

**PENSIONS, RETIRING ALLOWANCES, COMPENSATIONS, AND GRATUITIES
PAID 1885-6.**

Pensions, Compensations, &c.	Annual Allowances.	Compensations and Gratuities.	Total.
	£	£	£
<i>Under Special Appropriations—</i>			
Constitution Act	2,835	...	2,835
County Court Judges	3,661	...	3,661
Master-in-Equity	750	...	750
Commissioner of Audit	229	...	229
Railway Department	855	12,578	13,433
Public Service *	41,255	6,637	47,892
Others (Lady Darling, Mrs. Petrie, and Widow of late Hon. J. M. Grant)	1,100	3,000	4,100
Total	50,685	22,215	72,900
<i>Under Annual Votes—</i>			
Railway Department	1,823	12,877	14,700
Public Service	8,373	8,986	17,359
Others	333	...	333
Total	10,529	21,863	32,392
Total, exclusive of Police Pensions ...	61,214	44,078	105,292
<i>To the Police—</i>			
Endowment and amount voted £12,000† } From Police Superannuation Fund 11,446 }	17,963	5,483	23,446
Grand total	79,177	49,561	128,738
<i>Less amount derived from Police Superannuation Fund</i>	...	...	11,446
Amount paid by State ... ..	...	...	£117,292‡

413. Taking into account pensions, retiring allowances, compensations, and gratuities of all kinds, whether specially appropriated or voted, the amount paid by the State was less by £667 in 1885-6 than in the previous year.

Retiring allowances, &c., 1884-5 and 1885-6.

PART III.—VITAL STATISTICS.

414. In pursuance of the provisions of Act 28 Vict. No. 246, records are kept of all marriages, births, and deaths which are known to occur in Victoria. The marriages are recorded by registrars of marriages or by clergymen throughout the colony, and the births and deaths by deputy registrars. The marriage registrations are made in

Registration system for marriages, births, and deaths.

* Including allowances to officers under the Civil Service and Public Service Acts, the Lunacy Statute, and the Discipline Act.

† These figures represent the amount paid from the general revenue, which consists of the usual endowment of £2,000, and an additional grant of £10,000 voted by Parliament.

‡ See table following paragraph 241 *ante*.

triplicate, one copy being forwarded to the Registrar-General, one retained by the lay registrar or officiating clergyman, as the case may be, and the third given to the parties married. The birth and death registrations are made in duplicate, one copy being forwarded to the Registrar-General and the other retained by the deputy registrar.

Time of registration dealt with in compiling statistics.

415. It is found convenient to deal with the records according to the periods in which the marriages, births, and deaths are registered, rather than those in which they occur. And—since the registration of a death should in all cases precede burial, and the registration of a marriage is simultaneous with the marriage itself—the registrations in the former case closely, and in the latter case entirely, agree with the actual occurrences during any period. In the case of births, however, there is a wider margin, since the legal limit of registration extends to two months, and may in special cases extend to twelve months, after the date of birth; the effect of which is, not that the numbers in one period differ much from those in another not distant period of similar duration, but that, in view of the length of time over which the non-registration of a birth is permitted to extend, and the natural tendency of some persons to postpone whatever is not absolutely necessary to be done on a particular day, a certain number of births escape registration altogether.

Marriages, 1886.

416. The marriages returned to the Registrar-General for 1886 numbered 7,737, as against 7,395 for the previous year. The excess in favour of 1886 was thus 342.

Marriages, 1886 and former years.

417. More marriages were returned for 1886 than for 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; and in 1884, for the first time, they exceeded 7,000.*

Marriage rate.

418. The proportion which the number of marriages bear to the total population is generally called the marriage rate. This for many years had been 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; and then gradually revived, and in 1886 amounted to 7·84, this being the highest rate which has prevailed during the last twenty-four years. The following table gives the number of marriages and number of persons married per 1,000 of the population during each of the twenty-seven years ended with 1886:—

* For the number of marriages during each year since the first settlement of Port Phillip, see Statistical Summary of Victoria (first folding sheet) *ante*.

ANNUAL MARRIAGE RATE, 1860 TO 1886.

Year.	Per 1,000 of the Mean Population.	
	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
1867	6·97	13·94
1868	7·08	14·16
1869	6·89	13·78
1870	6·63	13·26
1871	6·37	12·74
1872	6·36	12·72
1873	6·50	13·00
1874	6·33	12·66
1875	6·33	12·66
1876	6·21	12·42
1877	6·31	12·62
1878	6·20	12·40
1879	5·98	11·96
1880	6·22	12·44
1881	6·79	13·58
1882*	7·09	14·18
1883*	7·43	14·86
1884*	7·73	15·46
1885*	7·72	15·44
1886	7·84	15·68
Mean of 27 years ...	7·00	14·00

419. It has been shown, upon more than one occasion,† that the frequency of marriage is not dependent upon the numbers of the total population, still less upon the number of marriageable women, but almost entirely upon the number of marriageable men the community contains, the tendency of whom to marry is modified by their 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 one. To demonstrate this, the following table has been constructed, showing the proportion of marriages to the population, to the number of single men and to the number of single women, in each of the last five census years :—

Marriage rate at various periods.

