \\1879 \\1880$	· · · · · · · · · · · · ·	$14.43 \\ 15.73 \\ 19.08 \\ 17.12 \\ 15.23 \\ 15.72 \\ 14.06 \\ 14.47 \\ 14.4$	$14.20 \\ 15.36 \\ 18.63 \\ 16.37 \\ 14.77 \\ 14.94 \\ 13.84 \\ 14.01 $	$1882 \\1883 \\1884 \\1885 \\1886 \\1886 \\1887 \\1888 \\1889 \\$	· · · · · · · · · · · · · ·	$15.85 \\ 15.06 \\ 16.35 \\ 15.89 \\ 15.15 \\ 14.27 \\ 14.20 \\ 14.97$	$15.02 \\ 14.51 \\ 15.29 \\ 14.97 \\ 14.33 \\ 13.64 \\ 13.39 \\ 14.02$	
1881	•••	14.62	14.01	Means	•••	15.42	14.78	

DEATH RATE IN AUSTRALIA AND AUSTRALASIA, 1873 TO 1889.

Normal death rate

and Aus-

tralasia.

594. It will be noticed that in 1875 and 1876 the mortality on the in Australia Australian continent exceeded 17 per 1,000, but in no other years; also that it exceeded that rate upon the continent combined with the colonies of Tasmania and New Zealand only in 1875. It will further be noticed that in 1889 the rate for the continent, as well as that for the whole of Australasia, was lower than in any previous years since 1873, except 1879, 1880, 1881, 1887, and 1888.

Death rates in certain British possessions.

595. The following table shows the death rates in as many British colonies outside Australasia as the particulars are available for. In many cases the average extends only over a short period, and in few, if any, of the colonies are the conditions affecting the duration of human life similar to those prevailing in the Australasian group :--

Color	ies.			Years.	Number of Deaths per 1,000 of the Population.
Malta				1886	27.0
Cevlon		•••	••••	1886_7	22.8
Straits Settlements	•••	* * *	•••	1000-7	250
Hong Kong	•••	• • •	•••		219
Mouniting	•••	• • •	• • •	1879-86	26.6
	•••	• • •		1886-8	31.4
Seychelles	•••	•••	•••	$\boldsymbol{1886}$	20.1
St. Helena	• • •	• • •		1871 - 5	13.2
Gambia	•••	• • •		1882	51.2
Nova Scotia				1871-5	12.1
Bermudas			••••	1975 95	24.5
British Guiana	•••	• • •	•••	1070-00	
West Indies	•••	• • •	•••	1871-83	337
Debaman					
banamas	•••	• • •	•••	1874 - 5	22.6
Jamaica	• • •			1883 - 7	22.9
St. Lucia	• • •	• • •		1869 - 84	25.3
St. Vincent	•••	•••	•••	1886	23.0

DEATH RATES IN BRITISH POSSESSIONS.

Co	olonies.			Year.	Number of Deaths per 1,000 of the Population.
West Indies—					
Barbados	• • •	• • •		1886	25.7
Grenada	• • •	•••		1883 - 4	21.0*
Tobago		• • •		1886	21.0
Antigua	• • •	• • •		1883 - 4	39.5
Montserrat			•••	1883 - 6	20.4
Dominica		•••		1882 - 3	17·3 ·
Trinidad	• • •	•••	•••	1883-6	27.8*

DEATH RATES IN BRITISH POSSESSIONS-continued.

596. In all the European countries of which the information is at Death rates hand, the mean annual death rates are higher than in Queensland, countries. and much higher than in any of the other Australasian colonies. Moreover, in all, with the exception of Norway and Sweden, the mean annual death rate is above 17 per 1,000, and, with the same exceptions, in not one of those countries did the annual death rate during any of the years named ever fall as low as 17 per 1,000; whilst in Hungary and Spain, on the other hand, the average death rates amount to nearly twice that proportion. In the following table, the countries are arranged in the order of their mean death rates, as shown in the last column :----

	[	Number of Deaths per 1,000 of Mean Population.							
Countries.		1884.	1885.	1886.	1887.	1888.	Mean of Five Years.		
Hungary		31.4		32.2	33.5	•••	32.44		
Spain		31.1		- • •	• • •	•••	32.1‡		
Austria		$29 \cdot 2$	29.9	29.4	28.9	29.2	29.3		
Italy		26.7	26.6	28.3	27.7	26.8	27.2		
German Empire		26.0	25.7	26.2	24.2	23.8	25.2		
Prussia		25.5	25.7	26·0	23.9	23.0	24.8		
France		22.2	22.0	22.5	· 22·0	21.8	22.1		
The Netherlands		22.2	21.0	21.8	19.7	20.4	21.0		
Switzerland		20.2	21.3	20.7	$20^{\cdot}2$	19.9	20.5		
Belgium		20.9	20.1	21.1	19.3	20.1	20.3		
England and Wales		19.6	19.0	19.3	18.8	17.8	18.9		
Scotland		19.4	19.1	18.6	18.7	17.6	18.7		
Denmark		18.4	17.9	18.2	18.3	19.7	18.5		
Ireland		17.6	18.4	17.9	18.3	18.0	18.0		
Sweden		17.5	17.8	16.6	16.1		17.08		
Norway		16.4	16.5	16.1	16.0	16.9	16.4		

DEATH RATES IN EUROPEAN COUNTRIES, 1884 TO 1888.

597. According to the reports of the Registrars-General of Eng- Death rate in United land and Scotland. the death rate of the latter country approximates Kingdom.

\* Inclusive of still-births, which are recorded as deaths. # Mean of two years, 1883 and 1884. † Mean of three years.

§ Mean of four years.

very closely to that of the former, but in Ireland it is somewhat lower than in the other two countries.\* From the figures for the United Kingdom during each of the eighteen years ended with 1888. it will be noticed that the death rate in 1888 was, for the first time. below 18 per 1,000 persons living:-

Deat	н Кате	IN	THE	United	Kingdo	m, 1871	то	1888.
		Dea of t	aths pe he Pop	er 1,000 Julation.			D of	eaths per 1,000 the Population.
1871			22.0	6	1881			18.7
1872			20.9	9	<b>1882</b>			19.2
1873	•••	• • •	20.8	8	1883	• • •		19.5
1874			21.	6	1884	• • •	• • •	19.3
1875			<b>2</b> 2·2	2	1885	• • •	•••	18.9
1876			<b>2</b> 0·8	5	1886	• • •	•••	19.0
1877			<b>2</b> 0·0	C	1887		•••	18.7
1878	• • •	• • •	$21\cdot 2$	2	1888			17.8
1879			20:	5				<u> </u>
1880			20.4	<b>4</b>	$\mathbf{M}$	lean	• • •	20.1

**Death** rates country, 1889.

598. In every country the death rate is higher in towns than it is in town and in the extra-urban 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 serious illness for the sake of the superior nursing and medical attendance to be obtained in town. In 1889, the death rate was somewhat higher in Melbourne and suburbs than in the country towns, whilst in the former it was nearly two and a third times as high, and in the latter more than twice as high as in the country dis-The following are the figures for that year :--tricts.

DEATHS IN URBAN AND COUNTRY DISTRICTS, 1889.

	Estimated Mean	Deaths, 1889.			
Districts.	Population.	Total Number.	Number per 1,000 of the Population.		
Melbourne and suburbs (Greater Melbourne)	445,220	10,412	23.39		
Extra-metropolitan Towns Country districts	$196,400 \\ 462,680$	4,303 4,577	21·91 10·11		
Total	1,104,300	19,392	17:56		

\* Formerly the registrations in Ireland were admitted to be defective; but the Registrar-General of that country states that in recent years much improvement has taken place-especially since the passing of certain Acts of Parliament in the years 1878-80; and he has reason to believe that, at the present time, but few deaths escape registration.

599. The number of deaths per 1,000 of the estimated population Death rates in town and of the metropolitan towns (Greater Melbourne), the extra-metropolitan country, 1873 to towns, and the country districts of Victoria is given in the following 1889. table for each of the last seventeen years :---

DEATH	RATES	IN	Urban	AND	COUNTRY	DISTRICTS.	1873	то	1889.
-------	-------	----	-------	-----	---------	------------	------	----	-------

Years.		Greater Melbourne.	Extra- Metropolitan Towns.	Country Districts.	Total of Victoria
1873		19.86	18.50	9.65	15.02
1874		21.27	20.47	9.09	15.71
1875	•••	25.82	26.03	11.24	$19 \cdot 42$
1876		21.84	23.00	10.45	17.02
1877		21.18	20.07	9.86	15.80
1878		20.12	20.21	9.83	15.46
1879		19.23	18.65	9.17	14.53
1880		18.70	17.65	8.13	13.70
1881		19.32	19.44	7.91	14.16
1882		21.02	20.24	8.94	15.32
1883	•••	19.46	18.81	8.33	14.28
1884		20.54	18.74	7.86	14:46
1885		20.15	18.88	9.00	14.98
1886	•••	20.42	19.27	8.75	15.15
1887		21.25	20.64	8.65	15.70
1888		20.52	19.56	8.64	15.34
1889		23.39*	21.91	10.11	17.56

NOTE.—In 1875, and to a certain extent in the preceding and succeeding years, the death rate was swelled by epidemics of measles and scarlatina.

600. It will be noticed that in thirteen of the years, including the Normal last eight years, the death rate in Melbourne and suburbs was above that in the other town districts; but in the other four years the death rate in the extra-metropolitan towns was the higher. The greater mortality in proportion to population prevailing in the urban than in the country districts is very striking in all the years. In the former the mortality was invariably much above the normal 17 per 1,000 persons living, whilst in country districts it was always very con-It will also be noticed that the death rate siderably below that rate. in 1889 in each district was, with one or two exceptions, higher than in any previous year shown in the table.

death rate in town and country.

601. In England and Wales, during the ten years 1876-85, the Death rates in town death rate in urban districts was 21.5 per 1,000, and in country and country districts of districts, 18.0 per 1,000; the difference between these rates being not England. nearly so great as in similar divisions of Victoria.<sup>+</sup>

\* The death rate in Greater Melbourne during 1889 would be reduced to 19.74 per 1,000 persons living, if the deaths which occurred in the metropolitan hospitals, asylums, etc., should be † See 48th Report of the Registrar-General of England, page lxxv. eliminated from the total.

Death rates suburbs.

602. The following table shows the mean population, the number bourne and of deaths, and the proportion of the latter to the former, in 1889, also the number of deaths to every 1,000 persons living during the period of five years commencing with 1881 and ending with 1885, in each of the different municipalities and other sub-districts forming the component parts of the district of Melbourne and suburbs (Greater Melbourne. In order to render the rates of the various districts comparable as far as possible, the deaths in hospitals and similar institutions have been eliminated from the districts in which they occurred, and are shown separately near the foot of the table :--

			Deaths.		
Sub-districts.	Estimated Mean Population,	Total	Number per 1,000 of the Population.*		
	1889.	Number.	1889.	Annu <b>al Mean</b> , 1881 <b>to 1885.</b>	
Melbourne City	. 73,890	1,378	18.65	16.28	
North Melbourne Town	. 21,475	471	21.93	18.12	
Fitzroy City	. 31,780	574	18.06	18.15	
Collingwood City	. 33,790	758	22.43	19.40	
Richmond City	. 36,610	790	21.58	18.09	
Brunswick Town	. 17,915	362	20.21	17.25	
Northcote Borough	. 5,800	107	18.45	11.33	
Prahran City	. 35,600	696	19.55	16.00	
South Melbourne City	. 41,820	786	18.79	17.03	
Port Melbourne Borough	. 12,480	305	24.44	18.73	
St. Kilda Borough	. 18,187	299	16.44	13.31	
Brighton Town	. 8,596	154	17.92	13.82	
Essendon Town†	. 10,215	134	13.12)		
Flemington and Kensington Borough	n 8,664	160	18.47	12.85	
Hawthorn Town	15 440	287	18.59	12.79	
Kew Borough	5 620	107	10.04	11.50	
Footscrav Town	. 14 940	404	27.04	16.66	
Williamstown Town	. 13 620	264	19.38	16.53	
Remainder of district	. 33,410	663	19.84	13.23	
Shipping in Hobson's Bayand rive	r 1,478‡	11	7.44	9.20	
Total	441,330	8,710	19.74	16.55	
Hospitals, Asylums, etc.§	. 3,890	1,702	3.82	3.84	
Grand Total	. 445,220	10,412	23.39	20.11	

DEATHS IN GREATER MELBOURNE.

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\* In order to compare the death rate with density of population, see table following paragraph 152 ante.

† Essendon, formerly a Borough, was proclaimed a Town on the 7th January, 1890.

‡ Census figures.

§ Includes the Melbourne, Alfred, Women's, Children's, and Homœopathie Hospitals, and the Immigrants' Home, all situated in Melbourne City; the Benevolent Asylum, which is on the boundary between North Melbourne Town and Melbourne City; the Home of the Little Sisters of the Poor, which is in Northcote; the Metropolitan Lunatic Asylum, which is in Kew Borough; and the Yarra Bend Lunatic Asylum and the Austin Hospital for Incurables, which are in "Remainder of district." || Per 1,000 of the population of the whole of Melbourne and suburbs.

603. It will be observed that in 1889 the death rates in every one Death rates of the sub-districts, except Fitzroy, were above the average of the series of years. quinquennial period; the excess being most marked in the case of Northcote, Port Melbourne, Hawthorn, Kew, Footscray, and the "Remainder of district." It should be borne in mind, however, that some of these districts have also higher birth rates than formerly, and this would to some extent account for the increased mortality.

604. The only sub-district which, according to the average of five Places in years, had a higher death rate than 19\* per 1,000 is the low-lying and which death rate was still imperfectly drained locality of Collingwood; the next highest lowest. death rate prevailed in the shipping borough of Port Melbourne, and next in the densely populated suburbs of Fitzroy, North Melbourne, and Richmond. In 1889 the highest death rates were in Footscray and Port Melbourne, where the excessive, but, fortunately, exceptional rates of 27 and 24.4 per 1,000 were recorded; then followed in the order named Collingwood, North Melbourne, Richmond, Brunswick, "Remainder of district," Prahran, Williamstown, and Kew-all with rates above 19 per 1000. During the period of five years, after the shipping, the lowest death rates were in Northcote and Kew; the next in Essendon and Flemington, and Hawthorn; and the next in the "Remainder of district," St. Kilda, and Brighton. In 1889 the lowest death rate was in Essendon, and the next in St. Kilda, these being the only districts in that year having a death rate below 17 per 1,000.

605. The death rate of Greater Melbourne, taken as a whole, in Sub-districts the calculation of which the deaths in charitable institutions are rates over included, was about  $23\frac{1}{3}$  per 1,000 persons living in 1889, or over 3 per 1,000 higher than the average during the period of five years. During the last-named period the annual death rate was over 17 per 1,000 in all the sub-districts except Prahran, St. Kilda, Brighton, Hawthorn, Kew, Melbourne, Northcote, Essendon and Flemington, and "Remainder of district;" and during 1889 it was above 17 per 1,000 in all the sub-districts except Essendon and St. Kilda. It will be borne in mind that the deaths in hospitals, asylums, etc., are excluded from the returns of the individual districts; if such deaths should also be excluded from the total, the deaths in Greater Melbourne would only number 8,711, or a proportion of 19.74 per 1,000 living, a similar proportion for the five years ended with 1885 being 16.55.

in 1889 and

highest and

with death 17 per 1,000.

\* It should be remembered that the deaths in hospitals, asylums, etc., have been eliminated from the various sub-districts. If this had not been done, the death rates of several sub-districts would have been much higher than those shown in the table.

Deaths in Australasian capitals, 1889.

606. In 1889, according to the following figures, the death rate of Melbourne-already stated to have been exceptionally high-was apparently much higher than that of any of the other Australasian capital cities. There is strong reason to believe, however, that in some of the colonies either the metropolitan population is overestimated, or the metropolitan radius, so far as the deaths are concerned, is smaller than that for which the population is calculated. In either of these cases, the death rate would obviously appear to be lower than it really is. It should, moreover, be mentioned that the death rate of Melbourne is swelled by the large number of country residents who are admitted to and die in the metropolitan hospitals. In the Wellington returns, and probably in those of some other of the capital cities, it is the custom to eliminate such entries, and it is probable that in Melbourne such deaths bear a higher proportion to the total number of deaths recorded than they do in any other of the capital cities named :---

		-		Deaths, 1889.			
Capital	Cities.*		Estimated Mean Population.	Deaths, 1889 Total Number. per Po 10,412 699 179 1,572 6,338 1,856 405	Number per 1,000 of the Population.		
Melbourne			445.220	10.412	23.39		
Hobart			35,043	699	19:95		
Perth	* * *		9,000	179	19.89		
Brisbane	• • •		91,300	1,572	17.22		
Sydney†	* • •		374,207	6,338	16.94		
Adelaide†	• • •		120,600	1,856	15.39		
Wellington	•••	•••	32,050	405	12.64		
				Į			

DEATHS IN AUSTRALASIAN CAPITAL CITIES, 1889.

Death rates in Australasian capitals, 1881.

607. The populations of the various metropolitan cities being merely estimated, they may perhaps be inaccurate, in which case the death rates would appear lower or higher than the truth, according to whether the estimate might be too high or too low. In the year of the last general census of the Australasian colonies (1881) when the populations of these cities could be accurately known, the death rate then shown for Melbourne was much lower, and the death

† There are some doubts as to whether too high an estimate has not been given of the populations of Sydney and Adelaide. If this should be the case, the death rates for those cities, as shown in the table, would, as a matter of course, be lower than the true rates. The metropolitan district of the latter was somewhat extended in 1888 so as to embrace a well-defined area, having its boundary at an average distance of about 10 miles from a central point between North and South Adelaide. It is possible, moreover, that the registration districts do not fit in with the area over which the population is calculated, and consequently that some of the deaths occurring within the ten mile radius may be registered outside, and consequently not be included in the metropolitan returns.

<sup>\*</sup> With Suburbs.

rates for all the other capital cities were much higher than those given in the last table. The following are the figures for the census year :---

### DEATH RATES IN AUSTRALASIAN CAPITAL CITIES, 1881.

		Deaths the I	s per 1,000 of Population.		Deaths per 1,00 the Populatio			
Adelaide	• • •	• • •	23·55	Sydney	• • •	19.12		
Hobart	• • •	•••	23·18	Brisbane	• • •	18.82		
Melbourne	•••		19.32	Wellington	•••	14.00		

608. According to the following figures, showing the death rates in Death rates the principal towns in the United Kingdom, and the figures just United given (for 1881) showing the death rates in Australasian capital cities, the death rate is lower in Wellington than in any British town; in Brisbane, than in any except Brighton, Derby and Nottingham; in Sydney and Melbourne, than in any except those towns and Hull; whilst the death rates in Adelaide and Hobart are below those in 7 of the towns named on the list. If, however, deaths in hospitals and asylums should be excluded from the Melbourne returns, the death rate would be lower in that city than in any of the British towns named : --

		Deaths j the P	per 1,000 of opulation.				Deaths per 1,000 of the Population.		
Dublin	•••		30.6		Halifax	•••		21.0	
Manchester	• • •		28.7		Birkenhead		• • •	21.0	
Preston			27.9	-	Twenty-eight	large	towns	20.8	
Blackburn	• • •		25.5		Bristol		•••	20.4	
Newcastle	• • •	• • •	25.3		Norwich		• • •	20.4	
Oldham	•••		23.8		Bradford			19.9	
Liverpool	• • •		23.7		Edinburgh	•••		19.8	
Glasgow	• • •		$23 \cdot 2$		Sunderland	• • •	• • •	19.7	
Huddersfield	•••	•••	23.0		Birmingham	• • •		19.7	
Plymouth			22.7		London		• • •	19.6	
Salford			$22 \cdot 2$		Portsmouth		•••	19.5	

### DEATH RATES IN BRITISH TOWNS, 1887.

in towns of

Kingdom.

Cardiff	•••	• • •	21.9	Leicester	• • •		19.5
Wolverham	pton		21.7	Hull	• • •	• • •	$19 \cdot 2$
Sheffield		•••	21.6	Nottingham	• • •	• • •	18.7
Bolton		• • •	21.3	Derby			17.1
Leeds	•••		21.1	Brighton	•••		16.9

609. It will be noticed that the death rate is higher in Dublin than Towns having in any other large town in the United Kingdom. In this respect it highestand lowest contrasts very unfavourably with London, which is one of the towns death rates Manchester is one in which in which the death rate is lowest. the death rate has always been, and still continues to be, highest; but Liverpool, which some years since stood at the very head of the
list, has now six towns above it, and stands immediately above Glasgow. In Birmingham the mortality is comparatively low, and approximates closely with that of London

Death rates in foreign towns. 610. The death rates in all the Australasian capitals will be found to be considerably lower than the average death rates of most of the 45 Colonial and Foreign towns named in the subjoined list:—

# DEATH RATES IN 45 COLONIAL AND FOREIGN TOWNS, 1878-80.\*

Annual Deaths per 1,000 of the Population.

Annual Deaths per 1,000 of the Population.

Vera Cruz			70.5	Leipsic	• • •	• • •	26.1
Valparaiso	• • •		<b>64</b> ·6	Turin	•••	• • •	<b>25</b> .6
St. Petersburg			51.4	Dresden	•••	• • •	25.4
Havanna			45·7	Stockholm	•••	•••	24.7
Madras (1887)			40.3	Lyons	• • •	• • •	24.7
Rio Janeiro			39.4	Hamburg		• • •	24.5
Madrid			37.4	Bucharest		• • •	24.5
Montreal	• • •		37.2	Brussels	• • •	• • •	<b>23</b> ·9
Buda-Pesth			35.2	Boston		• • •	23.5
Breslau			32.5	Paris (1887)		• • •	23.4
Rouen			31.3	Rotterdam		• • •	23.3
Calcutta			31.1	Berlin (1889	)		23.1
Mexico	* • •		30.9	Quebec		•••	22.9
Milan	• • •		30.6	Venice	• • •	•••	22.7
Buenos Aires	• • •		30.1	Copenhagen		•••	22.1
Vienna	• • •		29.0	Amsterdam (	[1887]	•••	22.1
Palermo	* * 4		28.5	Geneva	•••	•••	21.2
Marseilles	• • •		28.0	Baltimore			21.1
Chicago	• • •		27.2	Philadelphia			20.3
Rome			26.8	St. Louis			19.3
Bordeaux	• • •		<b>26·7</b>	Christiania			18.8
Bombay (1887	)	• • •	<b>26·3</b>	San Francisc	0		18.1
New York	• • •		26'2				

Death rates in Victorian towns.

<sup>48</sup> 611. Of the 4 principal towns in Victoria next in importance to <sup>an</sup> Melbourne, 2 had in 1889 a higher, and 2 had a lower, death rate than that city; but in none of them was the death rate as high as in the majority of Colonial and Foreign towns just referred to. This will be seen by the following figures :---

### DEATH RATES IN 5 VICTORIAN TOWNS, 1889.

		$\begin{array}{c} \mathbf{Deaths} \\ \mathbf{P} \end{array}$	per 1,000 opulation.	of the			Deaths	per 1,000 of the Population.
Castlemaine Geelong Melbourne	•••	•••	23·97 23·90 23·39		Sandhurst Ballarat	•••	•••	22·99 19·58

\* Partly taken from Mulhall's Dictionary of Statistics, page 126.

612. The mortality of Victoria is highest in the first five months Deaths in and in the last month of the year. The relative mortality of the various months fluctuates, however, in different years. According to the average of the quinquennium ended with 1885, the months in which most deaths occur appear to be March, December, and January, and then April, February, and May, in the order named; whereas in the decade ended with 1880 fewer deaths occurred in December than in any of the other months named. In the year under review more deaths occurred in January than in any other month. The number of deaths in each month of 1889, and their percentage to the total number in the year, also the percentage of the deaths in each month of the quinquennium ended with 1885, and of the decennium ended with 1880, to the total number of deaths during the same periods, will be found in the following table :---

		Year	· 1889.	Percentage in—			
Months.		Number of Deaths.	Percentage.	Five Years : 1881 to 1885.	Ten Years : 1871 to 1880.		
January	•••	2,225	11.47	9.34	10.29		
February	•••	1,738	8.96	8.46	9.09		
March		1,811	9.34	9.57	10.17		
April		1,728	8.91	8.68	9.73		
May	••••	1,587	8.18	<b>8</b> ·40	8.52		
June		1,314	6.78	7.69	7.44		
July		1,573	8.11	7.79	7.89		
August		1,436	7.41	8.22	7.37		
September	••••	1,294	6 67	7.31	6.81		
October		1,279	6.60	7:39	7.09		
November	•••	1,540	7.94	7.76	7.12		
December	•••	1,867	9.63	9.39	8.45		
Total		19,392	100.00	100.00	100.00		

DEATHS IN EACH MONTH.

613. In Victoria the summer is the most trying portion of the Deaths at year, especially to invalids and young children. It is not astonishing, different seasons. therefore, that most deaths usually occur during that period. Next to the summer, the autumn quarter is usually the most fatal; but in 1889, there were more deaths in the spring than the autumn quarter. In the United Kingdom, on the contrary, the greatest mortality occurs in the winter, and the least in the summer quarter. A statement of the relative mortality of the different seasons in Victoria, according to the experience of the past year and two previous periods; VOL. I. Y

in England and Wales, according to the experience of thirty-one years; in Scotland, according to the experience of ten years; and in Ireland, according to the experience of five years, together with the mean temperature in each quarter in Melbourne and Greenwich, will be found in the following table:-

### RELATIVE MORTALITY OF EACH QUARTER IN VICTORIA, ENGLAND. SCOTLAND, AND IRELAND.

				Dea	ths per 100 at	all Seasons.		
Second	Mean Ter in Sl	nperature nade.		Victoria.		England and Wales.	Scotland.	Ireland.
Seasons.*	Melbourne, Victoria.	Greenwich, England.	Year 1889.	Average of Five Years 1881 to 1885.	Average of Ten years, 1871 to 1880.	Average of Thirty - one Years.	Average of Ten Years.	Average of Five Years.
Summer Autumn Winter Spring	$ \begin{array}{r} 65{ }\cdot2\\ 53{ }\cdot8\\ 50{ }\cdot2\\ 60{ }\cdot3 \end{array} $	$60.5 \\ 44.3 \\ 40.0 \\ 52.8$	$29.77 \\ 23.87 \\ 22.19 \\ 24.17$	$\begin{array}{c} 27 \cdot 37 \\ 24 \cdot 76 \\ 23 \cdot 32 \\ 24 \cdot 55 \end{array}$	29·55 25·72 22·07 22·66	$\begin{array}{c} 23 \cdot 24 \\ 24 \cdot 65 \\ 27 \cdot 49 \\ 24 \cdot 62 \end{array}$	$22.34 \\ 24.71 \\ 27.95 \\ 25.00$	20·21 23·45 30·19 26·15
Year	57.6	49.4	100.00	100.00	100.00	100.00	100.00	100.00

Deaths of Chinese

gines.

614. The Chinese who died in 1889 numbered 150-all of whom and Abori. were males; and the Aborigines who died numbered 36-of whom 4 (including 1 adult) were stated to be half-castes. The former furnish a proportion of 12.84 and the latter of 55.39 to every 1000 of their numbers.<sup>+</sup> In the same year the proportion of deaths of all races to every 1,000 of the population was 17.56.

Ages at death of Aborigines.

615. The mortality of the Chinese would doubtless have been Chineseand higher but for the fact that the Chinese population in Victoria consists almost entirely of persons at the adult period of life. In 1889 only 1 of the Chinese who died was under the age of 5 years, and only 24 others were under 45 years of age; the great majority, or three-fifths, were between 45 and 65; whilst the oldest were said to be aged 80, 83, 84, 86, and 87 respectively. Of the Aborigines who died, eleven were under 5, whilst a female was stated to have attained the age of 85, whereas the oldest male was under 65.

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\* The summer, autumn, winter, and spring seasons in Victoria approximate to the quarters ending on the last day of March, June, September, and December respectively; and in the United Kingdom to those ending on the last day of September, December, March, and June respectively.

† The estimated number of Chinese in 1889 was 11,679; and on the 3rd April, 1881, the Aborigines numbered 780.

616. The following table shows the number of deaths at various Deaths at each age, periods of age registered in Victoria during the year 1889, and the 1889. proportion of the deaths at each age to the total at all ages :---

	Number o	f Deaths at 1889.	each Age,	Percentage of Deaths at each Age.			
Ages.	Males.	Females.	Total.	Males.	Females.	Total.	
Under 5 years	. 4,180	3,621	7,801	37.78	43.48	40 <b>·23</b>	
5 years to 10 years	. 336	294	630	3.04	3.23	3.25	
10 "15 ".	.   171	191	362	1•54	2.29	1.87	
15 " 20 "	. 275	265	540	2.49	3.18	2.78	
20 ,, 25 ,,	. 425	380	805	3.84	4.56	4.15	
25 , 35 ,	. 870	719	1,589	7.86	8.64	8.20	
35 " 45 " .	. 668	513	1,181	6'04	6.16	6.09	
45 " 55 " .	. 931	614	1,545	8.41	7:37	7.97	
55 , 65 , .	. 1,440	661	2,101	13.02	7.94	10.83	
65 , 75 ,	. 1,091	576	1,667	<b>9·</b> 86	6.92	8.60	
75 years and upwards .	677	494	1,171	6.12	5•93	6.03	
Total	. 11,064	8,328	19,392	100.00	100.00	100.00	

DEATHS AT EACH AGE, 1889.

617. It will be noticed that nearly two-fifths of the males and over Proportion two-fifths of the females who died had not reached their fifth year; that a fourth of the males and between a fourth and a third of the females were between 5 and 45 years of age; that over a fifth of the males, but little more than a seventh of the females, were between 45 and 65 years of age; and that about a sixth of the males and more than an eighth of the females were over 65 years of age; it will moreover be found that, on the average, the females who died were about 11 years younger than the males-about half the former being under and half over 16 years of age, whilst about half the latter were under and half over 27 years of age.

of deaths at different ages.

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618. The exact ages of the population of Victoria were ascertained Death rate at each age. at the census of 1881, and since then they have been brought on by means of the records of the births, of the deaths at each age, and of the net immigration, and thus an opportunity is afforded of calculating the death rates of males and females at different ages. Such results for 1889 are given in the following table, and are compared with the average rates which prevailed during the ten years 1871-80, the increase or decrease at each age being also shown :---

		Number	of Deaths	per 1,000 of	the Populatio	n at differe	ent Ages.	
			Males.		Females.			
Ages.		Mean of 10 Years: 1871 to 1880.	1889.	Increase + Decrease -	Mean of 10 Years: 1871 to 1880.	1889.	Increase + Decrease –	
Under 5 vears		47.34	59.21	+ 11.87	42·19	53.53	+ 11.34	
5  to  10		6.10	5.29	51	6.00	5.07	93	
10 to 15		3.30	2.88	- ·42	3.30	3.34	+ .04	
15 to 20 ,,		4.43	4.53	+ .10	4.29	4.55	+ •26	
20 to 25 ,		5.38	6.32	+ •94	5.39	6.40	+ 1.01	
25 to 35 ,,	• • •	7.60	8.23	+ .63	8.20	7.80	70	
<b>35</b> to 45 ,,		12.18	13.47	+ 1.29	11.76	11.68	08	
45 to 55 ,,		18.67	18.93	+ •26	1431	15.42	+ 1.11	
55 to 65 ,	• • •	31.24	32.46	+ 1.22	24.20	24.09	11	
65 to 75 "		60.47	64.69	+ 4.22	48.10	55.74	+ 7.64	
All ages	• • •	16.45	18.83	+ 2.38	14.15	16.12	+ 1.97	

DEATH RATE AT EACH AGE, 1871-80 AND 1889.\*

Death rate at each age 1889 compared with average of previous years.

619. It has already been stated that in 1889 the death rate of both males and females was much above the average. The table shows that this was especially the case in regard to children under 5 of both sexes, amongst whom the rate of mortality increased by about onefourth; in regard to persons of both sexes between 20 and 25, amongst whom it increased by one-fifth; and in regard to females aged 65 to 75, amongst whom it increased by one-seventh; whilst in a minor degree an increased mortality occurred amongst males at the age-periods between 25 and 45 and between 65 and 75, and amongst females at the age-periods 15 to 20 and 45 to 55. On the other hand, it will be observed that there was a decreased mortality amongst males at the age-periods between 5 and 15, and amongst females at the age-periods 5 to 10, between 25 and 45, and 55 to 65.

"Ordinary" death rate seldom

620. It has often been pointed out in the Victorian Year-Book that the ordinary mode of computing the death rate at all ages, viz., by reliable. comparing the total number of deaths of either sex with the number of the same sex living, as shown in the lowest line of the tablealthough that adopted in every country which publishes Vital Statistics-gives results which are misleading for the purpose of comparing the mortality of one country with that of another, or the mortality of a country at one period with the mortality of the same country at another period, unless the proportions living at different ages are identical in the two countries or at the two periods respecting which

<sup>\*</sup> For population at each age in 1889, see table following paragraph 134 ante; the deaths at each age are given in table following paragraph 616 ante.

it is desired to make comparison, which is seldom if ever the case. To render accurate comparisons possible, it therefore becomes necessary to devise a mode of computing the total death rate whereby the ages of the population might be taken into account.

621. Several modes have been proposed to effect this object\*; of Mode of which the mode probably least open to objection is that termed the "Adjusted "Adjusted death rate" This is obtained by applying the rates of death rate." "Adjusted death rate." This is obtained by applying the rates of mortality actually experienced at the various age-periods during any period to a certain standard population, in which the proportions living at the various ages are in a normal condition, and after finding the total number of deaths which would, according to the actual experience have occurred amongst such a population, calculating therefrom the average rate of mortality (or "Adjusted death rate"). The standard population selected is shown in the following table; also the method of calculating the "Adjusted death rate," the deaths dealt with being those of males under 75 years of age which occurred in Victoria during the ten years ended with 1880:-

		Males under	75, 1871 to 1880.
Ages.	Standard Population.	Death Rates experienced. †	Deaths in Standard Population accord- ing to rates in previous column.‡
Quinquennial Age-periods.			
Under 5 years	1,350	47.34	63·91
5 to 10 <sup>°</sup> ,	1,200	6·10	7.32
10 to 15 "	1,075	3 30	3.52
15 to 20 "	1,000	4.43	4.43
20  to  25  ,	900	5.38	484
Decennial Age-periods.			
25 to 35 years	1,475	7.60	11.21
35 to 45 <sup>°</sup> ,,	1,125	12.18	13.70
45 to 55 ,,	825	18.67	15.40
55 to 65	600	31.24	18.75
65 to 75 "	325	60 47	19.65
Total	9,875§		162 76
Average, or "Adjusted	1,000		16.48

MODE OF COMPUTING "ADJUSTED DEATH RATE."

\* For an account of three of these methods, see Victorian Year-Book 1885-6, paragraphs 594 et seq.

t Ascertained by finding the proportion of deaths at each age-period per 1,000 of the actual population at the same age-period.

‡ Ascertained as follows :-- Under 5 years,  $\frac{1,350 \times 47.34}{1,000} = 63.909$ , and so on for the other lines.

§ The difference between this number and 10,000 (viz., 125) represents the number over 75 years of age.

" Adjusted " death rate."

622. It is thus shown that if the mortality of males under 75 years of age, which occurred in Victoria during the ten years 1871 to 1880, had been experienced by a male population of 9,875—the ages of such population being in the same proportions as those of the standard population shown on the table—the total deaths of such males would have numbered 162.76, or a proportion to the total number (9,875) of 16.48 per 1,000, which may be termed the "Adjusted death rate" of males during the period of 10 years alluded to. This "Adjusted death rate" is available for forming a correct comparison with a proportion similarly obtained relating to the other sex or to any other period or country, no matter what may have been the differences of age between the sexes at the two periods, or in the two countries. It should be mentioned that the age of 75 is the highest taken into the computation, as, in most countries, the deaths and population are generally tabulated in quinquennial or decennial periods up to, but not beyond that age; and, moreover, the higher ages may safely be left out of account, since, although the death rate at such ages is high, the number living over 75 in a normal population usually amounts to only about 1 per cent.\*

"Ordinary," and "Adjusted" death rates.

623. For the decennium 1871 to 1880 and the year 1889, the "Adjusted death rates" of males and females, obtained in the manner just described, are, in the following table, placed side by side with the "Ordinary death rates," or those obtained by comparing the deaths with every 1,000 of the population of the same sex irrespective of age :—

"Ordinary" and "Adjusted" Death Rates, 1871–1880 and 1889.

Period.			Ordinary Death Rate.†	Adjusted Death Rate.
Males.				
1871 to 1880	• • •		16.45	16.48
Year 1889	•••		18.83	18.58
Increase			2.38	2.10
Females.				
1871 to 1880		•••	14.15	14 <b>·6</b> 4
Year 1889	•••		16.12	16.42
Increase	•••		1.97	1.78

\* It has been suggested that another age group -75 and upwards-should be added in order to complete the series, but this has been omitted advisedly, inasmuch as the average age of persons living over 75 would obviously be lower in the younger colonies of Australasia than in the older ones, and this would introduce an element of uncertainty, seeing that the death-rate doubles itself every tenth year at such high ages.

+ Per 1,000 of the actual population.

‡ Per 1,000 of the standard population.

624. Comparing the death rates in 1889 with those in the decen-Results of the two nium 1871-80, it is found that according to the "Ordinary" and less methods compared. reliable method of computation, there was an apparent increase in the mortality of males, amounting to 2.38 per 1,000, and in that of females, amounting to 1.97 per 1,000; whereas, according to the "Adjusted" or more correct method, there was an increase of 2.10per 1,000 in the case of the males, and an increase of 1.78 per 1,000 , in the case of females.

625. In the next table the death rates of males and females at Death rates different ages in Victoria, England and Wales, and France are compared—the observations being in all cases for periods of ten years:—

at various ages in Victoria, England, and France.

	Number of Deaths per 1,000 of the Population.							
	Vict	toria.	England a	and Wales.	Fra	ince.		
Ages.	Average o 1871 t	f 10 Years : o 1880.	Average o 1871 t	f 10 Years : to 1880.	Average of 10 Years.			
	Males.	Females.	Males.	Females	Males.	Females.		
All ages ("Ordinary" death rate) ,, ("Adjusted" death rate)	$16.45 \\ 16.48$	14.15 $14.64$	$\begin{array}{c} 22.6\\ 20.7 \end{array}$	20·0 18·0	$23.80 \\ 23.15$	$23.19 \\ 21.67$		
Under 5 years 5 to 10 ,, 10 to 15 ,,	$ \begin{array}{r} 47.34 \\ 6.10 \\ 3.30 \end{array} $	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{r} 68.1 \\ 6.7 \\ 3.7 \end{array} $	58.1 6.2 3.7	$     \begin{array}{r}       84.55 \\       10.49 \\       5.36     \end{array} $	$75.45 \\ 11.04 \\ 6.41$		
15 to 20       ,,           20 to 25       ,,           25 to 25	4.43 5.38	$4.29 \\ 5.39 \\ 2.50$	$\begin{array}{c c} 5.2 \\ 7.3 \\ 0.2 \end{array}$	$\left \begin{array}{c}5\cdot4\\6\cdot8\end{array}\right\rangle$	10.34	8.41		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	12.18 18.67	$     \begin{array}{r}       8^{50} \\       11.76 \\       14.31     \end{array} $	93 137 200	11.6 15.6	10.02 10.96 14.76	11.03 14.88		
55 to 65 ,, 65 to 75 ,,	31·24 60·47	$ \begin{array}{c c}     24.20 \\     48.10 \end{array} $	34·8 69·6	$     \begin{array}{r}       28.5 \\       60.8     \end{array} $	$ \begin{array}{c c} 29.19 \\ 60.69 \\ \end{array} $	$ \begin{array}{c c} 1100\\ 27.27\\ 63.49\\ \end{array} $		
75 to 85 ,,	114.80	102.94	150.9	155.8	160.22	153.76		

DEATH RATE AT EACH AGE IN VICTORIA, ENGLAND, AND FRANCE.

626. It will be observed that the average mortality of both males Death rates "Ordinary" and females at all ages is much lower in Victoria than in England or and ' Αα-France, but the difference is not so striking when the new method of *justed*," in Victoria, England, comparison is used ("Adjusted" death rate) as it is when the old and France. method is used ("Ordinary" death rate.) Thus, according to the old method, deaths of males per 100,000 living are, in England, 615, and in France, 735, more than in Victoria; but according to the new method only 422 more in England, and 667 more in France. And, according to the old method, deaths of females per 100,000 living are, in England, 585, and in France, 904, more than in Victoria; but, according to the new method, only 336 more in England, and 703 more in France.

Deathrate at 627. It will further be noticed that at none of the age-periods is the mortality of males, and at only one age-period (35 to 45) is that than in France. of females, as high in Victoria as in England; but the Victorian mortality is higher than that of France, in the case of males at from 35 to 65 and in the case of females at from 35 to 45.

Deathrate of children less in Victoria than in England or France. 628. It is very commonly believed that the conditions of life in Victoria are more fatal to children than those conditions in older countries; but the figures in the table prove the fallacy of this • opinion so far as England and France are concerned—the low mortality in Victoria, as compared with that obtaining in either of those countries, being especially marked at the age-periods under 10 years.

Death rate of males and females in three countries compared.

<sup>of</sup> 629. According to the table, the death rate of females exceeds that <sup>1</sup> of males at from 20 to 35 in Victoria (during a term of years), at <sup>m</sup> from 15 to 20, and from 75 to 85 in England and Wales, and at from 5 to 15, from 35 to 55, and from 65 to 75 in France; moreover, both in Victoria and in England and Wales, at from 10 to 15, the death rates of males and females are equal. At every other period of life the death rate of males exceeds that of females in the countries named.

Death rate at various ages in different countries. 630. Mr. Mulhall gives the ordinary death rate at various ages for different countries,\* and these, with the figures for Victoria—which will be found at almost every age much lower than those for any of the other countries—are subjoined:—

Countries	Number of Deaths per 1,000 living at each Age.									
countries.	Under 5.	nder 5. 5 to 10.		25 to 45.	45 to 55.	55 to 65.	65 to 75.			
Victoria	3S <sup>.</sup> 6	3.2	3.9	10.2	16.2	29.1	<b>59</b> · <b>4</b>			
England	63 <sup>.</sup> 6	66	5.2	10.2	17.4	31.8	64.3			
United States	58-8	10.1	5.4	10.8	17.6	27.2	51.4			
France	75.6	9.2	<b>8</b> ∙8	12.7	16.6	28.3	66.3			
Prussia		9.2	6.4	11.5	18.6	33.0	64.5			
Austria	111.7	9.8	6.6	11.3	21.1	41.5	92.8			
Switzerland	•••	8·5	6.3	11.6	19.3	38.4	82.5			
Italy	110.6	11.6	7.8	11.7	17.3	33.1	70.1			
Spain	106.2	11.7	8.8	12.9	23.8	42.0	95.0			
Belgium	<b>6</b> 8 <b>·</b> 1	12.7	8.1	12.9	19.0	32.3	74.5			
Sweden	57.6	8.0	4.8	8.2	14.7	27.4	62.6			

DEATH RATE AT VARIOUS AGES IN DIFFERENT COUNTRIES.

\* Dictionary of Statistics, page 127.

631. The mortality of infants in 1889, in proportion to the number Infantile mortality, born, was considerably above the average, and was by far the highest 1889. recorded since 1866. The total number under 1 year of age who died in 1889 was 5,549, and as the births numbered 36,359, it follows that 1 infant died to every 6.5 births, or 15.25 infants to every 100 births. In the twenty-three years 1866 to 1888, the proportion of infants dying before completing their first year was 12.42 to every 100 births.\*

632. It has already been stated that more boys are born than Mortality girls, but the balance of the sexes is to a certain extent maintained by female infants. more male than female infants dying. This is shown in the following table, which contains a statement, for the nineteen years ended with 1889, of the number of births of boys and girls, the number of deaths of each before completing their first year, and the proportion of the deaths of infants of either sex to the number of births of infants of the same sex:—

					Deaths at under 1 Year of Age.					
	Yeal	:	Bir	ths.	Total N	lumber.	Number per 100 Births.			
			Boys.	Girls.	Boys.	Girls.	Boys.	Girls.		
1871			14,000	13,382	1,710	1,404	12.21	10.49		
1872	•	• • •	13.831	13,530	1,801	1,533	13.02	11.33		
1873			14.234	13,866	1,679	1,502	11.80	10.83		
1874	• • •		13,659	13,141	1,839	1,502	13.46	11.43		
1875	•••		13,683	13,037	2,071	1,740	15.14	13.35		
1876		•••	13,759	13,010	1,637	1,343	11.90	$10\ 32$		
1877	• • •		13,272	12,738	1,838	1,461	13.85	11.47		
1878	• • •	•••	13,752	12,829	1,763	1,499	12.82	11.68		
1879	•••	• * *	13,727	13,112	1,817	1,402	13.24	<b>10</b> ·6 <b>9</b>		
1880	•••		13,358	12,790	1,669	1,436	12.49	11.23		
1881	•••	• • •	13,903	13,242	1,696	1,423	12.20	10.75		
Sums	and	Means	151,178	144,677	19,520	16,245	12.91	11.23		
1882	• • 9	6 <b>6</b> 7	13,612	13,135	2,049	1,673	15·05	12.74		
1883		<b>* \$</b> 4	14,109	13,432	1,702	1,448	12.06	10 <b>·78</b>		
1884		* * 4	14,844	14,006	1,853	1,428	12.49	10 <b>·20</b>		
1885	•••	4 8 3	15,455	14,520	2,046	1,725	13.24	11.88		
1886	• • •		15,753	15,071	2,127	1,797	<b>13·5</b> 0	11.92		
1887	• • •	. • •	16,876	16,167	2,354	1,942	13.95	12.01		
1888	•••		17,617	16,886	2,390	2,011	13.57	11.91		
1889	•••	• • •	18,713	17,646	2,989	2,560	15.97	14·5 <b>1</b>		
						1				

MORTALITY OF MALE AND FEMALE INFANTS, 1871 TO 1889.

\* See table following paragraph 639 post.

Mortality of male greater than of female infants. 633. According to a previous paragraph,\* the births of male infants in a series of years were in the proportion of about  $104\frac{1}{2}$  to 100 female infants, and the numbers in this table point to a proportion of 120 deaths of the former to 100 of the latter. It will be noticed that in every one of the years deaths of male infants very much exceeded those of female infants; and as the numbers living were about equal (the excess, if any, being slightly in favour of male infants), the greater tendency of boys than of girls to die before completing one year of life may be considered to be invariable.

Proportion of infants dying to births.

634. In proportion to every 1,000 born, the number of male infants dying varied from 118 in 1873 to 151 in 1875 and 1882 and 160 in 1889, and that of female infants dying from 103 in 1876 to 134 in 1875 and 145 in 1889—the mean number dying per 1,000 births during the eleven years ended with 1881 being 129 of the former and 112 of the latter. The high mortality of infants in 1875 was caused by an epidemic of measles. The next year was one in which the general mortality was much increased by an epidemic of scarlatina, but infants under 1 year appear not to have been at all affected thereby, as their mortality in 1876 was remarkably low. The high infantile mortality in 1882 was exceptional, as in that year no such epidemics were prevalent. It was not sustained in 1883 or 1884, the infantile mortality in those years having been lower than in most of the preceding ones, but concurrently with an increasing birth rate, there has been a gradual rise in the infantile death rate. The high mortality of 1889 was partly due to an epidemic of whooping cough, and partly to a largely increased mortality under diarrhœa, gastro-enteritis, and debility.

Deaths of infants at different

635. In classifying the deaths of infants, those are distinguished which occur at under 1 month of age, at from 1 to 3 months, at from 3 to 6 months, and at from 6 to 12 months. The numbers of these during 1889 and the eleven years ended with 1881 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. It will be noticed that in 1889 the mortality of both male and female infants under 1 month of age was below the average, but at every other period under 1 year the mortality of both sexes was above the average :—

<sup>\*</sup> See paragraph 538, ante.

		Deaths at under 1 Year of Age.							
Ages.			Year 1889.		Average of 11 years, 1871 to 1881.				
		Number.	Percentage at each Age.	Number per 100 Births.	Percentage at each Age.	Number per 100 Births.			
Boys.		· · · · · · · · · · · · · · · · · · ·							
Under 1 month		792	26.50	4.23	34.23	4.42			
1 to 3 months		556	18.60	2.97	17.30	2.23			
3 to 6 ,,		719	24.05	3.84	19.43	2.51			
6 to 12 ,,		922	30.85	4.93	29.04	3.75			
Total		2,989	100.00	15.97	100.00	12 91			
GIRLS.									
Under 1 month		$\boldsymbol{584}$	22.81	3.31	30.81	3.46			
1 to 3 months		<b>458</b>	17.89	2.60	17.23	1.94			
3 to 6 ,,		640	25.00	-3-63	20.14	2.26			
6 to 12 ,,	•••	878	34.30	4.98	31.82	3.57			
Total	•••	2,560	100.00	14.51	100.00	11.53			
			)		1	1			

#### AGE AT DEATH OF MALE AND FEMALE INFANTS.

636. During the period of eleven years, the mortality of male More deaths infants in proportion to the number born exceeded that of female infants at each of the age-periods. This was more especially the case in the first month of life, when the excess of the former was not quite a third; in the next two months this excess was reduced to about a seventh, in the next three months to about a ninth, and in the next six months to only a twentieth. In 1889, however, the relative mortality at the age-period 6 to 12 months was slightly higher amongst females than males.

637. In the same period of eleven years, over a third of the male Periods at and nearly a third of the female infants who died before they were a <sup>which</sup> infants die. year old did so in the first month after birth; about a sixth of both males and females in the next two months; about a fifth of both males and females in the next three months; between a third and a fourth of the males and nearly a third of the females in the next six months. The proportions for 1889 are considerably less for the first month of life, but much higher for the period 3 to 6 months, and slightly higher for the other age-periods than the proportions just alluded to.

638. As a practical result of these calculations, it may be mentioned Probable that of every 20,000 newly-born boys and girls in equal numbers, 442 mortality of the former and 346 of the latter may be expected to die before they are a month old; 223 more boys and 194 more girls may be expected to die between 1 month and 3 months of age; 251 more boys and 226

more girls between 3 and 6 months; 375 more boys and 357 more girls between 6 and 12 months. At the end of a year it is probable that 1,291 of the boys and 1,123 of the girls will have died, and 8,709 of the former and 8,877 of the latter will be still living.

Infantile mortality in colonies.

639. In Victoria, the infantile death rate in 1888 was slightly Australasian above, but in all the other colonies it was below, the average, as will be seen by the following table, which gives the number of births, the number of deaths of infants under one year, and the proportion of the latter to the former, in each of the colonies of the group, for each of the twenty-three years ended with 1888, except in regard to Western Australia, for which the information is given at the foot of the table for the last three of those years. All the calculations were made in the office of the Government Statist, Melbourne:-

<b>V</b> 00. <b>"</b>	Pirtha	Deaths a 1 Year o	t under of Age.	Disthe	Deaths a 1 Year	t unde <b>r</b> of Age.	Disting	Deaths a 1 Year o	t under of Age.
1 cai.		Total Number.	Number to 100 Births.	Number to 100 Births.		Total Number Number. births.		Total Number.	Number to 100 Births.
	(   V	ICTORIA.		NEW S	I South W	ALES.	Qu	BENSLAN	D.
1866	25,010	3,838	15.35	16,950	1,939	11.44	4,127	690	16.72
1867	25,608	3,534	13.80	18,317	2,269	12.39	4,476	578	12.91
1868	27,243	3,054	11.21	18,485	1,791	9.69	4,460	552	12.38
1869	26,040	3,284	12.61	19,243	1,858	9.66	4,654	528	11.35
1870	27,151	3,203	11.80	19,648	1,867	<b>9</b> .50	4,905	526	10.72
1871	27,382	3,114	11.37	20,143	1,812	9.00	5,205	516	9.91
1872	27,361	3,334	12.19	20,250	2,116	10.45	5,265	578	10.98
1873	28,100	3,181	11.32	21,444	1,985	9.26	5,720	701	12.26
1874	26,800	3,341	12.47	22,178	2,428	10.95	6,383	776	12.16
1875	26,720	3,811	14.26	22,528	2,695	11.96	6,706	1,025	15.28
1876	26,769	2,980	11.13	23,298	2,629	11.28	6,903	994	14:40
1877	26,010	3,299	12.68	23,851	2,785	11.68	7,169	1,058	14.76
1878	26,581	3,262	12.27	25,328	3,126	12.34	7,397	1.234	16· <b>68</b>
1879	26,839	3,219	11.99	26,933	2,886	10.72	7,870	917	11.65
1880	26,148	3,105	11.86	28,162	3,200	11.36	8,196	865	10.55
1881	27,145	3,119	11.49	28,903	3,341	11.56	8.220	918	11.17
1882	26,747	3,722	<b>13</b> .91	29,702	3,897	13.12	8,518	1.188	13.95
1883	27,541	3,150	11.44	31,281	3,590	11.48	9.890	1.319	13.34
1884	28,850	3,281	11.37	33,946	4,285	12.62	10.679	1.574	14.74
1885	29,975	3,771	12.57	35,043	4,596	13.12	11.672	1.733	14.85
1886	30,824	3,924	12.73	36,284	4,635	12.85	12.582	1.584	12.59
1887	33,043	4,296	13.00	37,236	3,945	10.59	13.513	1.526	11.29
1888	34,503	4,401	12.75	38,525	4,271	11.09	14,247	1,719	12.70
Sums and means	638,390	79,223	12.42	597,678	67,946	11.22	178,757	23,099	12.90

INFANTILE MORTALITY IN AUSTRALASIAN COLONIES.

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:		Deaths a 1 Year o	t under of Age.		Deaths a 1 Year o	t under of Age.		Deaths a 1 Year	t under of Age.
Year.	Births.	Births. Total Number.		Births.	Total Number.	Number to 100 Births.	Births.	Total Number.	Number to 100 Births.
	Soute	I AUSTRA	LIA.	T.	SMANIA.		New	ZEALAR	1D.
1866	6.782	1.178	17.37	2,805	264	9.41	8.466	849	10.03
1867	7.041	1.254	17.81	2,971	267	8.98	8,918	873	9.79
1868	7.247	1.084	14.96	2,990	351	11.73	9.391	899	9.57
1869	6.976	911	13.06	2,859	291	10.18	9.718	957	9.85
1870	7,021	1,031	14.68	3,054	298	9.76	10,277	956	9.30
1871	7,082	961	13.57	3,053	<b>2</b> 60	8.52	10,592	882	8.33
1872	7,105	1,145	16.12	3,010	<b>3</b> 06	10.17	10,795	1,074	9.95
1873	7,107	<b>99</b> 0	13.93	3,048	266	8.73	11,222	1,213	10.81
1874	7,696	1,319	17.13	3,097	321	10.36	12,844	1,394	10.85
1875	$7,\!408$	1,343	18.13	3,105	<b>4</b> 07	13.11	14,438	1,816	12.58
1876	8,224	1,228	14.93	3,149	286	9.08	16,168	1,673	10.35
1877	8,640	1,212	14.03	3,211	365	11.37	16,856	1,527	9.06
1878	9,282	1,466	15.79	3,502	375	10.71	17,770	1,486	8.36
1879	9,902	1,217	$12^{.}29$	3,564	384	10.77	18,070	1,941	10.74
1880	10,262	1,393	13.57	3,739	420	11.23	19,341	1,805	9.33
1881	10,708	1,364	12.74	3,918	405	10.34	18,732	1,731	<b>9</b> ·24
1882	10,844	1,647	15.19	4,043	<b>4</b> 19	10.36	19,009	1,678	8.83
1883	$11,\!173$	1,627	14.56	4,259	<b>5</b> 28	12.40	19,202	1,995	10.39
1884	11,847	1,590	13.42	4,578	457	9.98	19,846	1,573	7.93
1885	12,046	1,366	11.34	4,637	522	11.26	19,693	1,756	8.92
1886	11,177	1,409	12.62	4,627	485	10.48	19,299	1,899	9.84
1887	10,831	1,204	11.12	4,736	478	10.09	19,135	1,795	9.38
1888	10,510	1,008	9.29	4,777	460	9.63	18,902	1,336	7.07
Sums and means	206,911	28,947	14.25	82,732	8,615	10.38	348,684	33,108	9.20

INFANTILE MORTALITY IN AUSTRALASIAN COLONIES—continued.

NOTE.—In Western Australia the proportions for the last 3 years were as follow:—1886, 15.48; 1887, 15.68; 1888, 12.38, or an average of 14.51 for the three years.

640. For many years the returns of South Australia showed a very Apparently high infantile death rate, much higher than that in any of the other It is now, however, stated that the apparently Australian colonies. high rate referred to had no existence in reality, but was due to the ages of young children and infants having been incorrectly classified through a misunderstanding on the part of the registering officers. Latterly this has been rectified, with the result that for several years past the death rate of South Australia has compared favourably with The misunderstanding referred to is thus that of the other colonies. explained by the Registrar-General of births, deaths, and marriages, in South Australia, in his report for 1888\* :---

high infantile death rate in South Australia explained.

"It is believed, however, that some years ago, when a great deal of the classification of deaths under the different diseases and ages was done by the outside district registrars, the amount of infantile mortality in this colony was, in regard to children under one year, considerably overstated. The registrars were not, it is thought,

\* Page 4.

always careful to remember that the age "one year" or "twelve months" appearing in a death registration entry really meant over one year; while the one year columns in the classification sheets were intended only for the enumeration of the deaths of children under one year. Whenever this distinction was forgotten, the deaths of some children who had died really in their second year were almost certain to be entered in the first columns of the classification sheets, as if the children had died in their first year."

Order of colonies in respect to infantile mortality. 350

641. In the following lists the colonies are placed in order according to their respective rates of infantile mortality, the colony with the highest rate being placed first, and the rest in succession. The reduced rate in South Australia is indicated by the low place it occupies in the list for 1888, as compared with that it occupied in the list extending over a series of years :—

Order of Colonies in	Reference	то ]	[NFANTILE	MORTALITY.
Order in 1888.	[	Ord	der over a Serie	s of Years.
1. Victoria.		1.	Western Au	stralia.*
2. Western Australia.		2.	South Austr	alia.
3. Queensland.		3.	Queensland.	
4. New South Wales.		4.	Victoria.	
5. Tasmania.		5.	New South	Wales.
6. South Australia.		6.	Tasmania.	
7. New Zealand.		7.	New Zealand	d.
	•			

Infantile mortality in various countries. 642. Of all the countries respecting which the information is procurable, infantile mortality is highest in Germany, Austria and Italy. In France it is just below the average of the whole of the countries, and in England it is next below that in France. South Australia stands just below England and Belgium, Queensland and Victoria below these and Denmark and Sweden; New South Wales below these and Scotland; and Tasmania and New Zealand below all these and Norway; Ireland stands below all the other countries:—

INFANTILE MORTALITY IN VARIOUS COUNTRIES.

		Death of Ag	s under 1 Year e to 100 Births.		Deat of A	ths under 1 Year ge to 100 Births.
Wurtember	g	•••	31.25	Denmark	• • •	13.75
Bavaria	•••		30.84	Sweden		13.19
Saxony			28.22	Queensland	•••	13.00
Baden	• • •		26.17	Victoria	•-•	19.40
Austria			25.63	Scotland	• • •	12 40
Alsace-Lorr	aine		21.27	New South Wales	<b>••</b> •	14.20
Italv		• • •	20.97	Norman	•••	11.39
Prussia	• • •	• • •	20 37	Thorway		10.49
Holland	•	•••	4070	Lasmania	•••	10.46
	•••	• • •	19.32	New Zealand	• • •	<b>9·70</b>
Switzerland		• • •	18·79	Ireland		9.50
France	* * *	• • •	16.60	•••	• • •	
England	<b>.</b> .		14.92	Mean of the conv	triog	
Reloium			14.00	mean of the cour	luries	
	· · · · · · · · · · · · · · · · · · ·	•••	1404	named	• • •	17.50
South Aust	ralia	• • •	14.23	2		

NOTE.—The information respecting all the countries except the Australasian colonies and Ireland is based upon the average of the 19 years ended with 1833. That respecting the Australasian colonies is based on the average of the 22 years ended with 1887, and that respecting Ireland is for the year 1887. All the figures have been derived from official documents.

\* According to an average of 3 years only.

643. The infantile mortality of large towns is naturally always Infantile above that in country districts. Thus the deaths at under 1 year of Melbourne age in Melbourne and suburbs (Greater Melbourne) during the seventeen years ended with 1889 averaged 17 per 100 births, whilst in the extra-metropolitan districts of Victoria the mortality of infants at the same period of life averaged less than 10 per 100 births. The following table shows the death rate of infants in the metropolis and in the other districts of the colony during each of the seventeen years named :---

INFANTILE MORTALITY IN AND OUTSIDE OF GREATER MELBOURNE, 1873 то 1889.

37			Deaths at u of A	nder 1 Year Age.	*	Deaths at u of A	nder 1 Year Age.
ı ear	1641.		Total Number.	Number to 100 Births.	Birtns.	Total Number.	Number to 100 Births.
		Grea	at <b>er M</b> elbourn	ne.	Victoria, out	side Greater I	Melbourne.
1873		8,007	1,277	15.95	20,093	1,904	9.48
1874		7,946	1,480	18.63	18,854	1,861	9.87
1875		8,227	1,546	18.79	18,493	2,265	12.25
1876		8,202	1,339	16.33	18,567	1,641	8.84
1877		8,295	1,407	16.96	17,715	1,892	10.68
1878		8,636	1,297	15.02	17,903	1,965	10.98
1879		8,829	1,467	<b>16</b> .61	18,010	1,752	9.73
1880		$8,\!645$	1,439	16.65	17,503	1,666	9.52
1881		9,237	1,514	16.39	17,908	1,605	8.96
1882		9,576	1,857	19.39	17,171	1,865	10.86
1883		10,093	1,603	15.89	17,448	1,547	8.87
<b>1884</b>		10,911	1,832	16.79	17,939	1,449	8.08
<b>1885</b>		12,066	2,041	16.92	17,909	1,730	9.60
1886		$12,\!941$	2,309	17.84	17,883	1,615	9.03
1887		$14,\!583$	2,553	17.51	18,460	1,743	9.44
1888		15,645	2,688	17.18	18,858	1,713	9.08
1889	•••	16,934	3,290	19.43	19,425	2,259	11.63
		·····	•	-		- j	

mortalityin  $\mathbf{and}$ country.

Sums and		178,773	30,939	17.19	310,139	$30,\!472$	$9^{\cdot}82$
means y	)	-					
	1		1	l l	· •		

644. In Brisbane and Adelaide the rate of infantile mortality is Infantile mortally higher, and in Hobart and Wellington lower than in Melbourne and in English and Aus-Sydney—the rate in these two being nearly indentical. In the four tralian towns. last-named cities, the rate of infantile mortality compares favourably with that in the majority of the following towns, which are arranged in order according to the extent to which infantile mortality prevails in each :---

INFANTILE MORTALITY IN TOWNS OF ENGLAND AND AUSTRALASIA, 1877 to 1886.

		Deaths	under 1 Ye	ear			Deaths of Age	under 1 Year to 100 Births
_		of Age t	0 100 BILL	ns.	Shaffold		01 1150	16·3
Preston		• • •	21.8		Shemelu	• • •	* • •	16.0
Leicester	•••		20.1	3	Bradford		• • •	10.2
Blackburn	• • •	• • •	18.7	1	Hull		• • •	16.1
Livernool			18.3		Twenty-eight	ht Engli	ish	
Salford		•••	17.8	C annual C	Towns			<b>16</b> 1
Bolton			17.7	1	Newcastle			<b>16</b> ·0
Nottingham	••	•••	17.5	;	Wolverham	pton		15 9
Manchester			17.4	ł	Halifax	<b>* * *</b>	•••	15.9
Brishane (18	883 to	1887)	17.4	1	Sunderland	* * *		15.7
Norwich			17.3	1	Plymouth	• • •	• <b>• •</b>	15.7
Adelaide (18	$S_{4}$ to	1887)	17.2	4	London		· • •	15.2
Leeds	- 	***	17.2		Brighton			14.8
Cardiff			16.9	2	Bristol	•••	• • •	14.5
Huddersfield	1		16.9	*	Hobart (18	83 to 1887	7)	14.2
Oldham			16.9		Derby	* * *	•••	14.3
Melbourne (]	1878 to	<b>1888</b> )	169	1	Wellington	(1883 to 1	887)	14.2
Sydney (187)	S to 18	388)	16.8	1	Portsmouth	1	•••	13.8
Birmingham	 L		16 <b>·4</b>	1	Birkenhead	• • • •	• •	13.7

Deaths of infants in Women's Hospital.

645. In, or in connexion with the Women's Hospital, Melbourne, 711 children were born alive during the year ended with 30th June, 1889, and of these, 30, or about 4 per cent., died whilst under the care of the institution. In the previous year, 3 per cent.; in 1886-7, 4 per cent.; in 1885-6,  $4\frac{2}{3}$  per cent.; in 1884-5 and 1883-4, 9 per cent.; in the year 1882-3, 7 per cent.; in 1881-2 (18 months),  $11\frac{1}{2}$ per cent.; in the year 1880,  $5\frac{1}{2}$  per cent.; in 1879, 8 per cent.; in 1878,  $6\frac{1}{2}$  per cent.; in 1877, 7 per cent.; and in 1876 and 1875,9 per cent., of the infants born in the Women's Hospital, or outside under the supervision of its medical officers and committee, died before the mother had been discharged. It is satisfactory to find that the proportions in the last and three previous years were the lowest recorded in the institution; at the same time it may be pointed out that, in consequence of the bad class of cases which come to maternity hospitals for treatment, the infants who die in such institutions, in proportion to the numbers born, are, all over the world, in excess of a similar proportion outside.

#### \_\_\_\_\_

Deaths of children under 5. 646. In the year 1889, deaths of male children under 5 years of age numbered 4,180, and deaths of female children under that age numbered 3,621—the former being in the proportion of nearly 38 per cent. and the latter of about 43 per cent. to the total number of deaths at all ages. These proportions are considerably higher than in the preceding eight or ten years, but somewhat below the average of the eleven years 1871-81, and are still lower than those which prevailed in the earlier years of that period. This is accounted for by the fact that the proportion of children to the total population has been diminishing from year to year, and is now very much lower than it was

in the early years referred to. The following table shows the number of such deaths at each year of age and their proportion to the deaths at all ages in 1889 and in each of the previous eighteen years :---

DEATHS OF CHILDREN UNDER 5 YEARS OF AGE, 1871 TO 1889.

	Years of	of Age at	Death (l	ast birth	day).	Total Deat	hs under 5 Years.
Years.	0.	1.	2.	3.	4.	Number.	Proportion per 100 Deaths at All ages.
MALES.							
1871	1.710	463	135	79	77	2,464	42.15
1872	1,801	486	155	120	102	2,564	42.23
<b>1873</b>	1,679	456	186	146	97	2,564	39.06
1874	1,839	504	184	159	128	2,814	<b>4</b> 0· <b>43</b>
1875	2,071	917	383	234	217	3,822	44.78
1876	1,637	511	312	261	210	2,931	<b>38</b> .04
1877 <b></b>	1,838	512	216	123	108	2,797	38.08
<b>1878</b>	1,763	465	176	140	87	2,631	36·65
<b>1879</b>	1,817	353	159	117	94	2,540	36.12
1880	1,669	414	156	103	74	2,416	36.55
1881	1,696	357	141		72	2,368	33.71
Means	1,775	494	200	144	115	2,728	39.40
1882	2 049	400	134	87	92	2,762	34.96
1883	1.702	358	123	114	95	2.392	32.28
1884	1.853	457	162	114	82	2.668	34.76
1885	2,046	402	162	106	78	2,794	33.66
1886	2,127	467	130	75	69	2,868	33.44
1887	2,354	539	149	91	72	3,205	34.79
1888	2,390	475	164	139	100	3,268	34.82
1889	2,989	668	237	157	129	4,180	37.78
FEMALES.					<b>k</b> 1		
1871	1 404	112	136	01.	68	2115	51.02
1872	1 533	473	155	106	9 <u>4</u>	2,110 2,261	52.20
1873	1,502	4.27	160	132	119	2,340	47·41
1874	1,502	472	171	135	99	2,379	45.58
1875	1.740	864	408	$\overline{256}$	169	3.437	51.22
1876	1.343	469	<b>275</b>	217	177	2.481	42.46
1877	1,461	484	171	148	102	2,366	43.57
1878	1,499	481	204	108	95	2,387	$43^{\cdot}22$
1879	1,402	353	156	100	89	2,100	41.28
1880	1,436	386	143	89	51	2.105	<b>4</b> 1·75
1881	1,423	331	124	95	65	2,038	38.61
Means	1,477	468	191	135	103	2,374	45 <sup>.</sup> 93
<b>18</b> 82	1,673	358	121	94	86	2,332	4 <b>0</b> .67
1883	1,448	310	125	86	68	2,037	36.40
1884	1,428	423	182	128	87	2,248	<b>3</b> 8·56
1885	1,725	370	125	92	75	2,387	<b>3</b> 9· <b>3</b> 6
1886	<b>1,</b> 797	460	155	76	62	2,550	<b>4</b> 0·00
1887	1,942	435	146	102	76	2,701	39·7 <b>7</b>
1888	2.011	400	156	94	85	2,746	39.79
1889	2,560	620	197	127	117	3,621	43.48

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More boys die than girls.

647. During the eleven years ended with 1881, deaths of male children under 5 numbered 30,011, and deaths of female children under 5 numbered 26,109, and thus the former exceeded the latter by 3,902. or by 15 per cent. The deaths of male children in all the years bore a smaller proportion to the total deaths of males than the deaths of female children did to the total deaths of females, a circumstance mainly due to the small proportion of adults in the female as compared with that in the male population. In the eight years ended with 1889, the mortality of boys under 5 amounted to 35 per cent., and that of girls under 5 amounted to 40 per cent., of the whole mortality of their respective sexes. In none of the years to which the table relates did the former exceed 45 per cent., or the latter exceed 53 per cent., of that The epidemic periods, 1875 and 1889, are easily recognised mortality. by the increased mortality which occurred thereat.

Number of children their deaths.

648. The average number of male and female children at each year under 5 and of age under 5 living, during the period of eleven years ended with 1881, are compared in the next table with the average number of deaths of children of the same sexes at those ages which occurred annually during that period :---

#### NUMBER AND DEATHS OF CHILDREN UNDER 5 YEARS OF AGE, 1871 то 1881.

		Mal	es.		Females.						
Age last Birthday	Mean Number of Children living at each age, 1871 & 1881.	Mean Annual Number of Deaths at each age, 1871 to 1881.	Per- centage of Deaths at each age.	Number of Deaths per 1,000 Children living.	Mean Number of Children living at each age, 1871 & 1881.	Mean Annual Number of Deaths at each age, 1871 to 1881.	Per- centage of Deaths at each age.	Number of Deaths per 1,000 Children living.			
0 1 2 3 4 Total	12,152 11,228 11,943 11,807 11,261 58,391	1,775 494 200 144 115 2,728	$ \begin{array}{r} 65.07\\ 18.11\\ 7.33\\ 5.28\\ 4.21\\ 100.00\\ \end{array} $	$     \begin{array}{r}       146.07 \\       43.99 \\       16.75 \\       12.20 \\       10.21 \\       \hline       46.72 \\     \end{array} $	$ \begin{array}{r} 11,809\\ 11,004\\ 11,635\\ 11,469\\ 11,138\\ \hline 57,055\\ \end{array} $	$ \begin{array}{r}     1,477 \\     468 \\     191 \\     135 \\     103 \\     2,374 \\ \end{array} $	$ \begin{array}{r} 62.22\\ 19.71\\ 8.04\\ 5.69\\ 4.34\\ \hline 100.00\\ \end{array} $	125.07* 42.53 16.42 11.77 9.25 41.61			

Proportion of children dying annually.

649. During the period to which the table refers, the mean number of children of both sexes under 5 living was 115,446, and the mean

\* These results, being based upon infants living at any one time instead of annual births, are naturally in excess of those in the total lines of the last two columns of table following paragraph 632 ante.

number of deaths of such children was 5,102, whence it results that 44 in every 1,000 children under 5, or about 1 in 23, died annually. In every 1,000 boys the proportion who died annually was 47, or 1 in 21; in every 1,000 girls it was 42, or 1 in 24.

650. Of every 1,000 boys under 1 year of age, 146, and of every Proportion of infants 1,000 girls under 1 year of age, 125, died annually. These are larger dying annually. proportions than those quoted in the table showing the comparison of deaths of children under 1 with the births, the proportions in which were 129 deaths of male infants and 112 deaths of female infants to every 1,000 births of infants of those sexes respectively.\*

651. In proportion to their respective numbers in the population, More boys died than more boys than girls died at every year of age, the difference per 1,000 girls. living being as much as 21 at under 1,  $\dagger$  but only about  $1\frac{1}{2}$  at from 1 to 2, and less than 1 at subsequent ages.

652. According to the figures, deaths of boys under 1 year of age Boys and girls dying furnish a larger proportion to the total deaths of boys under 5 than under 1. 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.

653. Of the whole number of children who died before they Proportion of deaths of attained the age of 5, nearly two-thirds, viz., 65 per cent. of the boys children at each age. and 62 per cent. of the girls, were under 1 year of age; less than a fifth of the boys and about a fifth of the girls were between 1 and 2; about a fourteenth of the boys and about a twelfth of the girls were between 2 and 3; 1 in 19 of the boys and 1 in 18 of the girls were between 3 and 4; 1 in 24 of the boys and 1 in 23 of the girls were between 4 and 5.

654. It results from actuarial calculations, based upon the figures Probable mortality in this and a previous table, ‡ that of every 20,000 boys and girls in of children under 5. equal numbers born in Victoria, 1,291 boys and 1,123 girls may be expected to die before they complete a year of life, 374 more boys and 369 more girls before they complete 2 years, 138 more boys and 139 more girls before they complete 3 years, 99 more boys and 98 more girls before they complete 4 years, and 83 more boys and 76 more

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- \* See table following paragraph 632 ante.
- + See also paragraph 636 ante. t See paragraph 638, also table following paragraph 635 ante, from which probable deaths at under 1 year of age have been deduced. Probability of death at other ages under 5 has been calculated from the numbers in the last table.

girls before they complete 5 years. At the end of that period it is probable that 1,985 of the boys and 1,805 of the girls will have died; and 8,015 of the boys and 8,195 of the girls will be still living.

Deaths of octogenarians. 655. The persons who died at the age of 80 or upwards numbered 613 in 1889, as against 582 in 1888, and 531 in 1887. Those in 1889 consisted of 337 males and 276 females. Thirty-five of the males and 41 of the females had passed the age of 90, and 4 of the males and 4 of the females had passed the age of 100. The following are the exact registered ages of such persons in the last nineteen years:-

	Years of age.		Year	: 1889.	Seven 188	Years, 2–88.	Elever 187	1 <b>Years,</b> 1–81.
			Males.	Females.	Males.	Females.	Males.	Females.
80		•••	59	53	334	210	253	144
81	•••	• • •	50	31	169	130	135	98
82	•••		<b>3</b> 6	28	<b>262</b>	139	119	97
83	• • •	•••	21	19	191	113	101	75
84	•••	•••	35	21	219	157	115	79
85		•••	<b>22</b>	22	170	126	91	70
86	••••	•••	17	17	123	100	63	61
87	°	•••	20	15	99	85	65	46
88			<b>22</b>	15	72	72	48	38
89		•••	<b>20</b>	14	42	48	35	26
<b>9</b> 0	•••	•••	7	8	47	45	26	37
91	• • •	• • •	• 1	9	<b>32</b>	21	10	16
<b>92</b>	• • •		4	7	21	20	18	18
93	• • •		7	3	16	25	9	8
94	•••	• • •	4	2	15	14	14	8
95	•••		4	4	13	12	16	9
96	• • •	• • •	1	1	8	3	11	4
97	• • *	• • •	• • •	1	7	6	3	4
98	•••	•••	3	1	5	6	5	2
99		• • •	• • •		6	7	8	
100	• • •		1	2	9	4	2	5
101	•••	•••	1	1	$\frac{1}{2}$	3	•1	2
102	•••		1		4	$\frac{1}{2}$	` <del>3</del>	
103	•••	••••	• • •	•••	3	$\frac{-}{2}$	1	2
104	•••	•••	• • •	1	2		2	1
105	• • •	• • •	1			1	$\overline{2}$	
106	•••	•••	•••		3	Ī		1
107	•••	•••	* • •	•••		1		
109	•••	•••	•••	•••	1	-		
110	· • • •	•••	, • • •				•••	1
111	• • •		·. • • •		1			-
114	•••		••• •				•••	1
Unsp	ecified	••••	•••	•••	•••		 135*	98*
7	Cotal	•••	337	276	1,876	1,354	1,291	951

DEATHS OF OCTOGENARIANS, 1871 TO 1889.

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\* These figures are those relating to the years 1871 and 1872, in which the exact ages of octogenarians were not noted.

656. In the 8 years ended with 1889, 2,213 males and 1,630 females Deaths of died in Victoria at the age of 80 or upwards. The deaths of males rians, 1882 and females at all ages during the same period numbered 69,522 and 51,623 respectively, therefore 1 male in every 31, and 1 female in every 32, lived to be upwards of 80 years of age. In the same period, 230 of the males, or 1 in 302, and 215 of the females, or 1 in 240, lived to be 90 years of age or upwards; and 29 of the males, or 1 in 2,397, and 19 of the females, or 1 in 2,717, lived to be upwards of 100 years of Owing to the rapidly increasing proportion of old people in the age. 5.7 population, these proportions are much higher than those prevailing in the preceding period of 9 years ended with 1881, when only 1 male in every 56 males and 1 female in every 58 females who died was upwards of 88 years of age; only one male in 496, and 1 female in 413, was upwards of 90 years; and only 1 male in 5,912, and only 1 female in 3,776, was upwards or 100 years.

657. The average age at death in 1889 was 28.5 years, or Average age at death. 28 years and 6 months. For males the average was 30.65 years, or about 30 years and 8 months, and for females was 25.66 years, or about 25 years and 8 months; the females being thus on the average 5 years younger than the males. Until 1882, the average age at which both males and females died in Victoria had a tendency to advance from year to year, but since then the average has remained tolerably steady -the year 1889, however, being an exception, owing to the high mortality of children in that year having lowered the average—as will be seen by the following figures :---

Males.

Females.

AVERAGE AGE AT DEATH IN VICTORIA.

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octogenato 1889.

					Years.		Years.
23 ye	ars—1852 t	o 1875	• • •	• • •	21.70	• ·• •	15.01
Year	1875	• • •	• • •		24.28	• • •	18.23
"	1876		•••	• • •	26.81	• • •	21.84
"	1877		• • •	• • •	28.60		23.06
"	1878	• • •		• • •	29.54	•••	23.24
,"	1879		•••	• • •	30.65	•••	24.71
,,,	1880	• • •	• • •	• • •	30.72	•••	25.35
"	1881	• • •	• • •	•••	<b>32</b> .63	•••	25.98
<b>99</b>	1882		• • •		32.04	• • •	26.58
	1883	• • •	• • •		33.13	• • •	27.55
	1884	• • •		• • •	32.24	• • •	27.50

1.

					Males.		Females.
					Years.		Years.
Year	1885		•••		33.48		27.52
12	1886	•••	•••		<b>33·32</b>		27.40
12	1887	•••	•••		32.80	• • •	27.35
33	<b>18</b> 88	* * *	•••	• • •	<b>32</b> .68	•••	27.59
, <b>.</b>	1889	• • •			30.65	• • •	25.66

AVERAGE AGE AT DEATH IN VICTORIA—continued.

#### Expectation of life in Victoria

and England.

658. It should be explained that the average age of death, as given above, would not give a correct idea of the average duration of life, even if the ages of the population were in a normal condition. In an increasing population the former must be always considerably below the latter, in consequence of the undue proportion of children, which tends to lower the average age. A knowledge of the average duration of life can only be accurately obtained from a life table based upon actuarial calculations of a complex character. In England and Wales, according to the most recent life table, the average duration of lifetechnically called "expectation of life," or "mean lifetime"—is 41.35 years for males, and 44.62 years for females. In Victoria, according to a life table constructed some time since by Mr. A. F. Burridge, F.I.A. of London, based on the mortality experienced in the 10 years, 1871-80, the average duration of life is 46.37 for males, but a table for females was not given. It would thus appear that a male Victorian may expect, on the average, to enjoy 5 years more of life than an Englishman.

New classification Victoria.

659. The system of classifying the causes of death in Victoria was adopted in changed in 1886 in accordance with a system which had been adopted in England a few years previously. This new mode of classification

was based upon one devised by a committee composed of members of the Royal College of Physicians, London, and was published by them, first in 1869, and afterwards, in a revised form, in 1885. The system of classification, now adopted, has superseded that of the late Dr. Farr, which, until the new system was introduced, had been the mode used for classifying the causes of death, both in England and Wales and in the Australasian colonies. A full account of the difference between the two systems was given in the Victorian Year-Book, 1886-7.\*

\* Paragraph 635 et seq.

660. A Nosological Index was compiled by the present writer more Nosological Index. than a quarter of a century since, under the sanction of the then Registrar-General, Mr. W. H. Archer, F.I.A., to be used in connexion with Dr. Farr's classification, in order to facilitate the bringing of all the circumstances resulting in death under classified heads, also for the guidance of deputy registrars in receiving, and of medical men in supplying, information respecting the causes of death, and of officers of charitable and other public institutions in preparing statistical tables of the deaths and sickness occurring therein. The adoption of a new system of classification has made it necessary that the Nosological Index should be completely altered to suit the change. This has been done according to the best knowledge possessed by the Department of the Government Statist, Melbourne, the place to be assigned to each disease or cause of death having been carefully considered by experienced officers and compared with the revised nomenclature proposed by the Royal College of Physicians. At the same time the opportunity has been taken greatly to increase the number of entries in the Index.\*

661. From the date of its publication until the adoption of the new victorian classification in 1886 the former Index had been in general use in the registration departments of all the Australasian colonies, some of which received such a supply of copies as they required from the Victorian Government, and others reprinted the work. Most of the colonies have now adopted the new system. To all the colonies adopting this system the revised Index will be found as indispensable as the former one proved itself to be during a period of twenty-five years in connexion with the system which has been abandoned.

Index in use throughout Australasia.

662. The following table shows the causes of death in classified Causes of death arrangement; the total number and the number of Chinese and classified. Aborigines who died from each cause during 1889, also the total number who died from each cause during the five years ended with 1885 and during the ten years ended with 1880 :---

\* A copy of the new Nosological Index was published in the Victorian Year-Book, 1886-7, page 853 et seq.

CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT. (10 Years: 1871 to 1880; 5 Years: 1881 to 1885; and Year 1889.)

				Number	per of Deaths.			
	ass.	Classes of Dooth *		Fivo	Y	ear 1889.		
Class.	Sub-Cl	Causes of Death."	Years: 1871-1880.	Years 1881-1885.	Total. †	Chinese	Abori- gines.	
		All causes	122,570	66,811	19,392	250	36	
Ι.		CLASSES. SPECIFIC FEBRILE OR ZYMOTIC DISEASES : — Zymotici ( $\zeta \dot{\nu} \mu \eta$ , leaven). Diseases of the whole body, dependent	28,430	10,447	3,272	10	4	
II.	• • • •	on morbid poisons. PARASITIC DISEASES :— Parasitici $(\pi a \rho \acute{a} \sigma \iota \tau \sigma s, \text{ parasite}).$ Diseases dependent on animal or vege-	734	391	81		1	
III.		table parasites. DIETIC DISEASES : Dietici ( $\delta i \alpha \iota \tau \alpha$ , way of life; diet).	1,979	1,124	283	4	• • •	
IV.		Diseases produced by errors of diet. CONSTITUTIONAL DISEASES :Ca- chectici ( $\kappa \alpha \chi \epsilon \xi i \alpha$ , bad habit of body). This class, according to the nomencla-	17,205	10,617	2,853	57	9	
		ture of the Royal College of Physicians, is designated "Diseases of the whole body—not classed." The term used by Dr. Farr in the old classification, however, is retained; Dr. Farr's de- finition being as follows :—"Sporadic diseases; affecting several organs in which new morbid products are often deposited; sometimes hereditary."						
V.		DEVELOPMENTAL DISEASES : Me- tamorphici ( $\mu\epsilon\tau a\mu \acute{o}\rho\phi\omega\sigma\iota s$ , change of form). Special diseases, the incidental result of the formative and nutritive processes.	6,042	4,431	1,352	20	2	
VI.		LOCAL DISEASES : — Monorganici ( $\mu \acute{o} \nu os$ , alone, without others; $\check{o} \rho \gamma a \nu o \nu$ , organ). Sporadic diseases, in which the functions of particular organs or systems are disturbed or obliterated, with or without inflammation.	51,209	30,575	8,726	117	14	
VII.		VIOLENT DISEASES OR DEATHS : Thanatici ( $\theta \acute{a} \nu a \tau o \iota$ , violent deaths). Diseases which are the evident and direct results of physical or chemical forces, acting either by the will of the sufferer, of other persons, or accidentally	8,607	4,243	1,186	24	5	
VIII.		ILL-DEFINED AND NOT SPECIFIED CAUSES : This group includes several diseases which were formerly classed under specific heads, such as dropsy, de- bility, tumor, abscess, etc.	8,364	4,983	1,639	, <b>18</b>	1	

\* The definitions given in this column are chiefly those of the late Dr. Farr.
† The Chinese and Aborigines are included in this column.

CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT—continued. (10 Years: 1871 to 1880; 5 Years: 1881 to 1885; and Year 1889.)

		······································	Number of Deaths.				
	ass.	Causes of Death		T.	7	7ear 1889	•
, S	ତ୍		Ten Vears	Five Vears		1	
Clas	Sub		1871-1880.	1881-1885.	Total.*	Chinese.	Abori- gines.
_		SUB-CLASSES.	1 2 4 2 0				
1.	1	Miasmatic diseases	15,459	4,588	1,756	4	•••
	2	Diarrhœal diseases	11,036	4,886	1,330	5	3
	3	Malarial diseases	213	39	5	•••	• • •
	4	Zoogenous diseases			1	•••	
	Ð	venereal diseases	377	218	36	••••	
**	6	Septic diseases	1,344	716	144		
	•••	Parasitic diseases	1 070	391	81	•••	
	•••		1,979	1,124	283		
1V.	• • •	Constitutional diseases	17,205	10,617	2,853	57	9
¥.	•••	Developmental diseases	6,042	4,431	1,352	20	2
VI.	L	Diseases of the nervous system	13,532	7,414	1,831	13	
		Diseases of the organs of special sense		1 4 7 9			
	J	Diseases of the circulatory system	0,804	4,453	1,382	39	
	4	Diseases of the diserting system	11,034	9,966	2,450	39 01	
	0 C	Diseases of the digestive system	11,240	0,135	2,213	21	3
	0	and ductless glands	44		9	•••	
	7	Discasses of the prinery system	1 875	1.511	548	4	
	8	Diseases of the organs of generation	205	190	52	3	
	a	Diseases of narturition	1 267	624	101	•••	•••
	10	Diseases of the organs of locomotion	201		59	1	•••
	11	Diseases of the integumentary system	328	192	65	_ <b>_</b>	•••
VIT.		Accident or negligence	7 447	3 662	1 000	19	
, 77.	2	Homicide	190	110	40	10	
	3	Suicide	951	463	143	5	
•	4	Execution	19	8	3		•••
VIII.		Ill-defined causes, or unspecified	8.364	4.983	1.639	18	1
•							
		DISEASES, ETC.					
I.	1	Small-pox	2	6			
		Chicken-pox	13	6	•••		•••
		Measles	2,080	386	19		••••
		Epidemic rose rash	•••				1
		Scarlet fever	4,101	282	41	•••	
		Influenza	276	162	21	•••	
·		Whooping-cough	1,974	701	234		•••
		Mumps	•••				
		Diphtheria †	3,040	681	530	•••	•••
		Cerebro-spinal fever	•••		•••		. • •
		Simple continued fever	3.973	2.364	910	4.	•••
	·	Typhoid (or enteric) fever	-,010				•••
		Others					••••
	2	Cholera (simple)					
		Diarrhœa	7,667	3,994	1,042		3
		Dysentery	2,846	629		3	•••
	3	Kemittent fever	169	25		•••	
		Beri Beri	• • •			•••	••••
	1 1		1	<u> </u>	1	1	J

\* The Chinese and Aborigines are included in this column.

† See also Croup (VI., 4).

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CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT-continued. (10 Years: 1871 to 1880; 5 Years: 1881 to 1885; and Year 1889.)

				Numbe	er of Dea	ths.	
•	Jlass.	Causes of Death.	Ten	Five	Y	'ear 1889.	
Class	Sub-(		Years: 1871-1880.	Years : 1881-1885.	Total.*	Chinese.	Abori- gines.
		DISEASES, ETC.—continued.			-		
I.	3	Ague	44	14	• • •	••••	
	4	Glanders			•••		•••
		Cow-pox and other effects of vac-	?	, <b>?</b>	1		• • •
		cination	000	170	20		1
	5	Syphilis	286	1/8		•••	T
		Gonorrhæa, stricture of the urethra	91	40 2	2	•••	•••
	6	Phagadæna	610	260	31	1	* * *
		Erysipelas	+264	4142	49		•••
		Pyæmia, septicæmia	461		62		* • •
TT		Thrush	327	119	19		
11.		Others from vegetable narasites	2	2			•••
		Hydatids	379	268	61		1
		Others from animal parasites	28	4	1		• • •
III.		Starvation, want of breast-milk	1,322	726	159	4	• • •
		Scurvy	§	§	2		• • •
		Intemperance	646	394	116		• • •
		Other dietic diseases	11	4	6		•••
IV.		Rheumatic fever, rheumatism of				,	
		heart	817	379	90	3	1
		Rheumatism )				[ ]	
		Gout		80	22		
		Rickets				····	
		Cancer, malignant disease	2,957	2,065	629	19	• • • •
		Tabes mesenterica	1 204	484	100	1	•••
		Tubercular meningitis (acute nydro-	1,394	719	201	↓ . <b>⊥</b>	• • •
		Phthisis	10.155	6 198	1 571	33	8
		Other forms of tuberculosis sorofula	10,100	301	91		
		etc.	100	001		-	
		Purpura, hæmorrhagic diathesis	¶100	<b>¶44</b>	17		•••
		Anæmia, chlorosis, leucocythæmia	**	**	42		
		Diabetes mellitus ++	146	114	32		
		Other constitutional diseases	?	?	4	3	•••
V.		Premature birth	2,715	1,689	475		
,		Atelectasis	11	**	46		
		Cyanosis	203	115	33		
		Spina bifida	108	51	14		
		Imperforate anus )					
		Cleft palate, harelip }	289	122	50	•••	
• •		Old and Old An					6
			2,727	2,454	734	20	
	1	,	}	1	į	t	1

\* The Chinese and Aborigines are included in this column.

A few cases of mumps and other miasmatic diseases probably included under this head.
‡ See also accidents of childbirth (Class VI., Sub-class 9, post).
§ Included with purpura (IV.). || Including lupus. ¶ Including scurvy.
\*\* Distributed over other heads, viz., anæmia with dropsy (VIII.), chlorosis with disorders of menstruation (VI., 8), and leucocythæmia with other diseases of the circulatory system (VI., 3).

## Includes diabetes insipidus, and diabetes undefined.
## Included with debility (VIII.).

CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT-continued.

(10 Years: 1871 to 1880; 5 Years: 1881 to 1885; and Year 1889.)

			Number of Deaths.					
	Jass.	Causes of Death.	Ten	Five	Y	Cear 1889	•	
Class.	Sub-C		Years : 1871-1880.	Years : 1881-1885.	Total.*	Chinese.	Abori- gines.	
		DISEASES, ETC.—continued.						
VI.	1	Inflammation of brain or its mem- branes	2,383	1,249	183		•••	
		Apoplexy	2.750	1.674	376	5		
		Softening of brain	+	+	61	2	• • •	
		Hemiplegia, brain paralysis	•					
		Paralysis, undefined (	1 596	068	362	3		
		Insanity (general paralysis of in-	1,030	900	502		•••	
		Chorea	20	9	1			
		Epilepsy	588	365	110	1		
		Convulsions	3,390	1,454	456	•••		
		Laryngismus stridulus	?	?	<b>2</b>			
		Idiopathic tetanus,						
		Paraplegia, diseases of spinal cord §	2,805	1,695	<b>280</b>	2	1	
		Other diseases of nervous system )						
	2	Otitis, otorrhœa						
		Epistaxis and diseases of nose	†	†	16	•••	•••	
		Ophthalmia and diseases of eye )					•	
	3	Endocarditis, valvular disease	377	229	<b>238</b>	4	•••	
		Hyportrophy of beaut						
		Angina noctoris	+	+	227	1		
		Syncone	4	+	24	-		
		A neurism	785	322	64	4		
		Senile gangrene	8	8	17			
		Embolism. thrombosis	3	J				
		Phlebitis				 [		
		Varicose veins	5,642	3,902	836	30		
		Other diseases of the circulatory					<b>,</b>	
		system						
	4	Laryngitis	359	253	58	•••		
		Croup	1,897	795	279	•••		
		Other diseases of larynx and trachea	2	?	5			
		Asthma, emphysema	392	261	80		····	
		Bronchitis	4,588	3,039	755	90		
		Concertion of the lunger	0,077	5,709	070 106	20 2	0	
		Dongestion of the lungs	1,012	1,049	170 172		6	
		A lourisy	502	260	<b>53</b>	<b>9</b>		
	5	Stomatitis	<b>1</b> 30	⊈00 ¶ 2	12			
		Dentition			196	,		
		Sore throat, quinsy	153	42	17			
		~~~~ ····	100					

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\* The Chinese and Aborigines are included in this column.
† Included with other diseases of nervous system.
‡ Included with other diseases of the circulatory system.
§ Included with mortification (VIII.)
# Including diphtheritic croup.
¶ The great majority of cases of stomatitis for these periods are included with diseases of omach stomach.

CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT-continued. (10 Years: 1871 to 1880; 5 years: 1881 to 1885; and Year 1889.)

				Numbe	er of Dea	ths.	
	Class.	Causes of Death.	Ten	Five	Y	ear 1889	
Class	Sub-		Years: 1871-1880.	Years: 1881-1885.	Total.*	Chinese.	Aborigines.
		DISEASES, ETC.—continued.			1		-
VI	5	Dyspepsia )					2
V .L.		Hæmatemesis	1 071	1 904	092	т	9
		Melæna	1,071	1,201	040	L	4
		Diseases of stomach					
		Enteritis	2,134	1,137	366	4	••••
		Ulceration of intestine	160	121	14		
		Ileus, obstruction of intestine	424	244	95	3	• • •
		Stricture or strangulation of intestine	44	35	10		
		Intussusception of intestine	93	60	23		
		Hernia	191	139	41	1	•••
		Fistula	17	8	•••		•••
		Peritonitis	771	442	130	4	•••
		Ascites	184	58	14	•••	•••
		Gallstones )					
		Cirrhosis of liver }	3,623	2,084	435	8	
		Other diseases of liver )		_			
		Other diseases of the digestive system	3	5	36		
	6	Diseases of lymphatic system		?	5	• • •	••••
		Disease of spleen	44	19	3	•••	•••
		Bronchocele		4			
		Addison's disease	<b>†</b>	†			•••
	7	Nephritis	218	182	107		•••
		Bright's disease	749		248		•••
		Uræmia	T	7	40		
		Suppression of urine	29	32 50	8	•••	•••
		Calculus	48	50		<b>L</b>	
		Hæmaturia			1	···	
		Diseases of bladder and prostate	200	140	89		•••
	0	Other diseases of the urinary system	020	000	44		•••
	n n	Discoggo of the storing and marine	170	00 50	25 19	•••	
		Disordars of monstruction	52	00 97	10	•••	
		Polyic abscass	+	- 41	4 7	•••	
	ĺ	Parineal abscess	+++++++++++++++++++++++++++++++++++++++	+ +	9	•••	
		Diseases of the testes, penis, scro-	29	$+$ 2		•••	
	0	tum, etc.					
	9	Abortion, miscarriage					
		Properal mania					
		Placenta provia flooding	1,267	624	101		
	1	Phlegmasia dolong					
		Other accidents of childhinth					
	10	Caries, necrosis	2	2	25	T	
		Arthritis ostitis periostitis	297	у 59	10	<b>–</b>	
		Other diseases of the organs of	203	79	14		
		locomotion					

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\* The Chinese and Aborigines are included in this column.
† Included with other diseases of urinary system:
‡ Included with abscess (VIII.).
§ Included with "Other diseases," in same sub-class.

CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT—continued.

(10 Years: 1871 to 1880; 5 Years: 1881 to 1885; and Year 1889.)

			Number of Deaths.					
Ċ.	-Class	Causes of Death.	Ten	Five	Y	ear 1889.	· · · · · · · · · · · · · · · · · · ·	
Clas	du8		1871-1880.	1881-1885.	Total.*	Chinese.	Abori- gines.	
		DISEASES, ETC.—continued.			•			
VI.	11	Carbuncle	37	27	3			
		Phlegmon, cellulitis	20	4	15			
		Lupus	<b>•</b>	+	1			
		Ulcer, bedsore	86	59	11			
		Eczema	?	?	<b>20</b>			
		Pemphigus			6			
		Other diseases of the integumentary	185	102	9			
	-	system		-				
VII.	1	Fractures, contusions	3,152	1,632	406	6	• • •	
,		Wounds	262	124	30			
		Burn, scald	885	434	102	2	3	
		Sunstroke	218	70	19			
		Lightning	25	12	3		· · · ·	
		Poison	178	93	<b>23</b>	1		
		Bite of snake or insect	37	18	<b>2</b>	•••		
		Drowning	1.937	933	270	6	1	
		Suffocation	625	283	84	2		
		Otherwise	128	63	61	2	1	
	2	Murder and manslaughter	190	110	40			
	3	Gunshot wounds	074	69	31			
	_	Cut. stab	254	1 74	19			
		Poison	188	71	29			
		Drowning	217	95	29	1		
		Hanging	256	138	<b>26</b>	4		
		Suicide by other means	36	16	9			
	4	Judicial hanging	19	8	- 3			
VIII.		Dropsy	±613	<u>† 322</u>	23			
		Debility, atrophy, inanition	\$6.987	\$4.279	1.491	14	1	
·		Mortification	131	55	<b>8</b>	2		
		Tumour	269	204	13			
		Abscess	38	3	20		•••	
:		Hæmorrhage			11			
		Sudden (cause unascertained)			6			
		Causes not specified	326	120	67	2		
	1					1		

663. The next table shows the same causes of death, arranged in Causes of the order of their fatality, during 1889, with the numbers who died death in order of from each cause in that year, during the five years ended with 1885, and during the ten years ended with 1880, also the order of fatality of the different causes during that period :—

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\* The Chinese and Aborigines are included in this column.
† Included with cancer (IV.).
‡ Including anæmia (IV.).
§ Including atelectasis (V.).

### CAUSES OF DEATH IN ORDER OF FATALITY.

(10 Years: 1871-80; 5 Years: 1881-85; and Year 1889.)

Orde	r of Fata	lity.		Num	ber of De	aths.
Ten Years : 1871-80.	Five Years: 1881-85.	Year 1889.	Causes of Death.	Ten Years : 1871-80.	Five Years: 1881-85.	Year 1889.
1 4	1 3	$1 \\ 2$	Phthisis Heart disease, etc., exclusive of aneur- ism (64) and pericarditis, endocar- ditis and valgular disease (238)	$10,155 \\ 642$	6,428 3,902	1,571 1,089
2	2	3	Diarrhœa	7,667	3,994	1,042
3	5	4	Accidents	7,447	3,662	1,000
8	8	5	Typhoid (or enteric) and simple con- tinued fever	3,973	2,364	910
5	4	6	Pneumonia	5,077	3,769	898
22	15	7	Dyspepsia, and other diseases of the stomach	1,971	1,294	823
6	6	8	Bronchitis	4,588	3,039	753
16	7	9	Old age	2,727	2,454	734
12	10	10	Cancer, malignant disease	2,957	2,065	629
11	26	11	Diphtheria	3,040	681	530
17	12	12	Premature birth	2,715	1,689	475
10	14	13	Convulsions	3,390	1,454	456
9	9	14	Liver diseases not classed	3,623	2,084	435
15	13	15	Apoplexy	2,750	1,674	376
19	17	16	Enteritis	2,134	1,137	366
26	19	17	Hemiplegia, paralysis, insanity	1,596	968	362
<b>23</b>	21	18	Croup (including diphtheritic croup)	1,897	795	279
14	11	19	Diseases of spinal cord and other diseases of nervous system	2,805	1,695	271
36	22	20	Bright's disease	749	777	248
48	48	21	Endocarditis, pericarditis, valvular disease	377	229	<b>23</b> 8
.21	25	22	Whooping cough	1,974	701	234
28	24	23	Tubercular meningitis (acute hydroce- phalus)	1,394	719	201
<b>24</b>	18	24	Congestion of the lungs	1,812	1,049	196
27	30	25	Dentition	1,469	464	196
18	16	26	Inflammation of brain or its mem- branes	2,383	1,249	183
<b>25</b>	20	27	Childbirth and puerperal fever	1,728	938	163
<b>29</b>	23	28	Starvation, want of breast milk	1,322	726	159
37	29	29	Tabes mesenterica	723	484	150
44	43	30	Cholera (simple)	523	263	147
30	31	2215	Suicide	951	463	143
41	40	5015	Malformation	600	288	143
13	27	32	Dysentery	2,846	629	141
35	32	33	Peritonitis	771	442	130
32	28	34	Pleurisy	811	540	118
38	33	35	Intemperance	646	394	116
<b>43</b>	36	36	Epilepsy	588	365	110
<b>54</b>	49	37	Nephritis	218	182	107
45	47	38	Ileus, obstruction of intestine	424	244	95
<b>34</b>	39	39	Other forms of tuberculosis. scrofula.	780	301	91
			etc.			

### CAUSES OF DEATH IN ORDER OF FATALITY-continued.

#### (10 Years: 1871-80; 5 Years: 1881-85; and Year 1889.)

Orde	r of Fata	lity.		Number of Deaths		ths.
Ten Years : 1871-80.	Five Years : 1881-85.	Year 1889.	Causes of Death.	Ten Years : 1871-80.	Five Years : 1881-85.	Year 1889.
31	35	40	Rheumatic fever and rheumatism	817	379	90
55	53	41	Diseases of bladder and prostate	203	140	89
46	44	$\overline{42}$	Asthma, emphysema	392	261	80
33	38	43	Aneurism	785	322	64
42	45	44	Diseases of the respiratory system not classed	598	260	63
		2 15 5	Softening of the brain	*	*	61
47	42	540	Hydatids	379	268	61
49	46	46	Laryngitis	359	253	58
53	52	47	Pyæmia, septicæmia	264	142	<b>49</b>
39	37	48	Diseases of the urinary system not classed	628	330	44
		49	Anæmia, chlorosis, leucocythæmia	2	?	42
56	54	350	Hernia	191	139	41
7	41	1500	Scarlet fever	4,101	-282	41
57	58	351	Murder and manslaughter	190	110	40
			Uræmia			40
.83	78	52	Diseases of the digestive system not classed	3	··· 5	36
		53	Caries, necrosis	?	?	- 35
64	57	54	Diabetes mellitus	146	114	32
40	45	55	Erysipelas	619	260	31
51	50	56	Syphilis	286	178	30
73		57 {	Ovarian disease	44	33	23
67	62	500	Intussusception of intestine	93	60	- 23
65	60	58	Gout	133	80	
52	51	59	Influenza	276	162	
		60			1 7	20
<b>5</b> 0	50	<b>61</b>		327	119	19
20			Measles	2,080	386	19
03 60		$\left\{ 62 \right\}$	Borre throat, quinsy	100		17
00	00		Digongog of the ore and onr	100	<u>4</u> 44	
 59	50	00	Diseases of the integrand ear	105		10
~UQ	09	$\left  \right\rangle 64 \right\rangle$	not classed	100	102	19
77	79	[] (	Phlegmon, cellulitis	20	4	15
59	58	) (	Ascites	184	58	14
55	61	$\left\{ 65 \right\}$	Diseases of the organs of locomotion not classed		79	14
62	55	$\mathcal{D}$	Ulceration of intestines	160	121	14
60	64	\$ 66 S	Diseases of the uterus and vagina	170	58	13
83	81	<u>[]</u> ~ ]	Stomatitis	3	2	13
70	63	3675	Ulcer, bedsore	86	59	11
<b>72</b>	65	1500	Calculus	48	50	11
69	64	12685	Arthritis, ostitis, periostitis	87	58	10
73	69	<b>1111111111111</b>	Stricture or strangulation of intestine	44	35	10
•••		69	Idiopathic tetanus			9
			1	1		

\* Included with diseases of spinal cord and other diseases of nervous system, ante.

### CAUSES OF DEATH IN ORDER OF FATALITY-continued.

(10 Years: 1871-80; 5 Years: 1881-85; and Year 1889.)

Orde	er of Fatz	lity.		Number of Deat		eaths.
Ten Years : 1871-80.	Five Years : 1881-85.	Year 1889.	Causes of Death.	Ten Years : 1871-80.	Five Years : 1881-85.	Year 1889.
	71	70	Suppression of urine	29	32	8
	• -	71	Pelvic abscess	***	•••	7
81	79	) _ (	Dietic diseases not classed	11	4	6
68	68	$\left\{ 72 \right\}$	Gonorrhœa, stricture of the urethra	91	40	6
		273 È	Diseases of the larynx and trachea not classed	?	2	5
			Diseases of the lymphatic system	?	2	5
	80	5 C	Rickets		3	. 4
		$\{74\}$	Constitutional diseases not classed	?	2	4
71	71	$\mathbf{N}^{-}$	Disorders of menstruation	52	27	4
75	81	$\dot{h}$	Diseases of testes, penis, scrotum, etc.	29	2	3
61	72		Remittent fever	169	25	3
78	76	[75]	Indicial hanging	19	8	3
73	73		Diseases of spleen	44	19	3
74	71		Carbuncle	37	27	3
. *		K V	Laronoismus stridulus			2
* * *	•••		Perineal abscess			$\overline{2}$
* * 1		76	Rori Rori			$\frac{1}{2}$
	•••	1	Phagadona			2
			Sentev	 2	 9	2
	•••		Mumne	•		1
* * *	•••	1 1	Luppe	 2	9	1
.77	75		Chores	· • 90	a	1
4.4	10		Unorea	20 9	2	.1
• • •	•••	} 77 {	Hæmaturia	: 9		1
* # *	•••		Compared athen affects of reasing	່. ຄ	••• 9	1
* • •	•••		tion	5	:	T
76	70		Other perceitie director	90		1
10	79		Dener parasitic diseases	28	4	1
 Q <i>A</i>	19			I Q	4 C	
0 <u>4</u> 00		•••	$Small-pox \dots \dots \dots$		D	***
00 70	11		$\mathbf{Concken-pox}  \dots  \dots  \dots  \dots$	13	D	***
19	70	•••		17	8	***
10 05	14	•••	Ague	44	14	***
60	•••	•••	Glanders		•••	•••
• • •		•••	Epidemic rose-rash	?	?	• • •
• • •	***	•••	Cerebro-spinal fever	•••	•••	***

	Deaths from well-defined causes Deaths from "atrophy and debility" and other ill-defined and un- specified causes	114,206 8,364	61,828 4,983	17,753 1,639
	Deaths from all causes	122,570	66,811	19,392

Death rate from various causes in Victoria and England. 664. The fatality of the different circumstances which cause death in this colony, as compared with the fatality resulting from similar causes in England and Wales, is shown by the following table, in which the number of persons dying from each cause in either country

is compared with the number of persons living in the same country. The total of each class and order is given, as also are some of the principal diseases. The Victorian results relate to the year 1889, the five years ended with 1885, and the ten years ended with 1880, and the results for England and Wales to the five years ended with 1880:—

ANNUAL DEATH RATE FROM EACH GROUP OF CAUSES AND CERTAIN DISEASES IN VICTORIA AND ENGLAND AND WALES.

			Number	r of Annual I Mean Po	Deaths per 1 pulation.	00,000 of
Class.	b-Class	Causes of Death.		Victoria.		England and Wales.
	Su	32 	Year 1889.	Average of 5 Years: 1881-1885.	Average of 10 Years : 1871 to 1880.	Average of 5 Years : 1876 to 1880
		All causes	1,756-04	1,464·31	1,538.01	2,081.74
		CLASSES.			· · · · · · · · · · · · · · · · · · ·	
I.		Specific febrile or zymotic diseases	296.30	228.97	356.74	332.00
II.		Parasitic diseases	7.33	8.57	9.21	5.74
III.		Dietic diseases	25.63	24.64	24.83	6.72
IV.		Constitutional diseases	258.35	232.70	215.89	358.26
V.		Developmental diseases	122.43	97.11	75.82	163.14
VI.		Local diseases	790.18	670.12	642.57	1,004.80
VII.		Violent deaths	107.40	92.99	108.00	72.00
VIII.		Ill-defined and not specified causes	148.42	109.21	104.95	139.08
			e :	1		
		SUB-CLASSES AND DISEASES.				
Ι.	1	Miasmatic diseases	159.01	100.56	193.98	219.26
		Measles	1.72	8:47	26.10	38.54
		Scarlet fever	3.71	6.18	51.46	68.04
		Diphtheria*	48.00	14.93	38.15	12.18
		Whooping-cough	21.19	15.36	24.77	52.76
		Typhoid or enteric fever, etc.	82.40	51.81	49.85	<b>34</b> .66
	2	Diarrhœal diseases	120.44	107.09	138.48	85.40
ţ		Diarrhœa	94•36	87.54	96.21	) 02.96
		Dysentery	12.77	13.79	35.71	1 00 00
	3	Malarial diseases	•45	.85	2.67	.74
د مد د دو در	4	Zoogenous diseases		•••	•01	•36
8	5	Venereal diseases	3.26	4.78	4.73	9.56
	6	Septic diseases	13.04	15.69	16.87	16.68
	j≣r ka	Puerperal fever (see also Childbirth and Puer-	5•62	6.88	5.78	6.20
y., •	↓	peral <i>infra</i> )				

\* Deaths from diphtheritic croup are not included with those from diphtheria, but under the head of croup, which is classed as a disease of the respiratory system, Class VI., Sub-Class 4.

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### ANNUAL DEATH RATE FROM EACH GROUP OF CAUSES AND CERTAIN DISEASES IN VICTORIA AND ENGLAND AND WALES—continued.

		Number	of Annual Mean Po	Deaths per 1 pulation.	.00,000 of
-Class.	Causes of Death.		Victoria.		England and Wales.
Sub		Year 1889.	Average of 5 Years : 1881-1885.	Average of 10 Years : 1871 to 1880.	Average of 5 Years: 1876 to 1880.
	SUB-CLASSES AND DISEASES.				
• • •	Constitutional diseases— Cancer, malignant disease Phthisis Other tubercular and scro-	$56.96 \\ 142.26 \\ 40.03$	$\begin{array}{r} 45.26 \\ 140.88 \\ 32.96 \end{array}$	$37.10 \\ 127.42 \\ 36.35$	49·60 204·24 77·87
	fulous diseases Developmental diseases— Of children (premature birth or malformation)	55.87	43.33	<b>41</b> .60	55-80
	Of old age	66·47	53.78	34:22	107.34
$\frac{1}{2}$	Nervous (brain diseases, etc.) Organs of special sense (nose, ear, and eye	$165.81 \\ 1.45$	162·50 ?	169·80 ?	277·80 1·34
3	Circulatory (heart diseases,	125.15	97.59	85·37	- 141-70
4	Respiratory (lung diseases,	221.86	218.43	194.92	<b>395·5</b> 0
5	Digestive (stomach, bowel,	200.39	134.46	141.04	117.60
6	Lymphatic, and ductless	•81	•50	•55	1.26
7	Urinary (kidney, bladder	<b>49</b> .62	33.12	23.53	37.50
8	Generative (diseases of ovary, uterus, and vagina, etc.)	<b>4</b> ·71	2.63	3·70	5.88
9	Childbirth (see also Child- birth and puerperal fever infra)	9.15	13.68	15.90	7-96
10	Locomotive (arthritis, ostitis,	5.34	3.00	<b>3</b> ·64	10.78
11	Integumentary (carbuncle, phlegmon, nlcer, etc.)	5.89	4.21	<b>4</b> ·12	7.48
1	Accident or negligence	90.55	80.26	93.45	<b>63</b> ·12
2	Homicide	3.62	2.41	2.38	1.40
3 4	SuicideExecution	12·95 •27	10·15 ·17	11 93 ·24	7·38 ·10
6 <b>}</b> 9 <b>}</b>	Childbirth and puerperal fever	14 <sup>.</sup> 77	20.55	21.68	14:16
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Sub-Classes of Death.Sub-Classes and DiseasesConstitutional diseases.PhthisisOther tubercular and scrofulous diseasesDevelopmental diseases.Of children (premature birth or malformation)Of old ageDiseases of the systems.Inservous (brain diseases, etc.)Organs of special sense (nose, ear, and eye diseases)Circulatory (heart diseases, etc.)Pagestive (stomach, bowel, liver diseases, etc.)Bigestive (stomach, bowel, liver diseases, etc.)Urinary (kidney, bladder diseases, etc.)Generative (diseases of ovary, uterus, and vagina, etc.)Generative (diseases of ovary, uterus, and vagina, etc.)Childbirth (see also Childbirth (see also Childbirth and puerperal fever infra)Locomotive (arthritis, ostitis, etc.)Accident or negligenceHomicideSuicideChildbirth and puerperal fever	$\frac{1}{2}$ Number $\frac{1}{2}$ Causes of Death. $\frac{1}{2}$ Year 1889. $\frac{1}{2}$ Vear 1889. $\frac{1}{2}$ Causes of Death. $\frac{1}{2}$ Cancer, malignant diseases $Cancer, malignant diseases142:26Other tubercular and scrofulous diseases142:26Other tubercular and scrofulous diseases40:030Children (premature birth or malformation)55:870Of children (premature birth or malformation)66:470Diseases of the systems—165:811Nervous (brain diseases, etc.)165:812Organs of special sense (nose, ear, and eye diseases)125:15etc.)*Digestive (stomach, bowel, 200:39200:391Hiver diseases, etc.)200:391Liver diseases, etc.)81gglands81gglands9151Locomotive (arthritis, ostitis, etc.)5:349Childbirth (see also Child- 9:159:1511Integumentary (carbuncle, 5:899:552Homicide3:623Suicide2:954Execution:2:954Execution:2:954Execution:2:95$	$\frac{1}{2}$ Causes of Death. $\frac{1}{2}$ Constitutional diseases. $Constitutional diseases. Cancer, malignant disease. Cancer, and eye diseases of the systems. Cancer, and eye diseases, etc.) Corgans of special sense liver diseases, etc.) Corgans of special sense liver disease. Cancer, and eye diseases. Circulatory (heart diseases, 221:86 218:43 etc.)* Cumphatic, and ductless value. Cumphatic, and ductle$	Number of Affiltal Dealins per line $\frac{5}{2}$ Causes of Death.Victoria.Victoria.Victoria.Victoria.Victoria.Victoria.Victoria.Victoria.Victoria.STB-CLASSES AND DISEASES.Constitutional diseasesConstitutional diseasesCancer, malignant diseaseOf children (premature birth or malformation)Of children (premature birth or malformation)

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Note.—See notes to table following paragraph 661 ante.

\* Deaths from diphtheritic croup are not included with those from diphtheria, but under the head of croup, which is classed as a disease of the respiratory system, Class VI., Sub-Class 4.

e. ...

665. By means of the results shown in this table, it is found that, Diseases over a series of years, the mortality from the following causes is greater in Victoria than in England and Wales :--Diphtheria,\* typhoid fever, diarrheal diseases, dietic diseases (including want of breast-milk and alcoholism), parasitic diseases (including thrush, hydatids, etc.); diseases of the stomach, bowels and liver; violent deaths of all kinds; and the consequences of childbirth. From every other cause shown, also from all causes combined, the death rate is, on the average, higher in England and Wales than in Victoria.

666. It should be explained that under the altered nosological New nosclassification, which has now been in force for four years, the increased number of distinct diseases specified, and the numerous changes made in the grouping of diseases, have rendered it difficult in some instances to compare correctly the number of deaths resulting from many diseases now stated separately, with the deaths which resulted from the same diseases before the change took place, when they were grouped with other complaints in such a way as to be now not distinguishable. Such discrepancies have, as far as possible, been pointed out in the footnotes to a previous table, by means of which it will generally be found possible to institute a fair comparison.

667. Per 100,000 of the population, 296 deaths in 1889 were set specific febrile or down to specific febrile or zymotic diseases. The number was 30 per zymotic diseases. cent. above the average of recent years, but 17 per cent. below the average of the decade 1871-80, during which period, in consequence of the prevalence of epidemics, the rate of mortality from this class of complaints was somewhat higher than in England. Of the 296 deaths referred to, 159 were set down to miasmatic diseases, 120 to diarrhœal diseases, 13 to septic diseases, 3 to venereal diseases, and a much smaller proportion to malarial diseases. Of miasmatic diseases, the most prominent in Victoria is typhoid fever, which caused 82 deaths per 100,000 of the population in 1889, as compared with only 51 in 1888; although the relative mortality from this disease is on the average about 44 per cent. higher than in England, in 1889 it was two and a third times as high as in that country. Diphtheria,\* which in 1889 caused nearly a third of the deaths from miasmatic diseases, or rather more than half as many as from typhoid fever, has been much more fatal than usual in the last two

more fatal in Victoria than in England.

ology prevents returns from being strictly comparable.

\* There is some difficulty in making comparisons in the case of diphtheria, as diphtheritic croup, which is generally classed with croup, may sometimes be classed with diphtheria. See footnote to last table.
years, but the rate of mortality was greater in 1889 than in 1888 by 20 per 100,000; in 1889, moreover, it was three times as high as the average of recent years (1881-5), but only 10 per 100,000 higher than the average of the ten years 1871-80. Whooping cough appeared in an epidemic form in 1889, causing, per 100,000 of the population, 21 deaths, as against barely 2 deaths in 1888, 15 deaths in the quinquennial period 1881-5, and 25 deaths in the decennial period 1871-80. The mortality from diarrheal diseases in 1889 (120 per 100,000) was considerably higher than in 1888, also higher than in the five years 1881-85, but somewhat lower than in the decade 1871-80. The mortality from most of the other zymotic diseases-which, however. are of but minor importance—were considerably below the average.

Zymotic diseases, etc., asian colonies.

668. The following is a statement of the number of deaths from in Austral- zymotic diseases under the old classification, which now corresponds as nearly as possible with the zymotic, parasitic, and dietic classes of disease together, and of the proportion of such deaths to the total mortality and to the population over a series of years in all the Australasian colonies. The colonies are placed in order according to the death rate from diseases of this class prevailing in each :---

Order	$\mathbf{OF}$	Colonies	IN F	REFEREN	CE TO	) MORT	ALITY	FROM	ZYMOTIC,
		PARASITI	C, AI	DIET OF	ic Di	SEASES,	1878-	-87.	

	Deaths from Zymotic, Parasitic, and Dietic Diseases, 1878-87.							
Colony.	Total Number.	Percentage of Total Deaths.	Annual Proportion per 10,000 Persons Living.					
1. Queensland2. Western Australia3. South Australia4. New South Wales5. Victoria6. Tasmania7. New Zeeland	. 13,190 . 1,099 . 8,425 . 22,909 . 23,776 . 2,793	$28.11 \\ 20.34 \\ 20.53 \\ 18.13 \\ 17.71 \\ 14.59 \\ 20.53 \\ 20.53 \\ 20.53 \\ 20.53 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.55 \\ 20.5$	49·5 34·2 29·3 27·7 26·2 22·7					

669. It will be observed that in Victoria, during the 10 years Results compared in different 1878 to 1887, the mortality from zymotic, parasitic, and dietic diseases colonies. was less in proportion to the population as well as to the mortality from all causes than it was in any of the other Australasian colonies except Tasmania and New Zealand. Queensland was much above the other colonies in these respects, and was the only one of the colonies in which the death-rate from this class of complaints was higher than In New South Wales, on the other hand, the that in England. proportion was only slightly higher than in Victoria.

670. Small-pox has never prevailed as an epidemic amongst the Small-pox in people of Victoria. On several occasions persons sickening from or countries. affected by that complaint have arrived in vessels, and before the nature of the malady was discovered it has been caught by others; but in every case the patients have been promptly isolated by order of the Government, and the disease has soon disappeared. No case of smallpox occurred in the year under review, and since the registration system was first introduced in 1853 only 26 deaths from it have been recorded, five of which occurred in 1884, that being the period of the last outbreak. It may not, however, be uninteresting to give some statistics of deaths from small-pox in other countries, material for which is at hand in the valuable paper contributed by Dr. E. Raseri to the International Statistical Institute at its session held at Rome in the month of April, 1886. The following are the figures referred to, which relate generally to the mean of the four years 1881 to 1884:---

#### ANNUAL DEATH RATE FROM SMALL-POX IN VARIOUS COUNTRIES.\*

Deaths from Small-pox Annually per 10,000 persons living.	Deaths from Small-pox Annually per 10,000 persons living.
Spain (principal towns) 13.07	Holland ·57
Spain 8·46	Sweden ·41
Austria (principal towns) 8.43	Switzerland ·33
Austria 7.05	Prussia ·29
Belgium 4.09	Germany (principal towns) 23
Belgium (principal towns) 3.15	Ireland ·20
Russia 2.96	Massachusetts ·18
Italy 1.63	Denmark (towns) '08
Switzerland (principal towns) ·80	Scotland (eight towns) 05
Sweden (principal towns) '69	Scotland
England and Wales67	

671. Although cases of small-pox have rarely occurred in Victoria, Vaccinaparents are required by law to cause their children to be vaccinated. In 1889 the number of cases of successful vaccination performed in Victoria was 25,331; and, as the number of births was 36,359, it

appears that 70 per cent of the children born were vaccinated.  $\mathbf{This}$ proportion is higher than that in 1888, but below the average of the last 14 years. Part of the remainder are accounted for by death-3,749, or over 10 per cent., of those born having died before they were 6 months old. The average proportion of vaccinations to infants born is 77 per cent., as is seen by reference to the following figures, which indicate the proportions during each of the 14 years ended with 1889:---

\* For an account of the mortality of small-pox amongst the Australian aborigines, see Victorian Year-Book, 1888-9, paragraph 228.

PROPORTION OF VACCINATIONS TO BIRTHS, 1876 TO 1889.

		I	Vaccinations Per 100 Births.				Vaccinations Per 100 Births.
1876			80	1884		• • 1	74
1877	* * *	* * *	87	1885		• • •	69
1878	• • •	1 * *	82	1886			70
1879		• • •	82	1887		• • •	78
1880	• • •		73	1888	•••		67
1881	• • •		100*	1889		• • •	70
1882			75		. C 1	4	
1883		• • •	67	Mea	in of T	4 years	

Vaccinations in various countries.

672. Dr. Raserit gives the following as the proportions of successful vaccinations to births in different countries, generally during the years 1880 to 1884. To these have been added the proportions in such of the Australasian colonies as the information is available for :-

PROPORTION OF VACCINATIONS TO BIRTHS IN VARIOUS COUNTRIES.

	Vaccinations Per 100 Births.	Vaccinations Per 100 Births.
Ireland	89	Italy 73
Scotland	88	Germany 71
Norway	87	South Australia (1878 to 1887) 69
England and Wales	86	New Zealand (1886 to 1887) 68
Hungary	86	France 64
Holland	82	Russia in Europe 56
Sweden	80	Tasmania (1878 to 1887) 55
Austria	78	New South Wales (1878 to 1887) 25
Victoria (1878 to 1887)	77	

Vaccinations in and elsewhere.

673. It appears by the figures that the proportion of infants Australasia vaccinated is larger in Ireland than in any other country, and next so in Scotland; and that whilst in Victoria more than three-fourths of the children born are vaccinated, in South Australia and New Zealand little more than two-thirds, in Tasmania little more than half, and in New South Wales only one-fourth, of the infants are vaccinated.

Cost of vaccination.

674. The number of public vaccinators in Victoria is 188, and the amount paid in 1888-9 for vaccinations, including fees to Deputy-Registrars and travelling allowances to vaccinators, was £5,499.

Zymotic diseases affecting children.

675. The seven zymotic diseases which chiefly affect children are measles, scarlet fever, diphtheria, croup, whooping-cough, dysentery, The following table shows the number of deaths from and diarrhœa. such diseases which occurred during the twenty-six years ended with

\* In this year owing to an alarm occasioned by an outbreak of small-pox, first in Sydney and subsequently on board vessels arriving at Melbourne, the vaccinations exceeded the births by 100. + Bulletin, etc., page 189.

1889, the annual means of the decade 1864-1873 and of the decade 1874-1883 being also given:—

		Number of Deaths from—									
Year	•	Measles.	Scarlet Fever.	Diph- theria.	Croup.	Whooping cough.	Dysen- tery.	Diarrhœa.	Total.		
1864		7	278	451	160	25	243	528	1.692		
1865		11	215	391	171	304	402	864	2.358		
1866		427	462	331	132	365	525	1.027	3.269		
1867		630	621	334	115	205	430	986	3.321		
1868	•••	24	460	451	194	<b>243</b>	<b>2</b> 20	640	2.232		
1869		24	<b>224</b>	493	162	100	306	858	2,167		
1870	• • •	3	24	418	99	50	244	706	1,544		
1871	•••	4	<b>27</b>	255	90	318	<b>3</b> 16	626	1,636		
1872	•••	7	135	320	121	227	424	747	1,981		
1873	•••	1	188	420	142	299	357	629	2,036		
Annual n 1864–18	nean } 373 }	113.8	263·4	386.4	138.6	213 <sup>.</sup> 6	346.7	761.1	2,223.6		
1874		256	120	375	159	151	325	846	2,232		
1875		1,541	<b>9</b> 85	239	135	58	509	1,002	4,469		
1876		5	2,240	201	173	13	202	675	3,509		
1877	• • •	6	183	359	315	245	254	963	2,325		
1878	s <b>t t d</b>	5	136	<b>33</b> 6	331	291	197	877	2,173		
1879	• • •	3	61	337	275	193	140	698	1,707		
1880		252	<b>26</b>	198	156	179	122	604	1,537		
1881		62	86	114	125	167	115	671	1,340		
1882	• • •	15	89	122	142	109	182	968	1,627		
1883	<b>b a a</b>	7	59	131	167	48	139	885	1,436		
<b>A</b> nnual 1 <b>1874</b> –18	mean ) 883 )	215-2	398·5	241.2	197.8	145.4	218.5	818.9	2,235.5		
1884		233	<b>34</b>	162	181	209	78	643	1,540		
1885	•••	69	14	152	180	168	115	827	1,525		
1886	•••	20	14	121	160	209	115	906	1,545		
1887	•••	78	4	199	191	129	138	933	1,672		
1888	• • •	30	21	301	282	21	109	817	1,581		
1889		19	41	530	279	234	141	1,042	2.286		

DEATHS FROM ZYMOTIC DISEASES CHIEFLY AFFECTING CHILDREN, 1864 TO 1889.

**NOTE.**—Croup is included in this table, although not now classed as a zymotic disease, since a large number of deaths are set down to diphtheria and croup conjointly.

676. The year 1889 has been marked by an increase in the mor- children's tality from all the diseases named in the table except measles and diseases, croup—deaths from the latter, however, being only 3 less than in 1888. The largest increase was under the heads of diphtheria, whooping cough, dysentery and diarrhœa. Taken as a whole, these diseases in 1889 caused half as many deaths again as in 1888, and a much larger number than in any previous year since 1877.

Measles.

677. An epidemic of measles occurred in 1884, and caused in that and the following year 302 deaths, or 12 less than resulted from the preceding epidemic of the same complaint in 1880 and 1881. Neither of these outbreaks of measles was so serious in its effects as the two previous ones of 1874-5 and 1866-7, when the resulting deaths numbered 1,797 and 1,057 respectively. Per 10,000 of the population, the proportion of deaths from measles was  $\cdot 17$  in 1889 and  $\cdot 86$ in the ten years ended with 1887, the latter proportion being lower than in any of the following European countries, but very slightly higher than that in the other Australasian colonies, except South Australia, as is shown by the following figures :—

# ANNUAL DEATH RATE FROM MEASLES IN VARIOUS COUNTRIES, 1881 TO 1884.\*

	Dea M pe pers	ths from leasles r 10,000 ons living.			Deat Me per 1 persor	hs from asles 10,000 ns living.
Spain (principal towns)	• • •	11.44	Switzerland (prin	cipal to	wns)	2.46
Spain	• • •	8.84	Sweden	• • •	•••	2.40
Italy		7.04	Austria (principa)	l towns)	•••	2.32
Scotland (eight towns)		5.34	Ireland	•••		1.81
Belgium		5.24	${f Massachusetts}$	• • •	• • •	1.16
Austria		4.60	Russia in Europe	•••	•••	1.09
England and Wales		4.01	South Australia (	1878 to	1887)	1.00
Denmark (towns)		3.66	Switzerland	•••		-88
Scotland		3.28	Victoria (1878 to	1887)		•86
Prussia		3.51	New Zealand	,,		·64
Sweden (principal towns)		3.27	New South Wales	s ,,	•••	·63
Germany (principal towns)		3.15	Tasmania]	,,	•••	•54
Holland		2.88	Queensland	,,		•27
Belgium (principal towns)		2.80	-			

NOTE.—A useful circular issued under the direction of the Central Board of Health describing the symptoms of measles, and the precautions necessary to be taken to prevent its spread and mode of treatment in the absence of medical aid, was published in the *Victorian Year-Book*, 1887-8, Vol. I., paragraph 661.

Scarlet fever. 678. On the occasion of both the earlier visitations of measles just referred to, the epidemic was accompanied or followed by one of scarlet fever (scarlatina), which proved to be even more fatal than the former complaint; but no such calamity has attended the last two outbreaks of measles, during the whole period of which, especially the last outbreak, the mortality from scarlet fever was exceedingly low. The fatality attending this complaint has very much diminished of late years, the deaths from it—notwithstanding the increased population—having numbered only 408 in the last ten years, or an average of 41 per annum; as against 3,987, or an average of 570 per annum,

<sup>\*</sup> These proportions, except those for the Australasian colonies, have been taken and re-arranged from Dr. Raseri's paper already alluded to, page 193.

in the preceding seven years; and 2,260, or an average of 377 per annum, in the six years ended with 1869. In 1889, scarlet fever caused 41 deaths, or  $\cdot 37$  per 10,000 of the population, as against  $\cdot 62$ in the five years ended with 1885, and  $5 \cdot 1$  in the ten years ended with 1880. Whilst the death rate from this complaint in the last ten years was lower than the average prevailing in any of the following countries, that in the decade preceding those years was higher than in most of the countries named :—

ANNUAL DEATH RATE FROM SCARLET FEVER IN VARIOUS COUNTRIES,

	Deat Scarl per person	hs from et Fever 10,000 ns living.		I	Deaths from Scarlet Feve per 10,000 Dersons livin	n er ) 1g.
Sweden (principal towns)	•••	6·10	Spain	4 • •	<b>2</b> ·00	
Austria	•••	5.86	Russia in Europe	• • •	1.79	
Prussia	• • •	<b>5·3</b> 0	Belgium (principal	$\mathbf{towns}$ )	1.58	
England and Wales	•••	5·29	Switzerland (princi	ipal towns	s) $1.49$	
Germany (principal towns)	• • •	<b>5</b> ·0 <b>9</b>	Spain (principal to	$\hat{w}$ ns)	<b>1·46</b>	
Sweden		4.85	South Australia (18	378 to 188	37) 1.27	
Scotland (8 towns)		4.77	Holland		1.15	
Austria (principal towns)		4.45	Switzerland	, • • •	1.01	
Scotland	• • •	<b>4</b> ·44	New South Wales (	1878 to 18	387) .89	
Ireland	• • •	3.00	New Zealand		·75	
Italy	•••	2.94	Victoria	29	•59	
Belgium		2.90	Tasmania	36	• <b>4</b> 9	
Denmark (towns)		2.64	Queensland	10	·13	
Massachusetts		2.54	• ,			

1881 то 1884.\*

Note.—A useful circular on scarlet fever, issued by the Central Board of Health, was published in the Victorian Year-Book, 1888-9, Vol. II., paragraph 238.

679. In consequence of the similarity of the complaints, and the Diphtheria number of deaths set down to a combination of both, it is misleading to consider the deaths caused by diphtheria apart from those caused by croup. Taking the two affections together, they were to every 10,000 of the population in the proportion of 7.32 in 1889, 5.49 in 1888, 3.83 in 1887, 2.85 in 1886, 3.23 in the five years ended with 1885, and 6.19 in the ten years ended with 1880. The proportion, over a series of years, is lower than that for any of the foreign countries of which information is at hand, except Ireland, England, Holland, Scotland, and European Russia, as will be seen by the following figures:—

\* Except those for the Australasian colonies, the figures have been taken and re-arranged from Dr. Raseri's paper, page 193.

# ANNUAL DEATH RATE FROM DIPHTHERIA AND CROUP IN VARIOUS COUNTRIES, 1881 TO 1884.\*

	Do Dip Crow per	eaths from htheria and 1p per 10,000 rsons living.	) (	Death Diphth Croup p persons	s from eria and er 10,000 i living.
Austria	• • •	16.63	South Australia (1878 to 1	1887)	5.93
Prussia	· · •	15.45	Scotland (8 towns)	•••	4.99
Spain (principal towns)	• • •	11.83	New South Wales (1878 to.	1887)	4.77
Germany (principal towns)	•••	11.54	Queensland "		4.75
Massachusetts		11.13	Russia in Europe	• • •	4.67
Austria (principal towns)		10.36	Scotland	•••	4.55
Sweden		9.79	Tasmania (1878 to 1887)	•••	<b>4·46</b>
Sweden (principal towns)	•••	9.74	Victoria ,,	•••	4.16
Italy	• • •	9.18	Belgium (principal towns)	•••	3.79
Switzerland (principal town	ns)	8.49	Holland		3.76
Belgium		7.72	England aud Wales	•••	3.02
Spain		6.85	Ireland	• • •	2.70
Denmark (towns)		6•28	New Zealand (1878 to 188	7)	2.42
Switzerland		<b>6</b> ·09	-	-	

NOTE.—A circular, giving the symptoms of diphtheria and directions for its management in the absence of medical assistance, was issued by the Central Board of Health during the early part of 1888, and was republished in the *Victorian Year-Book*, 1887-8, Volume I., paragraph 664.

Whooping cough.

680. Deaths from whooping-cough in 1889 were in the proportion of 2.12, in 1888 of .20, in 1887 of 1.27, in 1886 of 2.12, in the previous five years of 1.53, and in the ten years ended with 1880 of 2.48 per 10,000 persons living. All these proportions, as well as those in the other Australasian colonies, are lower than those generally prevailing in most of the foreign countries named in the following table :--

### ANNUAL DEATH RATE FROM WHOOPING-COUGH IN VARIOUS COUNTRIES, 1881 TO 1884.\*

N	Deat Whoop per perso:	ths from ing-cough 10,000 ns living.		Death 100pin per erson	s from ng-cough 10,000 s living.
Austria		10.63	Austria (principal towns)		2.74
Scotland (8 towns)		9.64	Spain (principal towns)		2.68
Belgium		7.18	Italy		2.45
Denmark		6.62	New Zealand (1878 to 1887)		2.42
Scotland	•••	<b>6</b> ·23	Switzerland		2.31
Prussia	•••	5.40	South Australia (1878 to 18	87)	<b>2·19</b>
England and Wales	• • •	4.67	New South Wales		1.93
Holland		3.82	Sweden		1.80
Germany (principal towns	)	3.48	Victoria (1878 to 1887)		1.79
Belgium (principal towns)		3.37	Queensland		1.51
Ireland	• • •	3.18	Tasmania		1.44
Spain	• • •	3.14	Massachusetts		1.16
Sweden (principal towns)		2.98	Russia in Europe		•23
Switzerland (principal tow	ns)	2.74			

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NOTE.—A circular on whooping-cough and its treatment, issued by the Central Board of Health, was republished in the Victorian Year-Book, 1887-8, Volume I., paragraph 666.

\* Except those for the Australasian colonies, the figures have been taken and re-arranged from r. Raseri's paper, page 193.

681. The mortality from typhoid fever \* was exceptionally high in Typhoid 1889, as many as 910 deaths having been caused by it, as against only 541 in the previous year. The rate of mortality from this complaint in 1889 was 8.24 per 10,000 persons living, which was much higher than in any previous year since 1866, when it was 8.39; these were the only occasions during the last twenty-four years on which the rate exceeded 8 per 10,000, whilst the average of the whole period was only  $5\frac{1}{2}$  per 10,000. During the last 24 years the death rate from typhoid fever has fluctuated considerably, but, nevertheless, there were four pretty well-marked maximum periods, viz., 1866-7, 1877-8, 1883, and 1889, when the rates rose to over  $6\frac{1}{2}$  per 10,000 persons living. The minimum periods are not so well marked; but the two principal ones appear to be 1871-3 and 1880-81, when the average rate was below 4 per 10,000; and 1885, when it was a little above that proportion. Typhoid fever causes, on the average, over 3 per cent. of the total deaths from all causes, and as many as 13 per cent. of those at between 10 and 25 years of age; but in 1889, nearly 5 per cent. of the total deaths from all causes, and no less than 25 per cent of those at the ages named were due to the same cause. The following table shows the number of deaths from typhoid fever, and their proportion to the population, during each of the past 24 years :---

Year.		Deaths fr F	com Typhoid ever.			Deaths from Typhoid Fever.		
		Total Number.Number per 10,000 Per- sons Living.		Year.		Total Number.	Number per 10,000 Per- sons Living.	
<b>186</b> 6	•••	528	8.39	1879	•••	438	5.25	
<b>18</b> 67	• • •	455	7.06	1880		297	3.49	
<b>18</b> 68		295	4.45	1881	• • •	351	4.04	
<b>18</b> 69	• • •	360	5.24	1882	• • •	472	5.30	
<b>187</b> 0	•••	416	5.83	1883	• • •	661	7.26	
<b>187</b> 1		269	3.65	1884	• • •	456	4.88	
<b>187</b> 2		323	<b>4</b> ·29	1885		<b>424</b>	4.42	
<b>187</b> 3	••••	<b>282</b>	3.68	1886	• • •	530	5.37	
<b>1874</b>		470	6.04	1887	• • •	631	6.19	
1875		455	5.78	1888	• • •	<b>541</b>	5.09	
<b>187</b> 6	•••	375	4.71	1889	• • •	910	8.24	
1877		<b>532</b>	6.58					
<b>187</b> 8		<b>532</b>	6.48	Mean	• • •	<b>458</b>	5.49	
s i								

DEATHS FROM TYPHOID FEVER, 1866 TO 1889.<sup>+</sup>

\* A useful circular issued under the direction of the Central Board of Health, describing the symptoms of typhoid fever, and the precautions necessary to be taken to prevent its spread and mode of treatment in the absence of medical aid, was published in the Victorian Year-Book, 1888-9, Vol. II., paragraph 242.

† In the new classification, simple continued fever is entered as a separate complaint from typhoid fever, but as no such distinction was observed in former years, cases occurring in 1886 and subsequent years, which might possibly have been placed under the former head have, for the sake of comparison, been still placed under the latter.

Typhoid fever in Australasian colonies. **380** 

682. The following table shows the mortality from typhoid fever in all the Australasian colonies, except Western Australia, during the sixteen years ended with 1888, or during as many of those years as the information is available for :---

# DEATHS FROM TYPHOID FEVER\* IN AUSTRALASIAN COLONIES, 1873 to 1888.

	1	Number of Deaths from Typhoid Fever.										
Year.		Total. Living.		Total.	Per 10,000 Persons Living.	Total.	Per 10,000 Persons Living.					
	•••	Vici	TORIA.	New Sou	TH WALES.	QUEE	NSLAND.					
1873		<b>282</b>	3.68			67 ~	4.78					
1874		470	6·05			78	5.03					
1875		455	5·78	298	5.10	158	9.16					
1876		375	4.71	401	6.64	<b>72</b>	3.91					
1877		532	6·58	375	<b>5</b> ·96	105	5.38					
1878		532	6·48	441	6.70	197	9.53					
1879		438	5.25	265	3.84	132	6.16					
1880	•••	297	3.49	240	3.31	54	2.03					
1881	•••	351	4.04	266	3.20	85	3.30					
1882	•••	472	5.30	450	5.66	166	6.31					
1883	•••	661	7.26	397	4.76	255	8.89					
1884	•••	456	4.88	516	5.86	563	19.10					
1885	•••	424	4.42	503	5.40	541	17.52					
1886	•••	530	5.37	591	6.03	408	12.27					
1887	* * *	631	6.19	434	4.24	245	6.91					
1888	••••	541	5.11	441	4.14	228	6.04					
Tota	al	7,447	5.28	5,618	5.08	3,354	7.90					
		South A	USTRALIA.	TASI	TANIA.	·New 2	ZEALAND.					
1873		68	3.48	24	2.39	127	1 4.41					
1874	• • •	97	4.82		4.22	161	5.05					
1875	•••	94	4:53		4.81	340	9.47					
1876	•••	92	4.22	26	<b>9</b> ·/0	195	5.03					
1877	•••	84	3.63	4.1	2.86	133	3.26					
1878	• • •	106	4.37	50	<i>J</i> 00 <i>A</i> :61	131	3.11					
1879	•••	100	3.07	30	40L 2.49	208	4.64					
1880	• • •	63	2.30	90	044	177	3.72					
1881	•••	85	203	23	2.00	197	0.70					
1882	• • •	146	5:02	00 90	201	190	270					
1883	•••	195	J UJ 4.51	<b>00</b>	2.98	140	201					
1884	•••	150	4.91		5.15	104	0.15					
1885	• • •	145	4.09	<b>5</b> 0	3.89	118	210					
1886	•••	140 100	403	30	2.27	128	2.20					
1997	• • •	100	5.39	47	3.4/	134	2.30					
1888	••••	120	3.77		8.01     5.82	$168 \\ 139$	2.82					
Tota	al	1,746	4.09	758	3.92	2,606	3.70					

\* Including simple continued and ill-defined fever. It is possible that in some of the colonies a few cases of remittent fever may be returned under one or other of these heads.

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683. In Tasmania, the death-rate from typhoid fever in 1888 was Deaths from above, but in all the other colonies it was below the average. Queensland the mortality from typhoid fever in 1884 and the two following years was simply enormous, amounting to 19,  $17\frac{1}{2}$ , and  $12\frac{1}{4}$  per 10,000 of the population in the three years respectively, but it fell off considerably in the two succeeding years, when it was more comparable with, although still higher then, than the rates prevailing in the other colonies. In Tasmania, the fever appeared in an epidemic form in 1887, when it caused as many as 8 deaths per 10,000 persons living, and in 1888 the rate had not yet fallen to its usually low level.

684. In England and Wales the mortality from typhoid or enteric Typhoid fever in fever\* has been considerably reduced of late years, and it is now lower England and Wales. than in any of the Australasian colonies, except Tasmania and New Zealand. During the ten years ended with 1880 the mean death rate therefrom was 4.30, but in the seven years ended with 1888 only 2.41 per 10,000 persons living, the latter being far lower than even the minimum rate (3.49) recorded in Victoria during the last twenty-four years.

685. In the returns of most European countries deaths from Typhoid and typhus in typhoid fever are not distinguished from those caused by typhus, various countries. the latter being a complaint which it is said does not exist in the Australasian colonies. In England and Wales these fevers have been returned separately since 1869, and it is probable the following figures, so far as they relate to that country, apply to typhoid only, whilst those for most of the other countries, it is believed, refer to the two descriptions of fever combined :---

# ANNUAL DEATH RATE FROM TYPHOID AND TYPHUS IN VARIOUS COUNTRIES, 1881 TO 1884.<sup>†</sup>

тарана. П		Per 10,000 Persons Living.	- · · · ·	Per 10,000 Persons Living
Italy	 •••	9.37	Sweden (principal towns)	<b>3</b> ·95

typhoid · In fever in the colonies, 1888, and previous years compared.

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Spain (towns)	•••	•••	<b>8·35</b>
Austria	• • •		<b>7·</b> 31
Belgium	• • •	• • •	6.17
Spain	• • •	• • •	5.63
Massachusetts	• • •		5.30
Prussia			5.14
Belgium (princi	ipal towns	s)	4.69
Austria (15 tow	ns)		4.49
Switzerland (17	' towns)		4.31
Holland	•••	•••	4.24

Denmark (towns)		<b>3</b> ·85
Scotland		3.77
Scotland (8 towns)	• • •	3.62
Ireland	• • •	3.57
Germany (principal towns	)	3.56
Sweden	• • •	2.87
England and Wales		2.70
Switzerland	• • •	2.30
Russia in Europe		2.07
<b>L</b>		

\* The English figures quoted are those of enteric, or typhoid, and simple continued fever, which probably correspond with the fevers tabulated as typhoid in Victoria. † See Dr. Raseri's paper, page 193. The fevers referred to are there termed "Febbre tifoide e ifo esantematico."

Venereal diseases.

686. Deaths from venereal diseases numbered 377 in the ten years ended with 1880, 218 in the five years ended with 1885, 111 in the three years ended with 1888, and 36 in 1889, being in the ratio per 10,000 of the population annually of  $\cdot$ 47 at the first period, of  $\cdot$ 48 at the second period, of  $\cdot$ 36 at the third, at  $\cdot$ 33 at the last period. If deaths from syphilis be considered apart from those caused by other venereal diseases, the numbers at the same periods would be 286, 178, 79 and 30, and the proportions  $\cdot$ 36,  $\cdot$ 39,  $\cdot$ 26, and  $\cdot$ 27, which contrast favourably with those in most of the following countries :—

#### ANNUAL DEATH RATE FROM SYPHILIS IN VARIOUS COUNTRIES, 1881 TO 1884.\*

	Per 10,000 Persons Living.			Pe Perse	er 10,000 ons Living.
Italy	1.65	Scotland	•••	• • •	·63
Sweden (towns)	1.16	Massachusetts	• • •	•••	$\cdot 32$
Scotland (8 towns)	1.01	Switzerland	• • •	• • •	·24
Denmark (towns)	•94	Ireland	• • •	•••	·16
England and Wales	84	Holland	• • •	* • •	•11

Venereal disease amongst the Aborigines. 687. Venereal disease has long prevailed amongst the Australian aborigines, and was no doubt first communicated to them by Europeans. The late Mr. Curr † gave it as his opinion that "it was first introduced into Australia by the whites many years ago, and has never since ceased to commit terrible ravages among our tribes. Probably this disease alone would suffice to exterminate them."

Parasitic diseases. 688. Parasitic diseases, chief amongst which are thrush and hydatids, caused rather more than 7 deaths in 1889 per 100,000 of the population, which was  $1\frac{1}{4}$  below the average of the five years ended with 1885, and nearly 2 below the average of the ten years 1871 to 1880. These diseases are more prevalent in Victoria than in England.

Hydatids. 689. Hydatid disease, which is said to be communicated to man by reason of the ova of the tape worm in dogs (Tænia Echinococcus) being taken into the stomach, generally in water, and to prove fatal to 25 per cent. of the human victims it attacks, during the seventeen years ended with 1889 has caused 819 deaths, or an average of 48 per annum. Per 100,000 of the population, deaths from this disease ranged from 3.79 in 1873 to 7.19 in 1879, the average for the first eight years being 5.18, for the nine succeeding years 5.57, and for the whole period 5.38. In the last five years, however, the mortality from hydatids was much below that of the previous six years. The following are the figures for the last seventeen years :--

\* See Dr. Raseri's paper, page 193.

† The Australian Race, Vol. I., page 227.

Year.	Deaths	from Hydatid Disease.	Year	Deaths from Hydatid Disease.		
	Total Number.	Number per 100,000 Living.	umber per 0,000 Living.		Number per 100,000 Living.	
1873 .	29	3.79	1883	56	6.15	
1874 .	41	5.27	1884	59	6 32	
1875 .	47	5.97	1885	47	4.90	
1876 .	36	4.52	1886	51	5.17	
1877 .	37	<b>4</b> ·57	1887	51	5.01	
1878 .	37	4.50	1888	53	4.99	
1879 .	60	7.19	1889	61	5 52	
1880 .	48	5.64				
1881 .	48	5.20	Moon	19	5.28	
1882 .	58	6.52	mean	40	0.00	

DEATHS FROM HYDATIDS, 1873 TO 1889.

690. According to the returns of the seven years ended with 1888, Hydatids as embodied in the following table, hydatids in a fatal form appear to be asian much more common in Victoria than in any of the other Australasian colonies. It should be mentioned, however, that medical men sometimes enter the cause of death simply as "disease" of the liver, lungs, kidney, etc. In such cases inquiry should be made as to whether the "disease" referred to was hydatid disease or not, which may possibly not be done so rigidly in the other colonies as it is in Victoria, and for this reason the mortality from the complaint may appear to be relatively higher here than it really is :---

DEATHS FROM HYDATIDS IN AUSTRALASIAN COLONIES, 1882 то 1888.



in Austral-

colonies.

			Living.		Living.		Living.
		VIC	TORIA.	NEW SOU	TH WALES.	QUEEN	) ISL <b>AN</b> D.
1882		58	6.52	12	1.51	3	1.26
1883		56	6.15	10	1.20	4	1.20
1884		59	6.32	20	2.27	8	2.71
1885		47	<b>4</b> ·90	28	2.92	3	•97
1886	• • • •	51	5.08	23	2.35	Nil.	
1887		51	5.01	27	2.64	1	·28
1888		53	4.99	22	2.07	Nil.	
Total	•••	375	5.22	142	2.14	19	•96

# DEATHS FROM HYDATIDS IN AUSTRALASIAN COLONIES, 1882 TO 1888—continued

		Number of Deaths from Hydatids.							
Year.	Total.	Per 100,000 Persons Living.	Total.	Per 100,000 Persons Living.	Total.	Per 100,000 Persons Living.			
	SOUTH 2	USTRALIA.	TAS	MANIA.	New Z	 ZEALAND.			
1882	12	4.14	4	3.31	7	1.37			
1883	6	2.01	4	3.22	1	·19			
1884	13	4.21	6	4.67	3	•55			
1885	. 5	1.60	2	1.51	3	•53			
1886	. 18	5.76	<b>2</b>	1.46	4	·68			
1887	. 9	2.87	3	2.15	3	•50			
<b>18</b> 88	. 13	<b>4</b> ·09	2	1.39	5	•83			
Total	. 76	3.53	23	2.53	26	·66			

NOTE.—In Western Australia only 1 death in 1888, but none in the previous years were set down to this disease.

Hydatids in England.

691. Hydatid disease is much more fatal in all the Australasian colonies than it is in England and Wales, where there were only 54 deaths from it in 1888, or a proportion of '19 per 100,000 persons living, as compared with a mean of '20 in the five years 1881 to 1885.\*

Dietic diseases. 692. Dietic diseases, consisting principally of want of breast milk and alcoholism, caused nearly 26 deaths in 1889 per 100,000 persons living, which was 7 higher than in 1888, and slightly above the average, viz., 25. These diseases appear to be nearly four times as fatal in Victoria as in England.

Alcoholism. 693. In 1889, 116 deaths were set down to alcoholism, as against 130 in 1888, 100 in 1887, 107 in 1886, 394 in the previous five years, and 646 in the ten years preceding that period. These figures furnish annual proportions per million persons living of 105 for 1889, 122 for 1888, 99 for 1887, 108 for 1886, 86 for the quinquennium 1881 to 1885, and 81 for the decennium 1871 to 1880, and would appear to indicate that the mortality from this cause was increasing. As a matter of fact, however, returns of the mortality from alcoholism are of doubtful

\* For further information respecting hydatid disease, see Victorian Year-Book, 1888-9, Vol. II. paragraphs 253 and 254.

value, as comparatively few deaths are set down to intemperance pure and simple, although a large number of complaints are no doubt brought on or aggravated, and many lives are doubtless shortened, from that cause, which, however, is not mentioned in the returns. By the following figures, taken from Dr. Raseri's paper\*—which must only be accepted for what they may be worth—the mortality from alcoholism would appear to be as high in Victoria, especially in 1886, as compared with that prevailing in most of the countries and towns named :—

ANNUAL DEATH RATE FROM ALCOHOLISM IN VARIOUS TOWNS AND COUNTRIES.

Deaths from Alcoholism per 1,000,000 persons living.	Deaths from Alcoholism per 1,000,000 persons living.
Denmark (towns) 274 Massachusetts	65
Sweden (principal towns) 99 Scotland	61
Paris 95   Italy	47
Switzerland 88 England and Wales	
Scotland (8 towns) 83 Berlin	40
Connecticut 80 Vienna	···· 36
Belgium 76 Sweden	34
London 74 Ireland	30
Russia in Europe 70 Holland	$\dots 21$

694. The name "Constitutional Diseases"-originally used in the Constituional old—has been continued in the new classification as applying to a diseases. group of complaints of obscure origin, which the committee of the Royal College of Physicians did not attempt to classify or even name in their own classification. These complaints for the most part appear to arise from morbid poisons-deeply seated and widely diffused throughout the system, affecting several organs, in which new products are often deposited. The most prominent are phthisis and other tubercular diseases, and cancer; also rheumatism, gout, and diabetes Under this class there were, in 1889, 258 deaths per 100,000 mellitus. of the population, or 26 more than the average of the five years 1881-85, and 42 above the average of the decade 1871-80. Of the 258 deaths per 100,000 referred to, 142 resulted from phthisis, or pulmonary consumption; 57 were set down to cancer; 40 to tabes mesenterica, acute hydrocephalus and other tubercular or scrofulous diseases; and 19 to other constitutional diseases.

\* Page 186. VOL. I. 2B

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Phthisis.

695. Phthisis, or pulmonary consumption, caused 1,571 deaths in 1889, or 43 more than in the previous year. Except during the prevalence of epidemics, phthisis is the occasion of more deaths in Victoria than any other disease;\* next to phthisis, diarrhœa is usually the most fatal disease on the list (although in 1889 heart disease stood before it), but this complaint causes less than two-thirds of the number of deaths set down to phthisis. It should moreover be borne in mind, as showing the baneful effects of phthisis as compared with those of the other diseases named, that the deaths ascribed to diarrhœa are for the most part those of infants and young children, whilst the majority of the victims of phthisis are at the adult period of life. The following table shows the number of deaths from phthisis and their proportions to the total population, in each of the last twentynine years :--

DEATHS	FROM	PHTHISIS	IN	VICTORIA,	1861	то	1889.
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Year.		Deaths fi	com Phthisis.			Deaths from Phthisis.		
		Total Number.	Number per 10,000 Persons Living.†	Year.		Total Number.	Number per 10,000 Persons Living.†	
1861		753	13.94	1877		1.088	13.46	
1862	• • •	707	12.90	1878		1,124	13.68	
1863	•••	717	12.74	1879		1.058	12.69	
1864		686	11.70	1880		1.175	13.82	
1865		741	12.12	1881		1.199	13.80	
1866		<b>782</b>	12.43	1882		1.274	14.31	
1867		793	12.31	1883		1.212	13.30	
1868		746	11.25	1884		1.359	14.55	
1869		893	12.99	1885		1.384	14:44	
1870	•••	888	12.45	1886	•••	1.375	13.93	
1871		841	11.41	1887		1.557	15.27	
1872		876	11.63	<b>18</b> 88		1.528	14.39	
1873		<b>945</b>	12.34	1889		1.571	14.23	
1874		1,011	13.00					
1875		1.027	13.04	Total in 29	) vears	30.320	13.25	

1876	1,010	12.68		
			•	

NOTE.—Deaths registered as occurring from hæmoptysis are included in this table.

Death rate from phthisis. 696. By the figures in the table it appears that the death rate from phthisis fell with tolerable steadiness from 1861 to 1871, but since that period there has, on the whole, been a gradual increase. During

- \* See table following paragraph 663 ante.
- T † For figures of mean population used in making these calculations, see table "Breadstuffs Available for Consumption" in Part "Production" in the second volume.

the whole period of twenty-nine years the deaths from this complaint were in the proportion of  $13\frac{1}{4}$  to every 10,000 persons living; during the first ten of those years that proportion was about  $12\frac{1}{2}$  (12.483); in the second ten it was over  $12\frac{3}{4}$  (12.775), and in the last nine it was  $14\frac{1}{4}$  (14.26). It must, however, be borne in mind that the proportions living at the ages at which phthisis is most fatal, viz., between 15 and 45, have also increased. It will be observed that the death rate from phthisis in 1889 (14.23 per 10,000) was lower than in 1888, 1887, 1885, 1884, or 1882, but higher than in any other year of the period.

697. Phthisis in Victoria generally affects males more heavily Deaths of males and In 1889, 956 of the former, and 615 of the latter, females than females. from died of that complaint; the males being in the proportion of 16.27, phthisis. but the females of only 11.90, per 10,000 of their respective sexes living.

698. The following table gives the number of deaths from phthisis Ages at at each age in 1889; also the proportion which such deaths bore to phthisis. the total deaths from all causes in 1889 and in the ten years ended with 1880 :---

death from

Arrog	Number wh	no Died from P	Percentage of Deaths from Phthisis to those from all Causes.		
11g05.	Males.	Females.	Total.	1889.	Ten Years: 1871-80.
Under 5 years	18	11	29	·37	•51
$   \frac{3}{10} \frac{10}{15} $	0 5	0 7/7	11	6.08	1.40
10 ,, 10 ,, 15 90	20 20	. 17	100	18.52	010
20 25	95 95	01 04	189	23.48	29.92
<b>25</b> 35	266 266	187	453	28.51	29.18
35 45	$\frac{1}{170}$	103	$\frac{100}{273}$	23.12	20.27
45 55	156	87	$\frac{-13}{243}$	15.73	13.69
55 65	146	40	186	8.85	8.30
65 75	47	9	56	3.36	2.97
75 years and upwards	8	1	9	•77	•83
Total	956	615	1,571	8.10	8.29

DEATHS FROM PHTHISIS, 1889.—AGES AT DEATH.

699. From a comparison of the figures in the last two columns, it Phthisis most fatal will be observed that in proportion to the total deaths the mortality to adults. from phthisis in 1889, at the age-periods under 5, between 15 and 35, 2B 2

and over 75 years, were considerably below, but at the other ageperiods were above, the average. In the year under review, about one-fourth of the deaths in the colony between the ages of 20 and 45, nearly one-fifth of those between 15 and 20, and nearly a sixth of those between 45 and 55, were caused by phthisis.

Phthisis in Melbourne and country. 700. Of the 1,571 deaths from phthisis in 1889, 923 occurred in Melbourne and suburbs (Greater Melbourne) and 648 in other parts of the colony. In proportion to population, the deaths from phthisis have always been much more numerous in the metropolis than in the remainder of the colony, as is shown by the following figures, which are the results for twenty-nine years :—

DEATHS	FROM	Phthisis	PER	10,000	Persons	s Li	VING	IN	AND
	OUTSID	E GREATE	R M	ELBOURI	NE, 1861	то	1889.		

Year.		Greater Melbourne.	Extra- Metropolitan Districts.	Year.		Greater Melbourne.	Extra- Metropolitan Districts.
1861	•••	23.44	10.63	1877	• • •	22·74	9.29
1862	•••	24'04 99.71	8.71	1878	• • •	22.62	9.63
1093	•••	2011	019	1079	• • •	2177	8.49
1004	• • •	20.00	8-70 8-57	1000	• • •	23.95	8.9Z
	•••		0.79	1001	•••	22.71	9.45
1866	•••	20.42	9.93	1882	•••	23.09	10.03
1867	• • •	21.56	8.87	1883		22.27	8.80
<b>18</b> 68		20.83	7.63	1884		24.45	9.32
1869	•••	23.87	8.83	1885	• • •	23.92	9.10
<b>187</b> 0		22.49	8.56	1886		21.25	9.51
1871		22.08	7.20	1887		23.22	10.31
1872		18.69	8.62	1888		21.55	9.71
1873		20.51	8.77	1889		20.73	9.83
1874		22.04	8.94				
1875		$\frac{-1}{21.46}$	9.25	Means		22.23	9.04
1876	•••	$\overline{22\cdot46}$	8.28	Broans	• • •		UVI

Death rate from phthisis in England. 701. In England and Wales, in the twenty-five years ended with 1888, the death rate from phthisis, per 10,000 persons, ranged from  $25 \cdot 33$  in 1866 to  $15 \cdot 41$  in 1888, the mean of the first five years of the period having been as high as  $25 \cdot 10$ , whilst that of the last five years was as low as  $16 \cdot 83$ .\* The latter proportion, though considerably lower than that of Greater Melbourne, is still much higher than that of Victoria taken as a whole. It may be remarked that there is no

\* See Fifty-first Report of the Registrar-General of England, page xlviii.

doubt the death rate from phthisis in the metropolis has for years past been swelled by the presence of persons who started from Europe whilst suffering from the disease in an advanced stage and who were induced to take the voyage under the hope that benefit might be derived from the Australian climate, but have landed in Melbourne only to die there.

702. Of the 250 Chinese who died in Victoria in 1889, 33, or 13 Phthisis among per cent., fell victims to phthisis. In the previous year 18 per cent. Chinese. of the deaths of Chinese were from phthisis.

703. Eight out of the 36 deaths of Aborigines in 1889 were set Pathisis down to phthisis. Mr. Henry Jennings, Vice-Chairman of the Board Aborigines for the Protection of the Aborigines, in his report dated 1st July, 1879,\* says—"Lung disease" (with which he probably includes phthisis) "is the chief cause of the death of the Aborigines, who, when once affected, very seldom recover;" and Mr. Richard Bennet, in an article entitled Some Account of Central Australia, † says, with reference to the Australian Aborigines generally, "From my experience among the blacks, I believe nine-tenths of them die of consumption." Similar testimony is given by the late Mr. E. M. Curr, in his admirable and exhaustive work, The Australian Race.<sup>‡</sup>

704. The rate of mortality from phthisis in Victoria would appear, Phthisis in by the calculations in the following table, to have been, over a series of years, lower than in Queensland, but much higher than in any other of the Australasian colonies. It will be observed that the figures of the other colonies in the several years exhibit more variation than those of Victoria, and that Queensland is the only colony besides Victoria in which the rate in any of the years exceeded 13 per 10,000; also that the rate in Queensland in 1884 and 1885, viz., 19 per 10,000,

> ^ . . . .

\* See Fifteenth Report of the Board, Parliamentary Paper No. 68, Session 1879.

† See Victorian Review for April, 1880, page lxxv.

‡ See Victorian Year-Book, 1888-9, Vol. II., paragraph 267.

§ It is pointed out by the Registrar-General of Queensland, in his Annual Reports, that the death rate from phthisis as well as from other complaints in that colony is considerably swelled by the high mortality amongst the Polynesians, and that the diminished mortality since 1884-5 is probably to some extent due to the gradual decrease of the Polynesian element, viz., from  $4\frac{1}{4}$  per cent. in 1884 to only  $2\frac{1}{4}$  per cent. in 1887-8 of the total population. Nearly half the deaths from phthisis in 1884 and 1885, and nearly two-fifths in 1886 and 1887, were of Polynesians, although they form a very small section of the total population. Excluding the Polynesians from the calculation, the death rate from phthisis in Queensland in 1884 was only 10.4, in 1885 only 10.5, in 1886 only 9.2, in 1887 only 10.2, and in 1888 only 8.75 per 10,000. It is stated that the general death rate of Polynesians in Queensland during 1884 was as high as 148, and during 1885 as high as 99, per 1000.

# DEATHS FROM PHTHISIS IN AUSTRALASIAN COLONIES, 1873 to 1888.

			Nu	mber of Deat	hs from Phthis	is.	
Year.		Total.	Per 10,000 Persons Living.	Total.	Per 10,000 Persons Living.	Total.	Per 10,000 Persons Living.
		Vict	OBIA.	NEW SOU	TH WALES.	QUEEN	SLAND.
1873		945	12.34	•••	1	145	10.35
1874		1.011	13.00		[]	163	10.51
1875		1.027	13.04	614	10.50	<b>228</b>	13 <b>·2</b> 2
1876		1.010	12.68	616	10.21	260	14.12
1877		1.088	13.46	597	9.49	<b>225</b>	11.23
1878		1.124	13.68	652	9.91	263	12·7 <b>2</b>
1879	-	1.058	12.69	746	10.80	<b>2</b> 81	13.12
1880		1.175	13.82	803	11.06	<b>3</b> 01	13 <sup>.</sup> 56
1881		1,199	13.80	874	11.20	292	13·21
1882		1.274	<b>14</b> ·31	927	11.66	<b>4</b> 04	17.00
1883		1.212	13.30	948	11.36	471	17.58
1884	•••	1,359	14.55	1.018	11.56	572	19.40
1885		1 384	14.44	1.078	11.28	593	19.20
1886		1 375	13.93	1.051	10.73	494	14.86
1887		1,557	15.27	977	9.26	441	12.43
1888		1,528	$\overline{14}\overline{39}$	1,045	9.82	$\overline{492}$	13.04
Total	•••	19,326	13.68	11,946	10.70	5,625	14.12
		South A	USTRALIA.	Tasm	ANIA.	New Z	BALAND.
1873		153	7.84	115	11.10	206	7.16
1874	•••	179	8.89	101	9.69	270	8.47
1875	•••	209	10.07	114	10.97	339	9.45
1876		226	10.36	102	9.75	307	7.92
1877		203	8.78	127	11.95	326	7.98
1878		$\frac{100}{267}$	11.00	115	10.60	326	7.73
1879	•••	271	10.66	90	8.09	399	<b>8</b> ·90
1880		277	10.21	113	9.95	44.7	9.42
1881		274	9.49	115	9.80	468	9.28
1882		341	11.77	127	10.52	438	8.60
1883		313	10.47	130	11.18	500	9.45
1884	•••	323	10.46	145	11.90	<u>408</u>	9.07
1885		307	9.80	145	10.07	<u>51</u> 1.	9.08
1886	•••	330	10.85	145	10.57	514 KUU	R-4R
1887	•••	353	11.97	154	11.01	500 52 <i>1</i> .	8.95
1888		365	11.48	116	8.04	476	7.86
Total	•••	4,400	10.23	1,963	10.34	6,548	8.61

Tubercular diseases. 705. Deaths from tubercular diseases, viz., tabes mesenterica, tubercular meningitis (acute hydrocephalus), phthisis, and "other forms of tuberculosis," taken as a whole, numbered 13,052 in the ten

years 1871 to 1880, 7,932 in the five years 1881 to 1885, 5,578 in the three years 1886 to 1888, and 2,013 in 1889. These numbers furnish proportions per 10,000 of the population of 16.36 deaths annually at the first period, 17.38 at the second, 18.17 at the third, and 18.23 at the fourth, which are all lower than the proportions relating to any of the subjoined countries except Spain :—

# ANNUAL DEATH RATE FROM TUBERCULAR DISEASES IN VARIOUS COUNTRIES, 1881 TO 1884.\*

				Death Tubercula per 1 person	s from ar Diseases 10,000 s living.
Austria (principal town	ns)	• • ′	•••	$\dots$ 72	·20
Austria	•••		• • •	38	.39
Belgium (towns)	• • •	• • •		35	•11
Germany (principal tov	vns)	• • •	•••	34	•40
Massachusetts	• • •		• • •	34	$\cdot 25$
Switzerland (towns)			• • •	32	•50
Sweden (towns)			• • •	31	•61
Scotland (8 towns)	• • •	• • • •		31	$\cdot 12$
Prussia	• • •			30	·88
Belgium	• • •			30	$\cdot 48$
Denmark (towns)				30	$\cdot 42$
Spain (towns)	• • •		• • •	29	$\cdot 24$
Scotland	• • •			$\dots 25$	•93
Italy	• • •	• • •		$\dots 25$	•54
Ireland	• • •			$\dots$ 22	•43
Switzerland			• • •	$\dots 21$	·79
England and Wales				$\dots 21$	·09
Holland		• • •		19	·73
Spain	• • •	•••	• • •	$\dots$ 12	$\cdot 32$
-					

706. Next to phthisis, the most fatal of the constitutional diseases Deaths from is cancer. This complaint caused 629 deaths in 1889, or 108 more  $\stackrel{\text{cancer in Victoria.}}{\text{Victoria.}}$ than in the previous year. Cancer in a fatal form has been much increasing of late years, for during the ten years ended with 1880 it caused only 1 death in every 41 from all causes, but in the last five years the proportion had risen to 1 in 32; moreover since 1861 the death rate from it has increased steadily from less than 2 to over 5 per 10,000 of the population; whilst in 1889 the exceptionally high rate of 5.7 was reached—the highest previous to that year being only 5.17. The following table shows the number of deaths from cancer, and the number per 10,000 persons living, in each of the last twentynine years :—

\* See Dr. Raseri's paper, page 193. The diseases referred to are there termed "Tubercolosi diffusa, Tisi polmonare, Tubercolosi meningea, ed Idrocefalo."

				Deaths	from Cancer.	
	Year.	-		Number per		
			Males.	Females.	Total.	Living.
1861			52	50	102	1.89
1862	• • •		30	50	80	1.46
1863	• • •		58	45	103	1.83
1864		•••	55	72	127	2.17
1865	•••		81	70	151	2.47
1866	• • •		52	64	116	1.84
1867	• • •		63	57	120	1.87
1868	•••		95	88	183	2.76
1869	• • •		85	99	184	2.68
1870	•		109	105	214	3.00
1871	•••	,	100	93	193	2.62
1872			130	96	<b>22</b> 6	3.00
1873	•••		122	128	250	3.27
1874	•••		146	122	268	3.45
1875	•••		168	140	308	3.91
1876	••		150	153	303	3.80
1877	•••		169	160	329	4.07
1878			182	132	314	3.82
1879			205	178	383	4.59
1880	•••		202	181	383	4.50
1881		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	172	179	351	4.04
1882			208	165	373	4.19
1883			234	216	450	4.94
1884	· · · ·		221	225	446	4.78
1885		,	234	211	445	4.64
1886			247	249	496	5.02
1887			275	252	527	5.17
1888		• • •	276	245	521	4.91
1889			324	305	629	5.70
Total	in 29	years	4,445	4,130	8,575	3.75

DEATHS FROM CANCER, 1861 TO 1889.

**Proportions** cancer.

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707. Cancer is a complaint which generally affects females more of the sexes than males.\* In the twenty-nine years of which mention is made who died of in the table, 93 of the former have died of it to every 100 of the latter, whereas the proportion of females to males at ages at which cancer is most prevalent (i.e., above 30 years of age) has over the whole period t been considerably below the proportion named. In 1889, 94 females died of cancer to every 100 males, although, in the population, females over the age of 30 were in the proportion of only 78 to every 100 males.

\* The difference may not really be so great as it appears to be from the figures. See Victorian Year-Book, 1887-8, Vol. I., paragraph 699.

† At the age referred to, females in the population were in the proportion of 42 at the census of 1861, of 59 at the census of 1871, and of 74 at the census of 1881, to every 100 males.

708. Judging from the experience of the seven years ended with Cancer in 1888, cancer is more fatal in Victoria than in any other Australasian asian colony except Tasmania, to the rate in which the Victorian rate is about equal. Tasmania is a colony in which—as cancer is essentially a complaint of advanced life—the large proportion of old people would naturally lead to the expectation of a high death rate therefrom. The following are the figures for the seven years referred to :---

DEATHS FROM CANCER IN AUSTRALASIAN COLONIES, 1882 TO 1888.

		Number of Deaths from Cancer.			
Colony.	Year.	Total.	Per 10,000 Persons Living.		
(	1882	373	4.19		
	1883	450	4.94		
	1884	446	4.78		
Victoria	1885	445	4.64		
	1886	496	4.94		
	1887	527	5.17		
la de la companya de	1888	521	4.91		
	Mean of 7 years	465	4.79		
(	1882	215	2.71		
	1883	215	2.58		
	1884	233	2.65		
New South Wales	1885	267	2.87		
	1886	333	3.40		
	1887	354	3.46		
	1888	404	3.80		
	Mean of 7 years	289	3.02		
(	1882	54	2.27		
	1883	70	2.61		
•	1884	94	3.19		
Queensland	1885	53	1.71		
	1886	92	2.68		
	1887	81	$2\cdot 28$		
	1888	88	2.33		
,	Mean of 7 years	76	2.44		
	1882	89	3.07		
	1883	86	2.88		
	1884	109	3.23		
South Australia	1885	100	3.19		
	1886	104	3.33		
· ·	1887	110	3.51		
	1888	116	3.65		
	• Mean of 7 years	102	3.31		

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Austral-

colonies.

			Number of Deaths from Cancer.			
Colony.		Year.	Total.	Per 10,000 Persons Living.		
		1882	9	2.96		
		1883	10	3.20		
		1884	10	3.09		
Western Australia		1885	17	4.99		
		1886	15	3.74		
		1887	17	4.08		
	IJ	1888	18	4.25		
		Mean of 7 years	14	3.76		
		1882	60	4.97		
		1883	67	5.39		
		1884	65	5.06		
Tasmania		1885	60	4.54		
		1886	57	4.16		
		1887	67	4.79		
	U	1888	68	4.71		
		Mean of 7 years	63	4.80		
	ſ	1882	147	2.88		
		1883	158	2.99		
		1884	191	3.48		
New Zealand		1885	177	3.13		
		1886	214	3.63		
		1887	238	3.99		
	U	1888	263	4.34		
		Mean of 7 years	198	3.49		

DEATHS FROM CANCER IN AUSTRALASIAN COLONIES, 1882 TO 1888 ---continued.

Deatns from cancer in England

709. In England and Wales there has for years past been a progressive increase in the death rate from cancer. This rate, in the three and Wales. years ended with 1888, was much higher than that prevailing in in any Australasian colony. The following figures are taken from the reports of the Registrar-General, who, however, indicated that he entertained doubts as to whether the increase shown by the figures was not partly due to improved diagnosis and more careful statement

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of the cause\* :--

#### DEATHS FROM CANCER IN ENGLAND AND WALES.

	I Can pe	Deaths from cer per 10,000 ersons living.			D Cano per	eaths from cer per 10,000 rsons living.
1861 to 1865	•••	3·68 Ŭ	1886			5.83
1866 to 1870		<b>4·04</b>	1887			6.06
1871 to 1875	• • •	4.46	1888	•••		6.10
1876 to 1880	• • •	4.95				
1881 to 1885		5.45		Mean	• • •	<b>4·76</b>
			,			

\* See Forty-sixth Annual Report, page xviii.; also Victorian Year-Book, 1887-8, Vol. I., paragraph 699.

710. According to the following figures, cancer would appear to be Deaths from less fatal in Victoria and Tasmania than in any of the countries various named except Prussia, Ireland, and Austria; less fatal in Western Australia than any except Ireland and Prussia; less fatal in South Australia and New Zealand than in any except Prussia; and less fatal in the other two colonies than in any one of the countries referred to :---

ANNUAL DEATH RATE FROM CANCER IN VARIOUS COUNTRIES, 1881 то 1884.\*

	l Car p	Deaths from ncer per 10,000 ersons living.			(	Deaths from Cancer per 10,000 persons living.
Austria (15 principa	al			England and Wales	• • •	5.35
towns)		11.20		Massachusetts		5.30
Denmark (towns)		10.98		Scotland (8 towns)		5.27
Sweden (towns)	• • •	8.71		Scotland	•••	5.26
Switzerland	•••	8.46		Austria		4.23
Italy	• • •	6·13	3	Ireland		3.69
Holland	• • •	5.82		Prussia	• • •	3.13

711. Developmental diseases, + Class V., caused 122 deaths in Develop-1889 to every 100,000 of the population Of these 56 were due to diseases. diseases peculiarly affecting infants, such as premature birth and malformations, and 66 to old age. The rate of mortality from the whole class in 1889—viz., 122 per 100,000—appears to have been about 25 more than the average of the five years 1881-5, and 47 more than the average of the ten years ended with 1880; the increase, especially as compared with the last named period, being chiefly confined to deaths from old age. The increased death rate from old age is accounted for by the circumstance that the proportion of old people (75 and upwards) in the population has increased since 1871-80 by 88 per cent., whilst the average age of such persons has advanced also. The actual deaths of infants born prematurely numbered 475 in 1889which number gives a proportion of  $8\frac{1}{2}$  per cent. of the total deaths under one year, or  $1\frac{1}{3}$  per cent. of the total births recorded, which proportions closely correspond with the average during the five years ended with 1885. The death rate from this class of complaints is always much higher in England than in Victoria.

cancer in countries.

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712. Local diseases, Class VI., or diseases of special organs or Local diseases. systems, usually cause a much higher mortality than any other class of complaints; thus, in 1889, 8,726 deaths, or 45 per cent. of the deaths from all causes, were ascribed to them, that being the same proportion

<sup>\*</sup> See Dr. Raseri's paper, page 193.

<sup>†</sup> This class of diseases differs from that under the old nosology; dentition, paramenia and childbirth, and atrophy and debility not being now classed as developmental diseases.

as in the five years 1881 to 1885. The deaths from diseases placed in this class were in 1889 in the proportion to every 100,000 of the population of 790, or 120 above the five years' average. Over a fifth of these diseases were due to affections of the brain and nerves: nearly a sixth to diseases of the circulatory system, including heart diseases; about two-sevenths to lung and throat diseases-viz., croup, bronchitis, pneumonia, pleurisy, etc.; a fourth to diseases of the digestive organs;  $6\frac{1}{4}$  per cent. to diseases of the urinary organs; a little over 1 per cent. to the accidents of childbirth; and the remainder to diseases of the integumentary, locomotive, and generative systems; of the organs of special sense; and of the lymphatic and ductless glands, in the order named. In the year under review the death rates from complaints classed under all the principal sub-classes of local diseases, except childbirth---more especially diseases of the circulatory, digestive, and urinary systems-were above the average of the five years ended with 1885; and, excepting diseases of the nervous system and childbirth, they were also higher than in the earlier period 1871-80. In England, the death rate from local diseases is, on the average, fully 50 per cent. higher than the death rate from that class of complaints in Victoria.

Diseases of respiratory system.

713. The mortality from diseases of the respiratory system in 1889 was somewhat above the average. The proportion in 1889 was 222 to every 100,000 persons living, while it was 218 in the five years 1881-5, but only 195 during the ten years 1871-80. The diseases in this group cause, on the average, half as many deaths again as phthisis (which is not included amongst "lung diseases," being classed as a "constitutional" disease\*). The victims are, for the most part, young children and old people, the majority dying in the winter quarter (July to September). In the year under review the actual number of deaths from these causes was 2,450, being equal to over one-eighth of the total mortality; and of these pneumonia caused 898, bronchitis 753, congestion of the lungs 196, and croup 279. Of those who died from these complaints, 1,127 were under 5 years-more than half of these being under 1 year-and 779 were over 50 years of age. If deaths from phthisis be added to those from diseases of the respiratory system, it will be found that altogether 4,021 deaths in 1889 (or 362 more than in 1888) were from diseases particularly affecting the organs of respiration, which is equal to between one-fourth and one-fifth of the total mortality.

\* See paragraph 694 ante.

714. Bronchitis and pneumonia, with congestion of the lungs, Bronchitis caused 11,477 deaths in the ten years ended with 1880, 7,857 in the monia in five years ended with 1885, 1,777 in 1886, 1,591 in 1887, 1,539 in 1888, and 1,847 in 1889, which numbers furnish proportions per 10,000 of the population of 14.40 deaths annually for the first period, of 17.22 annually for the second period, of 18.00 for 1886, 15.60 for 1887, 14.49 for 1888, and 16.72 for 1889. The complaints referred to are, according to the following figures, much less fatal here than in any of the countries named except Prussia, it being assumed that congestion of the lungs is included with bronchitis and pneumonia in the returns of the various countries :---

# ANNUAL DEATH RATE FROM BRONCHITIS AND PNEUMONIA IN VARIOUS COUNTRIES, 1881 TO 1884.\*

			د. د	
	Per 1	),000 persons living.	Per 1	0,009 p <b>erson</b> s living.
Spain (principal towns Italy Scotland (8 towns) Austria (principal town Holland Scotland Belgium England and Wales	)  as)	53.15 45.31 38.06 37.95 36.32 34.13 32.87 32.25	Germany (principal towns) Denmark (towns) Belgium (principal towns) Ireland Switzerland (principal towns) Spain Sweden (principal towns)	27.87 27.47 27.06 26.76 26.69 24.12 24.10
Switzerland Austria	• • •	31∙52 28∙09	Massachusetts Prussia	$21.03 \\ 16.63$

715. The death rate from a given complaint is usually ascertained Deaths in by comparing the number of deaths from it with the number of persons living, but the death rate of women in childbed is better realized by comparing the number of deaths of parturient women with the total number of births. Such deaths are classified in two ways. If the death is supposed to occur merely from the consequences of childbearing without specific disease, it is set down under the head of Childbirth, Class VI., Sub-class 9; but, if it should arise from Puerperal Fever, it is placed under that head, Class I., Sub-class 6. In 1889 the proportion of deaths of child-bearing women to the number of children born was, with the exception of that in 1871, the lowest recorded in the last twenty-six years, as is shown in the following table :---

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and pneuvarious Countries.

childbed.

\* See Dr. Raseri's paper, page 193. The complaints referred to are there termed "Bronchite e Polmonite."

DEATHS	OF	WOMEN	IN	CHILDBIRTH,	1864	то	1889.
I J LIATIN				/			

		Number o	f Mothers who	Deaths of Mothers	
Year.		Childbirth.	Puerperal Fever (Metria).	Total.	to every 10,000 Children born alive.
1864		100	21	121	47.12
1865		99	<b>24</b>	123	′ 47·46
1866		112	26	138	55.18
1867		117	<b>20</b>	137	5 <b>3·51</b>
1868	•	110	23	133	48 82
1869	• •••	105	18	123	47.23
1870	• •••	115	9	124	45.67
1871		90	12	102	37.25
1872	• • • • •	123	16	139	50·80
1873		127	44	171	60· <b>85</b>
1874		142	109	251	<b>93</b> 66
1875		154	83	237	88·70
1876		117	48	165	61.64
1877		131	42	173	66.51
1878		149	49	198	74·49
1879		123	38	161	59·99
1880		111	20	131	<b>50</b> 0 <b>9</b>
1881		155	78	233	85.84
1882		117	59	176	65 <sup>.</sup> 80
1883	•	115	43	158	57·37
1884	• •••	131	72	203	70.36
1885	• • • •	106	62	168	56 <sup>.</sup> 05
1886	•••	122	70	192	62·29
1887		116	58	174	52·6 <b>6</b>
1888		113	74	187	<b>54</b> ·20
1889	•• •••	101	62	163	44.83
Total in twenty	-six years	3,101	1,180	4,281	59.17

Increase of deaths in childbed at epidemic periods.

716. In 1884, the death rate of parturient women showed a sudden increase concurrently with the prevalence of an epidemic of measles, followed by a remarkable decrease in 1885 coincidently with the gradual disappearance of that epidemic. It is a singular fact that at or about the four periods during the last twenty-four years at which epidemics of measles and scarlatina have prevailed in Victoria,\* viz., 1866-7, 1874-5, 1881-2 and 1884, the mortality of child-bearing women largely increased. Whether this is only a coincidence, or whether there is any connexion between the two circumstances, is a matter which merits the consideration of the medical faculty. It should be mentioned that the visitation in 1881-2 differed somewhat from the others, as the deaths of child-bearing women did not increase in numbers concurrently with the epidemic, but in the year following that in which it was most fatal.

\* See table following paragraph 675 ante.

717. The proportion of women dying in childbed during the whole Deaths in period of twenty-six years was 1 to 168 births, and in 1889 the proportion was 1 to every 223 births. In 1888, the proportion was 1 to every 185 births; in 1887, 1 to every 190 births; in 1886, 1 to every 161 births; in 1885, 1 to every 178 births; and in 1884, it was as high as 1 to every 142 births. All these proportions are much higher than those in England and Wales, where, in the five years ended with 1887, 200 births occurred to each death of a mother.\* In Scotland, 1 woman died in childbirth to every 207 births during 1873, and to every 149 births in 1874; and in Ireland, during the ten years, 1869-78, 1 woman died in childbirth to every 151 births.

718. In the Midwifery Department of the Melbourne Women's Deaths from childbirth Hospital, 762<sup>+</sup> women were confined, and 711<sup>+</sup> infants were born in Women's Hospital. alive, during the year ended 30th June, 1889. Ten deaths of mothers occurred during or shortly after parturition; or 1 death of a mother to every 76 deliveries, or to every 71 births. In 1887-8, 1 death of a mother took place therein to 168 deliveries, or 158 births; in 1886-7, 1 to 28 deliveries, or 26 births; in 1885-6 1 to 34 deliveries, or 32 births; in 1884-5, 1 to 17 deliveries, or 16 births; in 1883-4, 1 to 31 deliveries, or 28 births; in 1882-3, 1 to 86 deliveries, or 77 births; in 1882 (first six months), 1 to 60 deliveries, or 56 births; in 1881, 1 to 29 deliveries, or 27 births; in 1880, 1 to 98 deliveries, or 89 births; in 1879, 1 to 71 deliveries, or 67 births; and in 1878, 1 to 92 deliveries, or 86 births. These proportions are, on the average, about  $2\frac{1}{2}$  times as high as those for the whole colony; but it should be mentioned that, all over the world, maternity hospitals are subject to receive a worse class of cases than the average of those dealt with outside, women not unfrequently being brought in such a state as to render their recovery from the first almost hopeless; therefore, in all such institutions, the

childbed in Victoria and United Kingdom.

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death rate of the inmates is higher than that which prevails amongst child-bearing women in the general population. It should be mentioned that the committee of management of this hospital attribute

\* There is reason to believe that the mortality from childbirth and metria in England is much understated, as the sending out of letters of inquiry in 1882-an exceptional proceeding-respecting certain ill-defined causes of death had the effect of increasing the recorded mortality from childbirth and metria ten per cent. If this correction be applied to the average above stated, the proportion would be 1 death of a mother to as few as 185 births.—See 45th Annual Report of the Registrar-General of England, page xvii.

† Including 87 cases occurring outside the hospital at houses provided by the committee, amongst whom 2 deaths occurred.

<sup>‡</sup> Including 7 cases of twins.

the low rate of mortality in 1887-8 to the fact that antiseptic precautions were more rigorously carried out than they had been in former years; but it will be noticed that such a low rate was not maintained in 1888-9.

Deaths in childbed in Australasian colonies.

719. Deaths of lying-in women appear to be more common in Victoria than in any other Australasian colony. It should, however, be mentioned that the fact of a woman dying in child-bed is not always at once discoverable from the death registers. Whether from a desire to conceal the fact of their losing patients in this manner, or from inadvertence, medical men frequently enter the cause of death as debility, exhaustion, blood-poisoning, pyæmia, septicæmia, phlebitis, embolism, peritonitis, hæmorrhage, etc., omitting to state that these circumstances were consequent upon child-bearing until specially asked whether such was the case. The causes of death of females at child-bearing ages should be carefully scrutinized, and the entry should be referred back for inquiry in all cases where the death is stated to have occurred from any of the above causes. It is questionable whether in any of the other colonies the scrutiny is as close as it is in Victoria, and hence it is probable that the full extent of the mortality in child-birth occurring is not known. The inaccuracy with which such deaths are often described excited attention a few years since in England, where the Registrar-General in 1881 and 1882 caused special letters of inquiry to be sent out respecting doubtful deaths of women at child-bearing ages, with the result that 348 deaths in the former and 428 in the latter year were added to those assigned to puerperal fever and the other incidents of child-birth.\* Such a practice has been followed for some years in Victoria, and it is much to be wished that it should be adopted by the other colonies of this group. The rule prescribed, although not always followed, is that whenever child-birth has occurred within one month before death, this fact should be registered with the cause of death. The following table contains a statement of the deaths recorded as having occurred from child-birth and metria in all the Australasian colonies except Western Australia during the sixteen years ended with 1888, and the proportion of such deaths to every 10,000 children born alive in each colony :---

\* See 45th Annual Report, for the year 1882.

		Number of Deaths from Childbirth and Puerperal Fever.								
Year.	Total.	Per 10,000 Children Born Alive.	Total.	Per 10,000 Children Born Alive.	Total.	Per 10,000 Children Born Alive				
	Vio	TORIA.	NEW SO	UTH WALES.	Quee	NSLAND.				
1873	171	60.85			23	40.21				
1874	251	<b>93</b> .66			33	51.70				
1875	237	88.70	149	66·14	37	55.17				
1876	165	61.64	186	79.84	43	62·29				
1877	173	66·51	113	47.38	53	73·9 <b>3</b>				
1878	198	74.49	103	40.67	46	62·19				
1879	161	59.99	90	33.42	38	48.28				
1880	131	50.09	127	45.10	42	51.24				
1881	233	85.84	117	40.35	70	85.15				
1882	176	65.80	118	<b>39</b> ·73	49	57.53				
1883	158	57.37	114	36.44	42	42 47				
1884	203	70.36	137	40.36	67	62.74				
1885	168	56.05	127	36.24	69	59.12				
1886	192	62·29	191	52.64	71	56.43				
1887	174	5 <b>2</b> ·66	173	46.46	62	45.88				
1888	187	54•20	151	39.20	75	52.64				
Sums & Means }	2,978	66.28	1,896	46.00	820	56.69				
	South	AUSTRALIA.		SMANIA.	New	ZEALAND.				
1873	22	30.96	26	85.30	52	46.34				
1874	38	49.38	20	64.58	74	57.61				
1875	54	72.89	32	103.06	93	64:41				
1876	49	59.58	20	<b>63</b> ·51	74	45.77				
1877	45	<b>52</b> .08	25	77.86	74	43.90				
1878	41	44.17	16	45.69	85	47.83				
1879	50	50.49	11	30.86	81	44.83				
1880	39	38.00	18	48.14	76	39.29				
1881	63	58.83	14	35·7 <b>3</b>	92	49.11				
1882	70	64·55	14	34.63	101	53.14				
1883	49	<b>43</b> ·86	19	44.61	95	49.47				
1884	49	41.36	12	26.21	137	69·0 <b>3</b>				

DEATHS FROM CHILDBIRTH AND PUERPERAL FEVER (OR METRIA) IN AUSTRALASIAN COLONIES 1873 TO 1888

1886	<b>36</b>	<b>32·21</b>	<b>13</b>	28·10	111	57·52
1887	<b>54</b>	<b>49·86</b>	<b>19</b>	40·12	95	49·65
1888	43	40 <b>·9</b> 1	18	37·68	111	58·72
Sums & } Means }	755	48:32	293	50.04	1,495	53·11

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**3**4·50

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73.12

NOTE.—In Western Australia 6 deaths of child-bearing women occurred in 1887, and 3 in 1888, or at the rates of 36.7 and 19.8 per 10,000 births, respectively.

720. The above figures show that, in proportion to the children Low death born alive, the number of deaths of child-bearing women in 1888 was rate from childbirth below the average in all the colonies except New Zealand. in colonies, In that 1888. colony the rate was exceeded in only three previous years.

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Deaths from child-bearing in various countries.

721. Comparing the deaths of child-bearing women with every 10,000 of the population, the proportions annually are 2.17 for the decennial period 1871 to 1880, 2.05 for the quinquennial period 1881 to 1885, 1.71 for 1887, 1.77 for 1888, and 1.48 for 1889. These and the following figures show Victoria to stand rather high in regard to the mortality of women in child-bed as compared with many other countries, and especially so as it would appear that deaths from diseases of pregnancy, as well as from circumstances attendant upon child-bearing, are included in the following list, which they are not in the figures for Victoria :—

ANNUAL DEATH RATE FROM DISEASES OF PREGNANCY AND CHILD-BEARING IN VARIOUS COUNTRIES, 1881-84.\*

	Deaths i and Ch 10,000	from Pregnanc ild-bearing per persons living.	Deaths from Pregna and Child-bearing 10,000 persons livit				
Spain (principal to	vns)	3.77	Massachusetts	• • •	1.80		
Spain		<b>3</b> ·56	Denmark (towns)		1.76		
Belgium		2.32	Belgium (principal town	ıs)	1.72		
Prussia		2.20	Ireland	• • •	1.62		
Italy		2.13	England and Wales		1.60		
Scotland (eight tow	ns)	2.10	Holland	. <b></b>	1.43		
Switzerland	••••	2.06	Sweden	• • •	1.29		
Switzerland (princ	pal		Sweden (principal town	s)	1.27		
towns)	• •••	2.02	Germany (principal tow	ns)	1.23		
Scotland		1.87					

Violent deaths. 722. Deaths from external causes, Class VII., in proportion to population, were formerly twice as numerous in Victoria as in England and Wales; but in recent years, as the number of individuals engaged in mining operations has decreased, and greater precautions are taken for the prevention of accidents, the rate in the former has fallen considerably. Over a series of twenty-seven years, the average annual number of violent deaths per 100,000 of the population was 136, but during the ten years 1871-80 it was only 108, and in the subsequent five years it fell to as low as 93, whilst in 1889 it again rose to 107. The last-named rate, however, is still higher by about one half than the rate prevailing in England and Wales, where it averages only 72. The greater frequency of violent deaths in Victoria than in England appears in all classes of such deaths, those from accidents and suicides being, in proportion to population, about a third more numerous, homicides more numerous by two-thirds, and executions twice as numerous.

\* See Dr. Raseri's paper, page 193; the complaints referred to are there termed "Malattie di gravidanza, parto e puerperio."

accident; 40, or 4 per cent., to homicide; 143, or 12 per cent., to suicide; and 3 to execution. Deaths from accidents were formerly more numerous than those from any single disease, and more recently than those from any specific disease except phthisis and diarrhœa.\* Forty-one per cent. of the deaths from accidents in 1889 were due to fractures, 27 per cent. to drowning, and 10 per cent. to burns and scalds. Both homicides and suicides were above the average of the five years ended with 1885. The following table shows the number of deaths and the exact modes of death under the heads of accident and suicide, also the number of deaths from homicide and execution, during the year 1889 and the five years ended with 1885, the sexes of those who died being distinguished :—

		1 Cal 1009.	•	Five Years: 1881 to 1885.		
Causes of Death.	Males.	Females.	Total.	Males.	Females.	Total.
Accidents :						
Fractures and contusions	359	47	406	1.464	168	1 632
Gunshot wounds	20	2	22		-00	<b>1</b> ,000
Cuts, stabs, etc	6	$\overline{2}$	. 8	107	17	124
Burns and scalds	42	60	102	179	255	434
Sunstroke	14	5	19	44	26	$\overline{70}$
Lightning	2	1	3	11	1	12
Poison	15	8	<b>23</b>	63	30	93
Snake, insect—bite	2		2	16	2	18
Drowning	227	43	270	754	179	933
Suffocation	50	34	84	169	114	<b>283</b>
Others	46	15	61	44	19	63
Total	783	217	1,000	2,851	811	3,662
Homicide	20	20	40	53	57	110
Suicide :				-	-	,
Gunshot wounds	31		31	67	2	69
Cuts, stabs, etc.	16	3	19	61	13	$\overline{74}$
Poison	19	10	29	45	26	$\dot{71}$
Drowning	23	6	29	68	27	$\frac{1}{95}$
Hanging	23	3	<b>26</b>	131	7	138
Otherwise	6	3	9	15	1	16
Total	118	25	143	387	76	463
Execution	3	••••	3	8		8
Grand Total	924	262	1,186	3,299	944	4,243

VIOLENT DEATHS.

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\* See table following paragraph 663 ante.

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Violent deaths in proportion to total deaths.

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724. During the five years ended with 1885, 38,213 males and 28,478 females died of specified causes; and it results, from these figures and those in the foregoing table, that, of the males, 1 in every 12 died a violent death; 1 in every 13 died of an accident; 1 in every 721 was a victim to homicide; 1 in every 99 committed suicide; and 1 in every 4,780 was executed. Of the females, 1 in every 30 died a violent death; 1 in every 35 died of an accident; 1 in every 500 died by the hand of another; 1 in every 375 committed suicide; but. happily, not one was executed.

Violent deaths of males and females.

725. Males are much more subject to violent deaths than females. Of those who so died in 1889, 924, or 78 per cent., belonged to the male, and 262, or 22 per cent., to the female sex. These proportions are identical with those which prevailed during the five years ended with 1885.

Violent deaths: proportion ofmalesand females.

726. Omitting fractions, it may be roughly stated that, where 1 female dies a violent death in Victoria, 4 males die violent deaths; where 1 female dies of an accident, 4 males die of accidents; where 1 female commits suicide, 5 males do so; but, according to the experience of recent years, more females are murdered than males. Only 1 woman has been executed in the colony since its first settlement; but in the  $38\frac{1}{2}$  years since Victoria has been an independent colony as many as 132 males have been executed.

Burns and scalds.

727. The only violent deaths which habitually affect females more than males are those resulting from burns and scalds. All other circumstances which occasion such deaths, as a rule, bear more hardly upon males than upon females.

Suicidal deaths.

728. One hundred and forty-three persons took their own lives in 1889, and 139 in the previous year. During the five years ended with

# 1885 the mean annual number of deaths by suicide was 93.

729. Hanging is the most common mode by which men commit Modes of suicide in suicide, drowning and shooting with almost equal frequency the next, Victoria. cutting or stabbing the next, and taking poison the next. Females most frequently take their lives by drowning or by taking poison, next by stabbing or hanging, but only four times in 131 cases which have occurred during the last nine years by shooting. It may be mentioned that suicide by shooting is much more common now than formerly, the number of cases in the five years ended with 1885 being equal to the number in the preceding ten years.

730. The Registrar-General of England in his 46th Report gives Modes of the following table, showing the proportion, during the ten years <sup>suicide in</sup> in England. ended with 1880, of suicides effected by different methods in England and Wales. With the exception of shooting, the relative frequency of each method follows substantially the same order as that obtaining in Victoria :—

Metho	Number by each Method per 1 by all Methods.				
	Males.	Females			
Hanging or strangu	lation			400	268
Drowning	• • •			165	333
Cut or stab	• • •	•••		<b>212</b>	149
Poison	• • •	•••		79	172
Shooting	• • •	•••		68	2
Jump from height	•••	· • •		20	36
Railway train	•••	•••		24	7
Otherwise	• • •	•••		32	33
Total	• • •	• • •		1,000	1,000

MODES OF COMMITTING SUICIDE IN ENGLAND AND WALES.

731. Suicide frequently occurs amongst the Chinese. Six men of Suicides of Chinese. This race committed that act in 1888, and five in 1889. Of the 11 referred to, all but four hanged themselves. The total number of Chinese males in the colony is about 12,000; so that those who committed suicide during 1888 were in proportion of about 1 in 2,000, and during 1889 about 1 in 2,400. In the general population the proportion of persons committing self-destruction averages only 1 in about 10,000.

732. According to the results in the following table, it would suicides in

appear that, in proportion to population, suicide is more common in Victoria than in any other Australasian colony except Queensland. It should, however, be stated that the death records frequently do not upon the surface show that the death has been suicidal, and close examination, with sometimes further inquiry, is therefore necessary to determine that fact. It is hence likely that the full extent to which suicide prevails in some of the colonies is not ascertained. The following are the suicides and their proportion to every 100,000 of the population during the sixteen years ended with 1888 recorded in all the Australasian colonies except Western Australia :---

# DEATHS FROM SUICIDE IN AUSTRALASIAN COLONIES, 1873 to 1888.

	Number of Deaths from Suicide.									
Year.	Total.	Per 100,000 Persons Living.	Total.	Per 100,000 Persons Living.	Total.	Per 100,000 Persons Living.				
	Vic	TORIA.	NEW SOU	TH WALES.	QUEE	NSLAND.				
1873	97	12.7	41	7.5	22	15.7				
1874	97	12.5	64	11.2	10	6.4				
1875	91	11.6	55	94	23	13.3				
1876	100	12.6	61	10.1	24	13.0				
1877	92	11.4	66	10.5	27	13.8				
1978	87	10.6	48	7.3	29	14.0				
1970	108	13.0	62	9.0	40	18.7				
1980	118	13.9	68	9.4	22	9.9				
1991	102	10.0	83	10.9	21	9.5				
1001	83	0.3	55	7.0	40	16.8				
1002	103	11.3	54	6.5	37	13.8				
1000	100	Q·2	81	9.%	45	15.3				
100	80	0.3	95	10.2	36	11.7				
1996	101	10.2	95	9.7	<u>AA</u>	13.2				
1000	132	102	191	11.8	63	17.8				
1888	139			12.4	62	16.4				
Moong	109	11.6		0.5	34	- 13.7				
Means		110		90	JŦ	197				
	SOUTH A	USTBALIA.	TASI	GANIA.	New Z	BALAND.				
1873	10	5.1	6	5.8	20	7.0				
1874	22	10.9	6	5.8	20	6.3				
1875	24	11.2	6	5.8	29	8.1				
1876	15	6.9	6	57	42	10.8				
1877	17	7.3	10	9.4	<b>32</b>	7.8				
1878	18	7.4	8	7.4	37	8.8				
1879	18	7.1	5	4.5	42	9.4				
1880	25	9·5	8	7.0	38	8.0				
<b>18</b> 81	34	11.8	6	5.1	42	8.2				
1882	18	6·3	3	2.2	53	10.4				
1883	31	10.4	5	<b>4</b> ·0	55	10.4				
1884	31	10.0	7	5.2	57	10.4				
1885	32	10.2	5	3.8	<b>54</b>	9.2				
1886	31	9-9	3	<b>2</b> ·2	66	11.3				
1887	29	<u>9</u> ·2	6	4.3	52	8.7				
1888	31	9.8	7	4.9	. 39	6.4				
Means	24	9.0	6	5.2	42	8.9				

Proportion of suicides in different colonies. 733. It will be observed that, according to the records, the suicides which take place annually in Victoria and Queensland are almost invariably above 1 per 10,000 persons living, but those which take place in the other colonies are generally below that proportion, which

indeed was not once reached in Tasmania, seven times in New South Wales, five times in New Zealand, and six times in South Australia, during the sixteen years named in the table. The rate in Tasmania appears to be much lower than in any of the other colonies.

734. By the following figures, which have been derived from Suicides in various sources, it appears that suicide is more common in eight countries. countries out of Australasia than in Queensland, in nine than in Victoria or New South Wales, and in ten than in New Zealand or South Australia, whilst there are only seven out of the twenty-two countries named in which suicide is less common than it is in Tasmania:—

	Deaths in pe Pers	from Suicio each year er 100,000 sons Living.	le	Deaths from Sui in each year per 100,000 Persons Livin			
Saxony	• • •	31.1		New Zealand		8.9	
Denmark	· • • •	25.8		Sweden	•••	8.1	
Schleswig-Holstein	• • •	<b>24</b> ·0		Norway		7.5	
Austria	• • •	21.2		Belgium	• • •	6.9	
Switzerland		20.2		England and Wales		6.9	
France	• • •	15.7		Tasmania		$5\cdot 2$	
German Empire		14.3		Hungary	•••	5.2	
Hanover	• • •	14.0		Scotland	• • •	<b>4</b> ·0	
Queensland	•••	13.7		Italy	•••	3.7	
Prussia	• • •	13.3		Netherlands	• • •	3.6	
Victoria	• • •	<b>11</b> .6	l	United States	• • •	3.2	
New South Wales	· • • •	9.2		Russia	•••	2.9	
Bavaria	•••	<b>9·1</b>		Ireland	• • • '	1.7	
South Australia		<b>9·</b> 0		Spain	•••	1•4	

DEATHS FROM SUICIDE IN DIFFERENT COUNTRIES.

735. It has been pointed out that suicide is a more terrible suicide destroyer of human life than war, for whilst during the first fifty years of the Queen's reign war occasioned 52,000 deaths of subjects of the United Kingdom, and 316,000 deaths of subjects of France, Germany, and Austria, suicide claimed 77,000 victims in the firstnamed country, and 610,000 victims in the other three countries named.\*

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736. According to the following figures, violent deaths during the Violent deaths in seven years ended with 1888 were about the same as in New Zealand, but less common in Victoria than in any other of the Australasian colonies, except South Australia and Tasmania :—

\* See Mulhall's Fifty Years of National Progress, page 11.
VIOLENT	DEATHS	IN	AUSTRALASIAN	Colonies,	1882	то	1888.

			Number of	Violent Deaths.
Colony.		Year.	Total.	Per 10,000 Persons Living.
		$     1882 \\     1883 \\     1884 $	841 908 799	9·44 9·97 8·56
Victoria	{	1885 1886 1887	846 942 1,023	8·83 9·54 10·03
	U	1888 Mean of 7 years	1,119	<u> </u>
	d	1882	904	11.37
N		1883 1884	850 990	10·19 11·24
New South Wales	]	1885 $1886$ $1887$	1,100 1,083 1,148	$ \begin{array}{c c} 11.88 \\ 11.05 \\ 11.23 \end{array} $
	U	1888 Mean of 7 years	$\frac{1,140}{1.032}$	$\begin{array}{ c c c c c }\hline 10.71 \\ \hline 11.10 \end{array}$
	ſ	1882 1883	439 396	$ \begin{array}{c}     18.48 \\     14.78 \end{array} $
Queensland	{	1884 1885	509 492	17·27 15·93
		1886 1887 1888	496 599 593	14.92 16.88 15.72
		Mean of 7 years	503	16.28
	ſ	$1882 \\1883 \\1884$	210 202 239	7·24 6·76 7·74
South Australia	{	1885 1886 1887	212 272 220	6·77 8·69 7·31
	U	1888 1888	234	7.36
	Ċ	1882	53	17.44
Western Australia		$1883 \\ 1884 \\ 1885$	59 51 45	18·89 15·78 13·21
		$     1886 \\     1887 \\     1888 $	67 57 90	18·02 13·67 21·27
		Mean of 7 years	60	16.90
		1882 1883	88 106	7·29 8·53
Tasmania	}	1884 $1885$ $1886$	90 92 94	7.01 6.97 6.94
•		$\begin{array}{c} 1887 \\ 1888 \end{array}$	112 118	8·01 8·18
		Mean of 7 years	100	7.56

			Number of Violent Deaths.			
Colony.		Year.	Total.	Per 10,000 Persons Living.		
		1882	505	9.92		
		1884	494 548	9.33		
New Zealand		1885	517	9.13		
		1886	571	9.81		
		1887	555	9.31		
	- Y	1888	513	8.47		
		Mean of 7 years	529	9.42		
		-				

VIOLENT DEATHS IN AUSTRALASIAN COLONIES, 1882 TO 1888 -continued.

737. In the following table, the Australasian colonies and certain Death rate European countries are arranged in order in accordance with the proportion of deaths from violence to the population of each country which have occurred during a series of years; the proportion of such deaths from accident or negligence, homicide, and suicide being also The figures relating to European countries have been partly shown. derived from the 40th Report of the Registrar-General of England :---

DEATH RATE FROM VIOLENCE IN VARIOUS COUNTRIES.

		Proportio	on per 100,000 Liv	ing of Deaths fi	rom—
Countries.		Violence of all kinds.	Accident or Negligence.	Homicide.*	Suicide.
Queensland Western Australia New South Wales New Zealand Victoria Switzerland United Kingdom† England and Wales Tasmania South Australia Norway Scotland Finland Sweden Russia		$   \begin{array}{r}     163 \cdot 8 \\     161 \cdot 7 \\     111 \cdot 7 \\     95 \cdot 7 \\     94 \cdot 0 \\     92 \cdot 4 \\     77 \cdot 5 \\     75 \cdot 7 \\     74 \cdot 5 \\     74 \cdot 2 \\     72 \cdot 4 \\     72 \cdot 0 \\     62 \cdot 6 \\     61 \cdot 9 \\     61 \cdot 6 \\     51 \cdot 0 \\   \end{array} $	$ \begin{array}{r}     141 \cdot 1 \\     133 \cdot 9 \\     94 \cdot 9 \\     84 \cdot 0 \\     80 \cdot 8 \\     68 \cdot 9 \\     69 \cdot 7 \\     66 \cdot 7 \\     68 \cdot 5 \\     63 \cdot 4 \\     64 \cdot 1 \\     68 \cdot 2 \\     55 \cdot 7 \\     50 \cdot 7 \\     46 \cdot 1 \\     97 \cdot 7 \end{array} $	$\begin{array}{c} 6\cdot 4\\ 12\cdot 1\\ 3\cdot 1\\ 1\cdot 4\\ 2\cdot 7\\ 3\cdot 9\\ 1\cdot 6\\ 1\cdot 7\\ 1\cdot 5\\ 1\cdot 4\\ 1\cdot 3\\ \cdot 1\\ 3\cdot 5\\ 2\cdot 0\\ 2\cdot 1\\ 3\cdot 9\end{array}$	$ \begin{array}{c} 13.5\\ 9.2\\ 9.3\\ 9.0\\ 11.5\\ 20.2\\ 6.2\\ 6.9\\ 5.3\\ 8.9\\ 7.5\\ 4.0\\ 3.4\\ 8.1\\ 13.3\\ 9.1 \end{array} $
Belgium	•••	48.3	38.5	1.6	6.9
Austria	•••	47.1		1	21.2
Ireland Italy	•••	<b>39</b> .1 <b>24</b> .0	35 <sup>-3</sup> 14·9	<b>5</b> ·4	17 3·7
				1	_

from violence in various countries.

NOTE.-In some instances the proportions of deaths from accident, homicide, and suicide are not for the same period as those from violence of all kinds.

\* Not including executions.

† Including the Shipping.

Proportion of violent deaths in different countries. 410

738. It will be seen that the list is headed by five Australasian colonies, in all of which the proportion of violent deaths is higher than in any of the European countries named. Victoria, however, stands below the other four colonies referred to, and immediately above Switzerland, which, with the United Kingdom and England and Wales, stands immediately above Tasmania and South Australia. According to the figures, the country in which the proportion of accidents is greatest is Queensland, that in which the proportion of homicides is greatest is Western Australia, and that in which the proportion of suicides is greatest is Austria.

Railway accidents. 739. The following table gives a statement of the number of cases of death and injury from accidents on the Government lines of railway during the thirty and a half years ended with 30th June, 1889, embracing the whole period of the existence of railways in Victoria:—

DEATHS FROM RAILWAY ACCIDENTS, 1859 TO 1888-9.

				Passengers.			Servants Depar Cor	of the Ra rtment of ntractors	ilway cof ·		Others	3.
	Year.	-	Total Number	From causes beyond their own control.	From their own miscon- duct or want of caution.	Total.	From causes beyond their own control.	From their own miscon- duct or want of caution.	Total.	At crossings.	Trespassers.	Miscellaneous.
1859 to 1 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 (six 1884-5 1885 c	.868         	••••	$\begin{array}{c} 37 \\ 4 \\ 2 \\ 6 \\ 3 \\ \dots \\ 10 \\ 11 \\ 23 \\ 22 \\ 16 \\ 21 \\ 18 \\ 34 \\ 38 \\ 32 \\ 10 \\ 36 \\ 20 \end{array}$	···· ···· ···· ···· ···· ···· ···· ···· ····	···· ··· ··· ··· ··· ··· ··· ··· ··· ·	         	3   4  3 3  1   4  4  4 	$     \begin{array}{r}       19\\       2\\       1\\       2\\      \\      \\       6\\       10\\       10\\       7\\       8\\       7\\       14\\       22\\       10\\       2\\       12     \end{array} $	$22 \\ 2 \\ 1 \\ 2 \\ \\ 4 \\ 6 \\ 13 \\ 13 \\ 7 \\ 9 \\ 7 \\ 14 \\ 22 \\ 10 \\ 6 \\ 12 \\ 10 \\ 6 \\ 12 \\ 10 \\ 12 \\ 10 \\ 12 \\ 10 \\ 12 \\ 10 \\ 12 \\ 10 \\ 12 \\ 10 \\ 12 \\ 10 \\ 12 \\ 10 \\ 10$	$ \begin{array}{c} 1 \\ \\ \\ 1 \\ \\ 2 \\ \\ 2 \\ 3 \\ 3 \\ 5 \\ \\ 7 \end{array} $	$ \begin{array}{c} 14\\1\\1\\2\\3\\\\4\\6\\8\\6\\9\\6\\8\\9\\10\\3\\14\end{array} $	$ \begin{array}{c}     \\     1 \\     \\     2 \\     \\     1 \\     2 \\     \\     1 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     2 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 \\     3 $
1885-6 1886.7*	• • •	•••	38	••••	1	1		15	16	5	14	2
1887-8	• .	• • •	45	4	· 9	4 9	Z	14	16	5	25	
1888-9	•••	•••	78	1	4	5	4	22 23	22 <b>27</b>	7	13 37	2
Tota	l killed	•••	534	11	19	30	25	206	231	54	197	22

\* The high mortality in 1886-7 was chiefly due to the Windsor railway accident. So far as the numbers killed and injured are concerned, this is the worst railway accident which has occurred in Victoria.

Persons In	JURED B	7 ]	RAILWAY	ACCIDENTS,	1859	то	1888-9.
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lber.			Passengers.			Servants of the Railway Department or of Contractors.				Others.		
	Year.		Total Nun	From causes beyond their own control.	From their own miscon- duct or want of caution.	Total.	From causes beyond their own control.	From their own miscon- duct or want of caution.	Total.	At crossings.	Trespassers.	Miscellaneous.
1859 to	1868		84	22	2	24	5	45	50	1	7	2
1869	• • •	• • •										
1870	• • •		4				4		4			
1871		• • •	3	•••				1	1		1	1
1872	• • •	, <b>•••</b>	32	28	2	30	1	1	2			
1873		• • •	1	• • •			•••	1	1		•••	
1874	• • •	• • •	1	••••			•••	1	1	•••		
1875	•••	• • •	8			•••	6	1	7		1	
1876	• • •		27	1	1	2	4	15	19	•••	5	1
1877	••	•••	49	36	•••	36	3	5	8	1	2	2
1878			40	22	3	25	6	5	11		1	3
1879	•••	• • •	45	7	2	9	11	20	31	3	1	1
1880	• • •	• • •	20	5		5	1	7	8	2	3	2
1881	• • •	•••	.64	46	4	50	1	10	11	•••	<b>2</b>	1
1882	•••	· •	261	210	5	215	13	25	38	1	<b>2</b>	5
1883	• • •	•••	101	67	8	75	7	12	19	2	1	4
1884 (si	x months)		90	<b>44</b>	9	53	10	<b>21</b>	31	<b>2</b>	1	3
1884-5	•••	• • •	116	13	23	36	10	46	56	5	9	10
1885-6			191	3	33	36	17	101	118	6	4	27
1886-7*	•••	• • •	358	266	24	290	16	43	59	3	3	3
1887-8	•••	•••	169	18	34	52	15	. 84	99	2	10	6
1888-9	•••	• • •	358	116	82	198	24	107	131	5	12	12
Tot	al injured	••••	2,022	904	232	1,136	154	551	705	33	65	83

740. It will be observed that, in the whole period of thirty and a Railway half years, 534 persons were killed and 2,022 were injured on the State lines of railway, and that, exclusive of trespassers, persons crossing the lines, etc., 225 of the former and 783 of the latter met their death or injury in consequence of their own misconduct or want of caution. Of the persons killed throughout the period, 30 were passengers, and as many as 231 railway or contractors' servants; 19 of the former, and 206 of the latter, having suffered in consequence of their own carelessness. The passengers injured numbered 1,136, and the railway servants 705; as many as 551 of the latter, but only 232 of the former, suffered from their own action. At crossings, 54 persons were killed, and 33 injured. As many as 197 trespassers were killed; these no doubt included persons who committed suicide by placing themselves in the way of trains. The trespassers injured

passengers and servants killed and injured.

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\* See footnote (\*) on previous page.

have numbered 65, half of whom received their injuries during the last five years.

Mining accidents. 741. In the sixteen years ended with 1889, embracing the whole period during which the Regulation and Inspection of Mines and Machinery Statutes\* have been in operation, 855 persons lost their lives, and 1,917 persons were injured, from accidents connected with mining operations. The following were the numbers in each year and their proportion to the number of miners at work :—

DEATHS AND INJURIES FROM MINING ACCIDENTS, 1874 TO 1889.

· ·	Year. Average Number of Miners			nber of Per	son <del>s —</del>	Numbers per 1,000 Miners at work—			
		Miners at work.	Killed.	Injured.	Total.	Killed.	Injured.	Total.	
1874	• • •	46,512	90	245	335	1.93	5·27	7.20	
1875	• * •	42,058	83	<b>2</b> 17	300	1.97	5.16	7.13	
1876	•••	41,531	55	170	$\boldsymbol{225}$	1.32	4.10	5.42	
1877	• • •	38,860	64	154	<b>218</b>	1.65	<b>3</b> ·96	5.61	
1878	• • •	37,212	40	106	146	1.07	2.85	3.92	
1879	•••	37,195	48	112	160	1.29	3.01	<b>4·3</b> 0	
1880	•••	38,076	50	89	139	1.31	2.34	3.65	
1881	• • •	38,436	72	108	180	1.87	2.81	<b>4</b> ·68	
1882	***	37,446	71	130	201	1.90	3.47	5.37	
1883	***	33,927	59	128	187	1.74	3.77	5.51	
1884	•••	29,182	41	106	147	1.40	3.63	5.03	
1885	•••	27,033	. 40	67	107	1.48	2.48	3.96	
1886	•••	25,361	44	68	112	1.73	2.68	4.41	
1887	•••	25,511	28	72	100	1.09	<b>2</b> ·82	3.91	
1888	•••	25,142	36	76	112	1.43	3.02	<b>4</b> ·45	
1889	• • •	24,577†	34	69‡	103	1.38	2.80	4.18	
Μ	eans	34,253	53	120	173	1.55	3.20	5.05	

Mining accidents 1889.

742. In 1889, fatal mining accidents numbered 2 less than in the previous year, and, in proportion to the number of miners at work, were below the average. In comparison with earlier years, the persons killed and injured in and in connexion with mines have much

diminished both in numbers and in proportion to the miners at work.

Mining accidents in Victoria and England.

• 743. According to the mean of the sixteen years to which reference is made, 1 miner in every 641 loses his life annually. In 1889 the proportion was as low as 1 in 723. These proportions contrast favourably with the proportion of fatal accidents in the metalliferous mines of Great Britain and Ireland, where, according to the report of

\* 37 Vict. No. 480, 41 Vict. No. 583, 45 Vict. No. 719, and 47 Vict. No. 783.
† Including 254 coal miners.
‡ Including 2 by coal mining accidents.

Her Majesty's Inspectors of Mines for 1883, 1 person in every 584 employed in and about mines lost his life by accident during the year, and one in every 607 during the ten years 1874 to 1883. This is exclusive of coal mines, in respect to which the proportion of fatal accidents is much higher. Dr. Raseri says that in Italy, during the six years 1879 to 1884, 1 miner in 450 lost his live annually by accident.

744. It appears by the following table that, in the sixteen years Causes of named, 1,362, or 49 per cent., of the mining accidents in Victoria were accidents. caused by the fall of earth or materials; 530, or 19 per cent., by falling down shafts, etc., and cage accidents; 337, or 12 per cent.. by explosions, principally of blasting charges; and the balance, or 20 per cent., by timber and truck accidents, machinery in motion, foul air, flooding, and undescribed casualties :---

			Number of Persons—					
	Nat	ure of Ac	cident.			Killed.	Injured.	Total.
Fall of earth	n or rock u	ndergro	und			341	630	971
3. 99	on surfac	e		• • •		109	79	188
, mate	erials down	shafts, 1	passes, etc	· · · · ·		44	157	201
		winzes,	etc	-		<b>2</b>		<b>2</b>
Falling dow	n shafts	•••				120	159	279
	winzes, s	shoots, e	tc			15	77	92
Cage accider	nts	•••		• • •		49	110	159
Timber acci	dents	•••		• • •		17	26	43
Truck accide	ents					6	45	51
Machinery i	n motion	•••				21	85	106
Explosion of	charges of	gunpow	vder			26	142	168
1		guncott	ton	•••		1	10	11
		nitro-g	lvcerine c	ompounds		<b>28</b>	64	92
,,	stored exp	olosives		L		7	28	35
	boilers	•••				<b>2</b>	6	8
	fire damp		•			1	22	<b>23</b>
Foulair				•••		11	1	12
Flooding of	mines			• •		<b>25</b>		<b>25</b>
Undescribed	•••	•••		• • •		30	276	<b>30</b> 6
	Total	•••	•••		•••	855	1,917	2,772

### CAUSES OF MINING ACCIDENTS, 1874 TO 1889.

745. Under the *Factories and Shops Act* 1885 (49 Vict. No. 862) Accidents in it is prescribed, under a penalty not exceeding £5 for non-compliance, factories that notices shall be sent to the Inspector of Factories, and to the certifying medical practitioner for the district, of any accident causing loss of life to a person employed in a factory or workroom, also of

any accident whereby a person so employed receives bodily injury, provided it is produced either by machinery moved by steam, water or other mechanical power, or through a vat, pan, or other structure, filled with hot liquid or molten metal or other substance, or by escape of gas, steam, or metal, and is of such a nature as to prevent the person injured by it from returning to his work in the factory or workroom within forty-eight hours of the occurrence of the accident. The following cases of injury were reported in the last two years :—

ACCIDENTS IN FACTORIES OR WORKROOMS, 1888 AND 1889.

Nature of Injury.	Ma	les.	Females.		
	1888.	1889.	1888.	1889.	
Death	5	4			
Loss of arm or hand	28	5	•••		
" leg	• • •	1	• • •		
" fingers or toes …		39	•••	1	
Fractures	21	6	1		
Lacerations, contusions, etc	43	54	3	2	
Total	97	109	4	3	

Factory accidents to persons under 20. 746. Of the males who were killed or injured in factories or workrooms, 35, or 36 per cent. in 1888, and 37, or 34 per cent. in 1889 were under 20 years of age. Of the females injured, 3 out of 4 in 1888, and all 3 in 1889 were under 20 years of age.

Ill-defined and unspecified causes of death. 747. In 1889, the year under review, there were no fewer than 1,639 deaths in Victoria from ill-defined or unspecified causes, or nearly 9 per cent. of the deaths from all causes, as compared with 8 per cent. in 1888,  $7\frac{1}{2}$  per cent. in the five years ended with 1885, and

7 per cent. in the ten years ended with 1880. The great majority of these—viz., 1,491 in 1889—were returned as from atrophy and debility; whilst 13 were set down to tumours, 23 to dropsy, 20 to abscess, 25 to other ill-defined causes, and 67 were altogether unspecified.

Atrophy and debility in Victoria. 748. The mortality under the head of atrophy and debility is almost entirely confined to infants and young children—thus, of the 1,491 deaths set down thereto in 1889, 1,364 were under 5 years, 1,214 were under 1 year, and 318 were under 1 month, of age. It is probable that a large number of these deaths might have been

returned more definitely if sufficient pains had been taken. The following are the numbers of both sexes recorded as having died from atrophy and debility in each of the twenty-three years ended with 1889:—

	Year.			Males.	Females.	Total
1867		•••		<b>3</b> 99	347	746
<b>18</b> 68	•••	• • •	•••	337	328	665
1869	•••		•••	386	337	723
1870		• • •	••	422	368	<b>79</b> 0
1871			•••	<b>368</b>	311	679
1872	•••	• • •	•••	<b>354</b>	338	692
1873	•••	• • •	•••	378	336	714
1874	• • •	• • •	•••	402	337	739
1875	• • •	• • •	•••	413	349	762
1876	•••	* * *	•••	<b>344</b>	305	649
1877	• • •	•••	•••	<b>344</b>	304	<b>648</b>
1878	•••	• • •	•••	389	311	700
1879	• • •	•••	•••	<b>407</b>	304	711
1880	•••	• • •	•••	<b>3</b> 69	324	693
1881	• • •	• • •	•••	392	345	737
1882	• • •		•••	493	442	935
1883	•••		•••	<b>412</b>	387	799
1884	• • •	• • •	•••	488	365	853
<b>18</b> 85	•••	•••	•••	541	414	<b>955</b>
1886		•••	•••	577	472	1,049
1887	•••	•••	•••	659	503	1,162
1888	• • •	•••	•••	639	550	1,189
1889	•••	• • •	•••	811	680	1,491
Ann	ual mean	1867 to 1	880	1.49	381	83(

DEATHS FROM ATROPHY AND DEBILITY, 1867 TO 1889.

749. Notwithstanding the proportions of the sexes of persons at sex of those ages to be affected by atrophy and debility were about equal, it will of atrophy, be observed that in every one of the years more males died than

females. During the whole period, females died of these complaints in the proportion of 85 to every 100 males.

750. The practice of returning atrophy and debility as causes of Atrophy and debility as causes of Atrophy and debility in debility in Australdebility in Australasian colonies. Atrophy and debility as causes of Atrophy and debility in Australasian colonies. Atrophy and debility in Australasian colonies. From those circumstances which medical men seem to find a difficulty in giving a more definite name to, being apparently more common generally in the warmer than in the cooler colonies. The following are the figures for the seven years ended with 1888:—

DEATHS FROM ATROPHY AND DEBILITY IN AUSTRALASIAN COLONIES, 1882 to 1888.

		Number of Dea and I	aths from Atrophy Debility.
Colony.	Year.	Total.	Per 10,000 Persons Living.
Victoria	1882 1883 1884 1885 1886 1887 1888	935 799 853 955 1,049 1,162 1,189	$ \begin{array}{r} 10.49\\ 8.77\\ 9.13\\ 9.96\\ 10.63\\ 11.40\\ 11.20\\ \hline 10.24\\ \end{array} $
New South Wales {	1882 1883 1884 1885 1886 1887 1888	776 832 975 1,059 971 756 886	$ \begin{array}{r}     9.76 \\     9.97 \\     11.07 \\     11.38 \\     9.91 \\     7.39 \\     8.32 \\ \end{array} $
Queensland	Mean of 7 years 1882 1883 1884 1885 1886 1887 1888	894 299 344 438 402 297 114 76	$\begin{array}{r} 9.69 \\ 12.58 \\ 12.84 \\ 14.86 \\ 13.02 \\ 8.93 \\ 3.21 \\ 2.01 \end{array}$
South Australia {	Mean of 7 years 1882 1883 1884 1885 1886 1887 1888	281 337 353 380 307 315 264 215	9.64 11.62 11.81 12.31 9.81 10.06 8.42 6.76
Western Australia	Mean of 7 years 1882 1883 1884 1885 1885 1886 1897 1888	$\begin{array}{r} 310\\ & 30\\ & 19\\ & 35\\ & 48\\ & 47\\ & 63\\ & 43\\ \end{array}$	$   \begin{array}{r}     10.11 \\     9.87 \\     6.08 \\     10.83 \\     14.09 \\     12.64 \\     15.11 \\     10.16 \\   \end{array} $
	Mean of 7 years	41	11.25

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Colony	Voor	Number of Deaths from Atrophy and Debility.		
	1 Cal .	Total.	Per 10,000 Persons Living.	
Tasmania	$     1882 \\     1883 \\     1884 \\     1885 \\     1886 \\     1887 \\     1888 $	$112\\124\\126\\124\\115\\148\\152$	9.289.989.819.38 $8.4910.5810.53$	
New Zealand (	Mean of 7 years 1882 1883 1884 1885 1886 1887 1888 Mean of 7 years	129 334 269 304 294 318 271 238 290	9.72 $6.56$ $5.08$ $5.54$ $5.19$ $5.46$ $4.54$ $3.93$ $5.19$	

DEATHS FROM ATROPHY AND DEBILITY IN AUSTRALASIAN COLONIES, 1882 TO 1888—continued.

751. The number of deaths of persons over 80 years of age, and Causes of their exact ages at death, have been already quoted for the year 1889 death of octogena. and the two preceding periods of seven and eleven years respectively.\* The following table shows the causes of death of these persons :---

Causes of Death.	Year 1889.		Seven 1885	Years, 2-88.	Eleven Years ended with 1881.		
		Males.	Females.	Males.	Females.	Males.	Females
Influenza, Coryza, Catarrh		1		5	2	5	11
Diphtheria Typhoid Fever etc	•••	•••		$1 \\ 6$	 3	 3	
Typhola rotor, coo	* • •	•••		v			

CAUSES OF DEATH OF OCTOGENARIANS, 1871 TO 1889.

Cholera		•••	L			3	6	L
Dysentery and I	Diarrhœa		14	8	60	49	51	36
Venereal Disease	es		•••		2		4	•••
Erysipelas	• • •				6	<b>2</b>	3	7
Hydatids	<i>* • •</i>				•••	• • •	1	•••
Privation	• • •				<b>2</b>	•••	3	
Scurvy			• • •		•••	• • •	1	•••
Intemperance	***					•••	2	1
Rheumatism			1	1	5	10	7	4
Gout			• • •	1	4	1	2	•••
Cancer			6	10	43	25	35	13
Tabes Mesenteri	ca				1	•••		• • • •
Phthisis			4	1	7	3	3	3
					5	ſ	1	1

\* See table following paragraph 655 ante.

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CAUSES OF DEATH OF OCTOGENARIANS, 1871 TO 1889—continued.

Causes of Death.		Year, 1889.		Seven Years, 1882-88.		Eleven Years ended with 1881.	
Causes of D	catu.	Males.	Females.	Males.	Females.	Males.	Females.
Purpura, Hæmorrha Anæmia, Chlorosis thæmia	gic Diathesis , Leucocy-	1		 1	1	•••	• • -
Diabetes Mellitus Old Age Brain Diseases, etc.	•••• ••• ••• •••	 164 29	164 23	$1 \\ 958 \\ 165$	 757 121 3	631 136	 538 103
Ear and Nose Disea Heart Diseases, etc. Lung Diseases, etc. Oninsy	ses	39 46	26 28	139 261	93 183	 66 183 	 46 116 1
Stomach Diseases, e Kidney Diseases, etc Gennetic Diseases	tc	8 12 	6 2 	71 71 1	$\begin{array}{c} 38\\11\\1\end{array}$	37 47 	21 1 1
Bone Diseases Carbuncle, Boil Skin Diseases, etc.	···· ··· ··· ···	<b>1</b>	••••	1	 1 	 3 4	 2 2
Accidents Suicide Dropsy	···· ···	9 1 	4  1	38 3 8	30 2 9	22 4 20	18  18
Mortification Tumour Abscess, etc.	···· ···	•••		$egin{array}{c} 4 \\ 3 \\ 1 \\ 7 \end{array}$	2 1  3	9  1 2.	3 3 
Total		337	276	1,876	1,354	 1,291	951

752. It will be noticed that during the nineteen years referred to in the case of more than half of both the males and females, no complaint was set down except old age. Little is to be learnt from such a vague definition, and it is much to be wished that medical men would endeavour to describe the causes of death with more precision. Of the remainder, two-sevenths of both sexes died of diseases of the organs of respiration, chiefly pneumonia and bronchitis, and about one-fifth died of affections of the brain and nerves.

Occupations

753. Elaborate tables showing the occupations at death of males

at death. at various ages in Melbourne, in the extra-metropolitan towns, and in the extra-urban districts, were published in the Statistical Register of Victoria for 1883, and statements based upon these have been given in former issues of the Victorian Year-Book.\* The following is a summary of the proportions of adult males of each class of occupations dying annually in the three years embracing the census year (1881), and the year immediately succeeding and following it, the groups being arranged according to the order of fatality :--

\* See Statistical Register, 1883, page 278; also, Victorian Year-Book, 1883-4, paragraph 619; ibid., 1884-5, paragraph 669; ibid., 1885-6, paragraph 684 et seq.

		•			A F	Innual Deaths of Males over 20 Der 1,000 Living.
1.	Engaged in	industrial pursuits	• • •			21.89
2.	))	entertaining and serving	•••	•••		20.42
3.		commercial pursuits	• • •	• • •		17.62
4.	>>	professional pursuits	• • •			1 <b>6·51</b>
5.	"	food and drinks	• • •	• • •	• • •	15.53
6.	"	books and literature	• • •	• • •	• • •	12.48
7.	>>	on land and with animal	S	•••		9.96

OCCUPATIONS OF ADULT MALES AT DEATH IN ORDER OF FATALITY.

754. As bearing upon the mortality, it is important to consider Medical men whether the number of medical men is sufficient to minister to the countries. health of the population. At the census of 1881, 454 legally qualified medical practitioners were returned, which gives 1 to every 1,900 persons, or to every 194 square miles. The first of these proportions compares favourably with that in most other countries, the only ones known to have a higher proportion being England and Wales, Italy, and Switzerland. In regard to the second proportion, in consequence of Victoria being much more thinly peopled than any of the countries of the old world, it is naturally low; lower, in fact, than in any other country respecting which the information is at hand, except Sweden and Norway. These results are shown in the following table, in which the countries are arranged in order according to the proportion of medical men to the population and to the area of each country :---

MEDICAL	Men	IN	PROPORTION	то	POPULATION	AND	Area	IN
<b>/</b>			VARIOUS	Coi	ONIES.			

Countries.	Year.	Medical Men per 100,000 Persons Living.	Countries.	Square Miles to a Medical Man.
Switzerland	1880	75	England and Wales	3.9
Italy	1885	60	Belgium	<b>4</b> ·7
England and Wales	1881	58	Italy	· 6·2
Victoria	1881	53	Holland	6·9
Scotland	1881	50	Switzerland	7.3
Ireland	1881	48	Ireland	$13 \cdot 2$
Holland	1884	43	France	13.9
Belgium	1884	42	Germany	15.1
France	1883	39	Austria	15.8
Germany	1876	32	Scotland	15.9
Austria	1884	32	Hungary	<b>33</b> .6
Norway	1882	32	Spain	37.1
Spain	1877	31	Portugal	43.4
Hungary	1876	24	Russia in Europe	148.4
Portugal	1880	18	Victoria	193.6
Russia in Europe	1832	16	Norway	205.0
Sweden	1883	13	Sweden	29 <b>4·9</b>

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NOTE.—The figures, except those relating to Victoria, have been taken (with some corrections) from a table given by Dr. Raseri. The area per medical man is there stated in square kilomètres, which have been converted into square miles on the assumption that one of the former is equal to <sup>386</sup> of one of the latter. . . .

Sickness and death in general hospitals.

755. There are 39 general hospitals in Victoria, 9 of which are also benevolent asylums. The total number of patients discharged from these institutions during the year ended 30th June, 1889, was 16,024, and the number of deaths was 2,160. There was thus 1 death to every 7.4 discharges during the year 1889, as against 1 death to every 8.0 during the previous year. The following table gives a list of the various hospitals throughout the colony, also a statement of the number of discharged, the number of deaths which occurred in the year ended 30th June, 1889, and the proportion of deaths to cases in each hospital during that year:--

Name of Hospital.	Number of			
	Discharged.*	Number of Deaths.	Percentage of Mortality to Discharged.	Discharges, Year ended 30th June, 1888.
Alexandra	75	9	12.00	6.25
Amherst	309	30	9.71	6.36
Ararat†	311	43	13.83	9.36
Bairnsdale	128	16	12.50	
Ballarat	1,054	146	13.85	10.53
Beechworth	547	47	8.60	13.51
Belfast <sup>†</sup> (Port Fairy)	44	5	11.36	20.59
Bendigo	1,187	140	11.79	11.84
Castlemaine	407	56	13.76	11.56
Clunes	113	7	6.19	6.80
Colac	71	9	12.68	9.68
Creswick	220	18	8.18	<b>6.86</b>
Daylesford†	208	<b>24</b>	11.54	15.69
Dunolly	310	35	11.29	10.13
Echuca	199	14	7.04	5.26
Geelong†	826	100	<b>12</b> ·11	11.76
Hamilton†	240	32	13.33	875
Heathcote	101	10	9.90	10.00
Horsham	184	<b>24</b>	13.04	8.19
Inglewood	418	37	<b>8</b> ·85	9.16
Kilmore	168	12	7.14	9.21
Kyneton	437	30	6.86	6.93
Maldon†	46	7	15.22	<b>18.00</b>
Mansfield	117	5	4.27	•93
Maryborough	329	40	12.16	9.18
Melbourne	4,013	747	18.61	19-24
Melbourne (Alfred)	1,494	223	14.93	12.11
Melbourne (Austin) ‡	42	37	88.10	71.11
Melbourne(Homœopathic)	668	77	11.53	9.75
Mooroopna	384	34	8.85	8.57
Nhill	93	13	13.98	10.66
Pleasant Creek (Stawell)+	. 181	24	13.26	9.88
Portland†	14§	6	<b>42·86</b>	3.85
Sale	284	38	13.38	8.78

SICKNESS	AND	MORTALITY	IN	GENERAL	HOSPITALS.
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#### **420**

\* Including deaths. † These institutions are also Benevolent Asylums. ‡ For incurables. § Exclusive of six inmates who were not under treatment.

SICKNESS AND MORTALITY IN GENERAL HOSPITALS-continued.

		Year	Percentage of			
Name of Hospital.		Number of Patients Discharged.*	Number of Deaths.	Percentage of Mortality to Discharged.	Discharges, Year ended 30th June, 1888.	
St. Arnaud Swan Hill Wangaratta Warrnambool† Wood's Point	···· ···· ····	252 92 233 118 107	23 7 18 16 1	$ \begin{array}{r} 9.13 \\ 7.61 \\ 7.73 \\ 13.56 \\ .93 \end{array} $	$ \begin{array}{r} 6.99\\ 9.26\\ 6.14\\ 13.45\\ 5.10\\ \end{array} $	
Total		16,024	2,160	13.48	12.49	

NOTE.—In this table the number of discharges from hospitals have been shown instead of the total number of inmates as in previous years.

756. In proportion to the cases discharged in 1888-9 the greatest Highest and mortality occurred in the Austin (Melbourne), Portland, Melbourne, death rates. Maldon, and the Alfred (Melbourne) Hospitals; and the lowest in the Wood's Point, Mansfield, Kyneton, and Clunes Hospitals. It should be borne in mind, however, that the Portland and Maldon Hospitals are also Benevolent Asylums.

757. The following figures, calculated from numbers given in Proportions Dr. Raseri's paper,§ show the proportions of deaths to inmates of hospitals in hospitals in various countries; those for Victoria during the six years countries. ended with 1885 being added :--

PROPORTIONS OF DEATHS TO INMATES OF HOSPITALS IN VARIOUS COUNTRIES.

							Per cent
Victoria	•••		•••	• • •	1880-85		11.85
England and	Wales		* * *	• - •	1884	• • •	11.11
Austria	•••		• • •	<b></b>	1883	•••	10.43
Italy					1885		10.22
Saxony	***		• • -	• • •	1882		9.40
Norway	***		•••	•••	1883	•••	9·36
France	• • •	•••		• • •	1883		9.14
Portugal		•••	• • •		1884		$9 \cdot 2$
Hungary		•••		•••	<b>1882</b>	•••	8·6 <b>8</b>
Prussia	* * •	•••	• • •	•••	<b>1882</b>	• • •	8.24
German Emp	oire		• • •	•••	1882	•••	7.18
Sweden					1883		6.23
Baden		• • •			1882		<b>4·86</b>
Bavaria	* • •	•••	• • •		1882		3·86
Würtemberg	• • •	• • •	• • •		188 <b>2</b>	•••	3·4 <b>9</b>

758. The rate of mortality in hospitals would appear by the figures Deaths in to be higher in Victoria than in any of the other countries named. Victorian and other hospitals.

Including deaths.
For incurables.

1 3

† This institution is also a Benevolent Asylum.§ Page 195.

In the absence of information it is impossible to say whether the cases treated in the hospitals of this colony may not be of a worse class than those in the other countries, or whether hospitals for special complaints-ophthalmic, maternity, etc., where the mortality would naturally not be so great as in general hospitals-may not be included with the latter in the returns of some of the countries.

Sickness and deaths in Women's Infirmary Department.

759. The patients discharged\* from the Infirmary Department of the Women's Hospital numbered 283 during the year 1887-8, and 251 in 1888-9. The deaths in the same institution numbered 16 in the former, and 18 in the latter year. Therefore, 1 patient in 18 who left the institution died in 1887-8, and 1 in 14 in 1888-9.

Deaths of mothers in Women's Midwifery Department.

760. In the Midwifery Department of the Women's Hospital, Melbourne, 671 women were confined in 1887-8, and 762 in 1888-9.+ Four died in the former period, and 10 in the latter. Thus, only 1 woman in 168 died in 1887-8, but as many as 1 woman in 76 in 1888-9. From the founding of the institution to the end of June, 1889, 14,483 women were accouched therein, + of whom 257 died, which is equivalent to 1 death to every 56 confinements.<sup>‡</sup>

Deaths of infants in Women's Hospital.

761. The infants born alive in the Women's Hospital numbered 634 in the year 1887-8, and 711 during the year 1888-9, and of these 20 in the former and 30 in the latter year died before being taken from the institution; thus, 1 infant in 32 died in the former, and 1 in every 24 in the latter year.<sup>‡</sup>

Sickness and deaths in Children's Hospital.

762. In the Melbourne Hospital for Sick Children the discharges numbered 636, and 43 deaths occurred, in the year 1887-8; and there were 941 discharges, and 77 deaths occurred, during the year 1888-9. These numbers furnish proportions of 1 death to every 15 patients in the former and 1 death to every 12 in the latter year.

Sickness and deaths in asylums.

763. Cases of sickness in benevolent asylums (exclusive of Melbenevolent bourne Immigrants' Home) numbered 2,003 in 1887-8, and 2,785 in the year 1888-9; deaths numbered 251 and 257. The deaths were thus to the cases treated in the proportion of 1 to every 8 in 1887-8, and of 1 to 11 in 1888-9.

764. In the Melbourne Immigrants' Home the cases of sickness Sickness and deaths in the year 1887-8 amounted to 670, and the deaths to 93, or 1 death in Immigrants' to every 7 cases of sickness. In the year 1888-9 the cases of sickness Home. in this institution numbered 676, and the deaths 102, or 1 death to every 7 cases of sickness.

> \* The discharges referred to in this and the following paragraphs in all cases include deaths. † Including women accouched outside the hospital by midwives connected with the institution, who numbered 212 in 1887-8, and 87 in 1888-9. ‡ See paragraph 645 ante.

765. In 1887-8 the cases of sickness in orphan asylums numbered Sickness and 128, and the deaths 5. In the year ended 30th June, 1888-9, these deaths in orphan numbers were 184 and 7 respectively. Thus, in both years, 1 death occurred to every 26 cases of sickness.

766. In hospitals for the insane during 1888, the cases discharged Sickness and numbered 735, and during 1889 they numbered 773. The deaths in lunatic asylums. amounted to 217 at the former period, and 237 at the latter, or an average of 1 death to every 3 cases of sickness in both years.

767. In gaols and penal establishments 2,030 cases of sickness Sickness and occurred in 1889. The deaths in the same year were 89, exclusive gaols. of three deaths by execution. Thus 1 death occurred to every 23 cases of sickness.

768. Altogether the number of deaths in penal or charitable Deaths in institutions during 1888-9\* was 3,085, being in the proportion of 1 to every 6.3 deaths which took place in Victoria during the year. The deaths in such institutions in the five years ended with 1886 were in the proportion of 1 to every 6.3 deaths; and in the four years, 1877-80, in that of 1 to every 6 deaths which took place in the whole colony. The following are the names of the institutions and the number of deaths which occurred in each during the year 1888-9:—

#### DEATHS IN PUBLIC INSTITUTIONS, 1888-9.

				Numbe	er of Deaths
General hospitals	• • •			4	2,160
Women's Hospital—	х. — ч		· .		-
Infirmary Department		•••			18
Midwifery Department	•	· · ·	• • •	•••	40+
Hospital for Sick Children		• • •	•••		77
Benevolent asylums					257
Melbourne Immigrants' Hor	me			· • • •	102
Orphan Asylums	• • •	• • •	· · ·		7
Eve and Ear Hospital		•••			3
Victorian Asylum and School	ol for the	Blind	• • •		1
Hospitals for the insane	•••	•••	• • •	• • •	237
					204



NOTE.--- No deaths occurred in 1888-9 in the Deaf and Dumb Institution.

\* The figures relating to hospitals for the insane, industrial and reformatory schools, gaols, and penal establishments are for the year ended 31st December, and those relating to the other institutions are for the year ended 30th June, 1889.

† Including the deaths of 30 infants born in the institution.

‡ Seventeen of this number were infants, who were admitted with their mothers.

§ Including deaths of boarded-out and licensed children.

|| Excluding 3 executions.

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 $\{1,2,1\}_{i\in \mathbb{N}}$ 

Deaths in public in England.

769. In England and Wales during 1882, 1 out of every 10 deaths institutions registered occurred in a workhouse, hospital, or lunatic asylum. Of such deaths, 63 per cent. occurred in the first of these institutions. 28 per cent in the second, and 9 per cent. in the third.

Sick and infirm.

770. The householder's schedule used at the census of 1881 contained a column headed "Health," respecting which an instruction was given to the effect that, if any person was unable to follow his usual occupation by reason of illness or accident, or was afflicted with deafmuteism, blindness, lunacy, idiocy, epilepsy, or leprosy,\* the name of such infirmity should be entered. As the result of this inquiry, the following information was obtained :---

							Males.	Females.	Total.
Suffering	from	sickness					7.381	5.822	13.203
2 un vi ing		accident					1,162	202	1.364
"	,,	deafmut	eism				168	119	287
>>	٦٩	hlindnes	d d		•••		502	240	201
22	• •	lunger	3	* * *	•••	•••	1 500		9 8 2 2
• •	;;		•••		* • •	•••	1,030	1,440	2,000
,,,	"	1010 <b>CY</b>	•••		•••	•••	108	53	161
,,	* 7	epileosy	• • •		• • •	•••	176	114	290
<del>3</del> 7	"	lameness	s, muti	ilation, de	formity, o	etc.†	83	49	132
		,	Total	•••	•••	•••	11,170	7,842	19,012

SICKNESS AND INFIRMITY, 1881.

771. The total numbers furnish a proportion of 221 persons Proportion of infirm to population. suffering from infirmity in every 10,000 of the population, of 247 infirm males in every 10,000 males, and 191 infirm females in every 10,000 females.

Sickness and accidents.

772. The sick, when the census of 1881 was taken, were found to be in the proportion of 153, and those laid up in consequence of accidents in that of 16 to every 10,000 of the population. The two combined, representing those entirely disabled for the time being, but not as a rule permanently affected, were thus in the proportion of 169 to every 10,000 living, or 1 in 59. A similar combination gives a proportion of 189 disabled males in every 10,000 males living, or 1 in 53; of 147 disabled females in every 10,000 females living, or 1 in 68.

Permanent infirmities.

773. The deaf mutes, the blind, the lunatics, the idiots, and the crippled, maimed, and deformed persons represent those having some

\* No case of leprosy was returned either in 1871 or 1881. It is known that this infirmity existed at both periods, to a small extent, among the Chinese; but the sub-enumerators did not distinguish it from ordinary sickness.

† The information in this line was not asked for, and is no doubt incomplete.

defect or injury which is generally permanent, but which often does not disable them from following some description of labour, and does not always prevent them from earning their own livelihood, although no doubt in most cases it seriously affects their usefulness to the community. These numbered 4,445, viz., 2,627 males, and 1,818 females, or 1 person in every 194, 1 male in every 172, and 1 female in every 226.

774. The deaf and dumb were in the proportion of 3.33 per 10,000 Deafmutepersons living; of 3.72 deaf and dumb males per 10,000 males, and of 2.90 deaf and dumb females per 10,000 females. These proportions, stated in other words, are 1 deafmute in 3,005 of the total population, 1 in 2,691 of the males, and 1 in 3,448 of the females.

775. The following are the proportions per 10,000 of the population Deafof deaf and dumb persons in as many Australasian colonies and other warious countries as the information is available for :—

eg o la para							
	* 	Dea 10,	fmutes per 000 living.			Dea: 10,0	fmutes per )00 living.
Switzerland	• • •	• • •	24.52	France	• • •	•••	6·26
Austria	an 1928 - 1928 • ● ● ● 1928 - 1928 - 1938		13.07	Denmark	* • •	• • •	6·20
Hungary		• • •	12·6 <b>3</b>	Great	Britain	and	
Sweden	- 10 Bel • • •	• • •	10.23	Ireland	• • •	•••	5.74
Prussia			10 <b>·19</b> 、	Tasmania	* • • •	• • •	5.44
Finland	l Article and L Article and L ₽ ₽	 	10.18	Italy	• • •	• • •	5.37
Germany (	exclusive	of		Spain	• • •		4.59
Prussia)		•••	<b>9</b> ·31	Belgium	• • •	* * •	4.42
Norway	74 <b></b>	1. 	8.64	Holland	• • •	•••	3.35
Canada			8.05	Victoria		•••	3.33
Portugal	•••	1	7.47	South Au	stralia	• • •	2.90
United State	S	( <b>1</b> .)	6·75	Western	Australia	• • •	2.36
Greece			6.46	New Zeal	and		2.33

### DEAFMUTEISM IN VARIOUS COUNTRIES.

NOTE.—The figures, except those relating to the Australasian colonies, have been taken (with some corrections) and rearranged from Dr. Raseri's paper, page 179.

776. It will be observed that the proportions of deaf and dumb Deafpersons to the population are smaller in New Zealand, Western Australasia Australia, South Australia, and Victoria, than in any other countries; where. but Holland, Belgium, Spain, and Italy stand above Tasmania. The country in which deafmuteism prevails to its greatest extent is Switzerland, about 1 person in every 400 being affected in this manner.

777. Blind persons in Victoria were found in 1881 to be in the Blindness. proportion of 8.60 per 10,000 persons living; blind males in that of 11.10 to every 10,000 males; blind females in that of 5.85 to every 10,000 females. There was thus 1 blind person in every 1,162 of mixed sexes, or 1 blind male in every 901 males, and 1 blind female in every 1,709 females.

Blindness in 778. Subjoined are the proportions of blind persons to the various countries. populations of the respective countries named :---

		Blind persons per 10,000 living.				
Portugal	<b>* * *</b>	21.90	France		• • •	8.37
Finland	• • •	21.15	Prussia	•••	- • <b>e</b>	8·31
Tasmania	***	16.00	Belgium	•••	•	8·11
Spain		14.79	Sweden		· • •	8.06
Western Australia		13.79	Germany(exclusi	ve of Pi	russia)	7.93
Norway		13.57	Denmark	•••	•••	7.86
Hungary		13.24	Italy		•	7.63
Great Britain and Ir	eland	9.85	Switzerland			7.61
United States		9.75	South Australia			7.06
Austria		9.07	Canada	- 		6.19
Greece		8.96	Holland			4.45
Victoria	•••	8.60	New Zealand	• • •		2.82

#### BLINDNESS IN VARIOUS COUNTRIES.

NOTE.—These figures, except those relating to the Australasian colonies, have been taken (with some corrections) and rearranged from Dr. kaseri's paper, page 179.

Blindness in Australasian colonies and elsewhere.

779. According to these figures, the people of New Zealand enjoy a greater immunity from blindness than those of any other country, and the people of South Australia than those of any other country except New Zealand, Holland, and Canada. Victoria has a larger proportion of blind persons than twelve, but a smaller one than eleven of the other countries named; whilst Western Australia has a larger proportion than all but four, and Tasmania than all but two of the other countries. Most blindness appears to exist in two countries situated so widely apart as Portugal and Finland, the proportion being 1 blind person to about every 450 of the population.

Lunacy.

780. Lunatics in Victoria were in the proportion of 32.85 per 10,000 of the population, viz., 35.17 male lunatics per 10,000 males living, and 30.30 female lunatics per 10,000 females living. Thus 1 person in every 304, 1 male in every 284, 1 female in every 330, was a lunatic.

Lunacy in England and Wales. 781. From whatever cause, lunacy appears to be much more rife in Victoria than in England and Wales. When the census of 1881 was taken, the proportion in the latter was 1 lunatic in every 502 of the population, which is a much lower proportion than that found to exist in Victoria at the same census.\*

\* See General Report on the Census of England and Wales, 1881, page 67.

782. The only Australasian colonies besides Victoria which col-Lunacy in lected complete returns of lunacy apart from idiocy were New Australasian Zealand, South Australia, and Tasmania, in all of which the proportion was lower than in this colony, as will be seen by the following figures :—

#### LUNACY IN AUSTRALASIAN COLONIES, 1881.

1.	Victoria had 1	lunatic	in	every	• • •	304 pe	ersons.
2.	Tasmania	"		-		334	,,
3.	South Australia	<b>&gt;</b> 7			•••	<b>43</b> 6	<b>,</b> ,
4.	New Zealand	27			• • •	437	"

783. The census returns of Queensland contain a return of the Lunacy in number of lunatics in asylums, but give no account of those in private houses, gaols, etc. The number was 563, or 1 in 379 of the population, which is a higher proportion than that which the total number of lunatics bore to the population of New Zealand or South Australia, but not so high as that which obtained in the other two colonies furnishing returns.

784. Persons returned as idiots in this colony were in the propor-Idiocy. tion of 1.87 per 10,000 of the population; 2.38 idiot males per 10,000 males, 1.29 idiot females per 10,000 females. These proportions may be otherwise stated as 1 idiot in every 5,356 persons, 1 idiot male in every 4,186 males, 1 idiot female in every 7,741 females.

785. The following are the proportions of idiots to the populations Idiocy in of three of the Australasian colonies and various other countries. It countries is probable that imbeciles are included with idiots in most if not all the countries out of Australasia, as the proportions relating to such countries are in every case higher than those relating to New Zealand and Victoria, and in all cases but four they are also higher than those relating to Tasmania :—

### IDIOCY IN VARIOUS COUNTRIES.

		Id 10,	liots per 000 living.		•	Idi <b>10,</b> 0	iots per 00 living.
United States	063		15.33	Italy	• • •		6·91
Portugal	~ * *		15.09	Tasmania	<b>*</b> č 1	• • •	6.57
Austria	•••	•••	14.64	Greece		•• •	6·53
Germany (excl	usive of Pr	ussia)	13.65	Spain	•••	· • •	5.47
Great Britain a	and Ireland	•••	12.92	Belgium		•••	5.02
Hungary	•••		11.86	Sweden			3.92
France	• د ک	630	11.40	Victoria			1.87
Denmark			<b>8·</b> 31	New Zealand	•••		1.18

Note.—The figures, except those relating to the Australasian colonies, have been taken (with some corrections) and rearranged from Dr. Raseri's paper, page 179.

Epilepsy. 786. Epileptic persons in 1881 were in proportion of 3.36 per 10,000 of the population of Victoria, of 3.89 per 10,000 males, and of 2.78 per 10,000 females; or, in other words, 1 person in every 2,974, 1 male in every 2,569, 1 female in every 3,599, was subject to attacks of epilepsy.

Epilepsy in New Zealand. 428

787. The census of England and Wales does not supply any information on the subject of epilepsy, and the only Australasian colony, except Victoria, which collects such information appears to be New Zealand, in which, according to the census of 1881, the proportion of epileptic persons was 1 in every 2,525 of the population, thereby showing a higher ratio of epilepsy than that found to prevail in Victoria.

Department of Public Health. 788. The Public Health Act 1889 (53 Vict., No. 1044) provides for the formation of a Department of Public Health, and for vesting in a responsible Minister the former powers and duties of the late Central Board, which has been abolished. The following account of the new Department has been furnished by the secretary:—

Matters relating to Public Health in Victoria are administered by the various municipal councils, which act as sanitary authorities for their districts. Of these councils there are now 192, and their functions and powers have been considerably extended by the *Public Health Act* 1889.

This Act has also created a separate Government Department with a responsible Minister of the Crown for the carrying out, in conjunction with an elective Board of Public Health, of the Health Acts, and for exercising supervision over local councils acting as sanitary authorities.

The new Board of Public Health consists of the chairman who is also permanent head of the Department and is appointed by the Government, a medical inspector who is an expert in sanitary science and is appointed by the Government, and seven representative members who hold office for three years, are members of municipal councils, and are elected by these councils. The powers of this Board are very large. It may compel local councils to carry out most of the provisions of the Health Acts which were previously optional, it may make general regulations for the inspection of dairies, it may provide hospital accommodation where councils are in default, it may order the isolation of persons suffering from dangerous, infectious, or contagious diseases, may require councils to provide destructors, incinerators, etc., and to pass by-laws providing for the effective treatment of house refuse, nightsoil, etc., and for the prevention of the pollution of rivers, and acts as a court of appeal in regard to abattoirs and offensive trade establishments.

The Act came into operation on the 1st February, 1890, and the Honorable Alfred Deakin was gazetted as the first Minister of Health; Mr. C. A. Topp, M.A., was appointed Chairman of the Board; and Dr. D. Astley Gresswell, M.A., M.D., formerly one of the Medical Staff of the Local Government Board, England, was appointed Medical Inspector.

The Board meets as a board or in committee weekly.

789. The following are the results of meteorological observations Meteorologitaken at different stations throughout the colony during 1889. These tions, 1889. places are arranged in the table in the order of their altitude above the level of the sea. The last three are situated in the interior, but the others are on the sea-board. The times at which the observations for mean temperature and mean atmospheric pressure are obtained differ at the various stations; but a correction is applied, in order to make the results equivalent to those which would be derived from hourly observations taken throughout the day and night :---

	Height above		Temp	erature	ure in the Shade.					
Stations.	Sea-level.	Max	Max.		Min.		Mean.			
PortlandGabo IslandMelbourneCape OtwayCape OtwayWilson's PromontoryEchucaSandhurstBallarat	feet. 37·0 50·0 91·3 270·0 300·0 314·0 701·0 1,438·0	° 102.0 87.0 99.8 94.0 91.0 111.0 109.0 104.3	° 102·0 87·0 99·8 94·0 91·0 111·0 109·0 104·5		$ \begin{array}{r} \circ \\ 33 \cdot 0 \\ 42 \cdot 0 \\ 31 \cdot 3 \\ 36 \cdot 0 \\ 37 \cdot 0 \\ 33 \cdot 0 \\ 33 \cdot 0 \\ 29 \cdot 2 \end{array} $		57.1 57.2 58.5 55.9 57.2 61.8 59.7 54.6			
Stations.	Mean Atmospheric Pressure.	Days on which Rain fell.	Amo o Rain	ount f fall.	Mean Relativ Humidi	ve ty.	Amount of Cloud.			
PortlandGabo IslandMelbourneCape OtwayWilson's PromontoryEchucaSandhurstBallarat	Inches. 29·985 29·918 29·943 29·739 29·640 29·659 29·271 28·568	No. 190 144 125 198 162 99 125 139	Incl 33 42 27 39 43 24 28 32	nes. ·90 ·97 ·14 ·33 ·74 ·38 ·29 ·41	0-1. •77 •85 •71 •80 •75  •66 •73		0-10. 4.9 6.9 5.8 5.9 6.1 4.4 5.3			

METEOBOLOGICAL OBSERVATIONS AT VARIOUS STATIONS, 1889.

cal observa-

790. The following are the results for Melbourne in each of the Meteorology in Meltwenty-six years ended with 1889: bourne,1864 to 1889.

## METEOROLOGICAL OBSERVATIONS AT MELBOURNE-RETURN FOR TWENTY-SIX YEARS.

Veen	Tempera	ture in the	e Shade.	Mean Atmospheric	Days on which	Amount of	Mean Relative	Mean Amount
y ear.	Max.	Min.	Mean.	Pressure.	Rain fell.	Rainfall.	Humidity.	of Cloud
				inches.	No.	inches.	0-1.	0—10.
1864	96 <sup>.</sup> 6	30.5	$57\cdot1$	<b>29</b> ·94	144	27.40	•72	6.1
1865	103.4	30.9	<b>5</b> G·5	29·94	119	15.94	•68	5 <sup>.</sup> 6
1866	108.2	28·0	<b>5</b> 7·8	29.95	107	22.41	-70	5.2
1867	108.4	29.7	57·7	29.92	133	25.79	.72	5.7
1868	110.0	27.4	57.1	29.98	120	18.27	•70	5.7
1869	108.4	27.0	57.2	29.94	129	24.59	•71	6·0
1870	109.0	29.6	57.4	29.93	129	33.76	•74	<b>5</b> ·8
1871	106 0	32.1	57.7	29.93	125	30.17	•74	5.9
1872	103.3	32.5	57.6	29.92	136	32.52	•74	6.4
1873	102.4	30.2	<b>5</b> 8·0	29.94	134	25.61	•72	6.0
1874	102.7	293	56.6	<b>2</b> 9· <b>9</b> 3	134	28.10	•72	6.1
1875	110.4	31.1	56.6	29.89	158	32.87	•72	<b>6</b> <sup>.</sup> 2
1876	110.7	29.0	57.0	29·9 <b>3</b>	134	24.04	•70	5.8
1877	100.7	31.0	56.7	<b>29</b> - <b>99</b>	124	24.10	•70	5.8
1878	103.4	31.1	57.4	29.90	116	25·36	•71	6.0
1879	10 <b>6</b> ·0	30.2	56 <b>·8</b>	29.92	127	19.28	•71	58
1880	106.5	29.0	57.8	<b>29</b> · <b>92</b>	147	28·48	•72	6 <sup>.</sup> 0
1881	<b>99</b> ·9	31.9	57.1	29.97	134	24.08	•68	59
1882	110.2	31.2	57.4	29.90	131	22.39	•68	5.6
1883	104.9	31.7	58.0	29.92	130	23.71	•69	5.9
1884	100.7	29.9	56.7	29 <b>·94</b>	128	25.85	.71	6.2
1885	101.6	29.9	57.1	30.00	123	<b>26</b> ·94	•71	6·3
1886 ·	104.1	28.1	57.1	29.96	128	24.00	•71	<b>6</b> ·0
1887	104.9	33.0	<b>5</b> 8·1	29.94	153	32.39	•74	6.1
1888	104.0	28.3	57.5	29.99	123	<b>19</b> · <b>42</b>	•71	5.5
1889	<b>99</b> ·8	31.3	58.5	29.94	125	27.14	.71	5-8
Means	104.9	30.2	57:3	29.94	1 <b>3</b> 0	<b>25.5</b> 6	•71	5.9

#### (Observatory 91.3 feet above the Sea-level.)

Observations in 1889 compared with means.

791. It will be noticed that in 1889, according to observations taken at the Melbourne Observatory, although the maximum temperature was 5 degrees below the average, and the lowest recorded—with two exceptions—during the whole period of twenty-six years, yet the minimum and the mean in temperature were each over 1 degree above the average; also that, whilst the mean atmospheric pressure and the mean relative humidity were the same as, the rainfall was  $1\frac{1}{3}$  inch above, the average. The mean amount of cloud, however, was slightly below the average, and the number of wet days was 5 less than usual.

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Observations in 1889 and former years compared. 792. During the period of twenty-six years a higher temperature than the maximum of 1889 was experienced in all the years but two, and a lower one than the minimum in all but six of the previous years;

moreover, the mean temperature was higher than in any previous year; the days on which rain fell were less numerous than in seventeen of the years, and the amount of rainfall was higher than in any of the years except eight.

793. The mean temperature of Melbourne over a series of years Mean temperature in (57.3°) corresponds with that of Bathurst, a town in the interior of Melbourne New South Wales, situated 2,150 feet above the sea-level, and is where. about equal to that of Washington (56.9°), Bordeaux (57.0°), Madrid (57.2°), and Marseilles (58.3°). It is lower by over 2 degrees than that of Hobart (55.1°), lower by  $5\frac{1}{3}$  degrees than that of Sydney (62.5°), and lower by  $7\frac{1}{3}$  degrees than that of Adelaide (64.6°).\*

794. The mean rainfall in Melbourne (25.5in.) corresponds Mean rainfall in approximately with that of Ventnor in England (25.5in.), Bathurst fall in Melbourne in New South Wales (25.0in.), and Toulouse in France (24.9in.). It where. is above that in London (24.0in.), Nottingham (23.7in.), or Paris (22.9in.), is  $2\frac{1}{2}$  inches above that in Hobart (22.9in.), is 5 inches above that in Adelaide (20.5in.), but is only about half as much as that in Sydney (50.1in.).\*

795. The Board of Visitors to the Melbourne Observatory in their Mirrors of report dated 12th September, 1889,† state that the polishing of the great telescope has been in progress some time, and, although certain preliminary difficulties have been overcome, it is doubtful whether the work can be satisfactorily completed; for while it has been found possible to obtain both figure and polish sufficient for many of the ordinary uses of the instrument, it is admitted on all hands that to procure results at all adequate to the higher purposes to which telescopes of the first order are now applied is a matter of extreme difficulty. In this opinion Sir Howard Grubb, who constructed the telescope, fully concurs, and has stated his reluctance to undertake the task of repolishing the mirrors. From the fact that such repolishing will become more frequently necessary henceforward, and that the climatic extremes of temperature render it specially difficult in this country, the visitors state that they are almost forced

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\* The observations, except those for Melbourne, Adelaide, and Hobart, have been taken from a work entitled *Physical Geography and Climate of New South Wales*, by H. C. Russell, F.R.A.S., Government Astronomer of that colony.

† Parliamentary Paper, No. 144, Session 1889.

to the conclusion-already arrived at elsewhere-that for astronomical purposes a refracting telescope is preferable to a reflector, and that the great success which has lately attended the production of object glasses of large diameter confirms this view; they therefore suggest that the expediency of replacing the mirror of the great telescope with a refracting objective-which, they believe, could be done at a comparatively moderate cost—be considered.\*

796. An extended account of the meteorology and climate of Meteorology elsewhere treated on. Victoria will be found in the Victorian Year-Book, 1874, paragraphs 54 to 95.

> \* An interesting description of the Melbourne Observatory and of the great Melbourne telescope, by Mr. E. J. White, the then acting Government Astronomer, will be found in the Victorian Year. Book, 1874, page 231 et seq.

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