* Amendments having been made in the population estimates, the proportions for these years have been slightly changed since last publication.

† See *Victorian Year-Book* 1879-80, pages 103 and 104; 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.

Year of Census.	Exclusive of Chinese and Aborigines.				
	Population.	Number of Marriages.	Proportion of Marriages per 1,000 of the—		
			Population.	Marriageable Men.†	Marriageable Women.‡
1854	234,361	3,696	15·77	52·16	245·04
1857	383,668	4,465	11·64	46·79	169·66
1861	513,896	4,528	8·81	42·34	122·36
1871	712,263	4,715	6·62	52·43	72·11
1881	849,438	5,732	6·75	57·40	48·02

Reasons for
fluctuations
in marriage
rate.

420. The numbers in the last column but two, and those in the last 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 gold-fields, 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 gold-fields 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 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,

* 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.

unable to obtain congenial occupation, had left the colony; tents had almost disappeared from the gold-fields; 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.

421. The decline in the female marriage rate shown in the last column of the table will be better realized when it is considered that in 1854 about 1 in 4 of all the spinsters and widows in the colony married 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 gold-fields, 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.

422. M. Toussaint Loua, Chief of the General Bureau of Statistics of France, in a paper read before the Statistical Society of Paris on the 17th December, 1884, pointed out the desirability of ascertaining the marriage rate by comparing the marriages with the number of marriageable persons instead of with the total population,* and states that in France marriageable males marry at the annual rate of 57 per 1,000, and marriageable females at that of 46 per 1,000. In a former paper (September, 1884,) the same writer had stated the proportions in Switzerland were respectively 49 and 38. The proportions in Victoria, according to the lowest line of the last table were 57 and 48. M. Loua does not say what ages he considers marriageable, and perhaps they may not be identical with those so considered by the Government Statist of Victoria—viz., 20 and upwards for males, and 15 and upwards for females.

* The following are M. Loua's words:—"Si l'on veut rendre compte de la fréquence réelle des mariages, le rapport à la population ne suffit pas; il vaut mieux mettre les mariages en parallèle avec la population *mariable*, c'est à dire avec le nombre des individus célibataires ou veufs) ayant atteint ou dépassé l'âge requis pour leur mariage."—*Journal de la Société de la Statistique de Paris*, vingt-sixième année, p. 13, Berger-Levrault, 5 Rue des Beaux Arts, Paris.

Marriage rates in Australasian colonies.

423. The following table gives a statement of the number of marriages to every 1,000 of the population of the various Australasian colonies for each year from 1865 to 1885, except Western Australia, for which colony it is given for the last fourteen of those years :—

MARRIAGE RATES IN AUSTRALASIAN COLONIES, 1865 TO 1885.*

Year.	Number of Marriages † per 1,000 of Mean Populations.						
	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1865 ...	7·36	8·94	13·27	9·45	...	6·27	10·47
1866 ...	6·76	8·26	11·61	8·12	...	5·93	10·32
1867 ...	6·97	7·84	9·54	8·20	...	6·10	9·69
1868 ...	7·08	8·23	8·33	7·37	...	6·57	9·35
1869 ...	6·89	8·04	8·31	6·78	...	6·44	8·32
1870 ...	6·63	7·85	7·80	6·90	...	6·62	7·62
1871 ...	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 ...	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	6·50	7·96	8·03
1879 ...	5·98	7·80	7·49	8·81	7·57	7·23	7·60
1880 ...	6·22	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	9·20	7·82	7·51	7·97	6·73
Means ...	6·73	8·08	8·69	8·60	6·87	7·02	7·99

NOTE.—In consequence of amendments in the population estimates, the figures of the three years ended with 1884 in the column for Victoria, and of the twenty years ended with 1884 in the column for New South Wales, have been amended since last publication of the *Victorian Year-Book*.

Reasons for marriage rates being higher in other colonies than in Victoria.

424. It will be observed that the mean marriage rate is lower in Victoria than in any one of the neighbouring 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 four-fifths of the males who marry enter the marriage state is between

* For the number of marriages in the various colonies during the thirteen years ended with 1885, see General Summary of Australasian Statistics (third folding sheet) *ante*.

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

20 and 35 years. It naturally follows, therefore, that on the number of 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 they—especially New South Wales, Queensland, South Australia, and New Zealand—have, for years past, introduced large numbers of adults at the cost of the State, and, as is nearly always the case when immigration is subsidized, these have been accompanied or followed by a steady stream of unassisted immigrants. Besides, not one of the neighbouring colonies has been subjected, in the early years 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 has taken place in Victoria at and since the time of the early gold discoveries. As the young population is growing to a marriageable age, however, this colony is rapidly assuming a normal condition; and this circumstance has for several years past brought about a marked improvement in the marriage rate, which, with perhaps occasional brief interruptions, will assuredly continue until marriages bear as high a proportion to the total population as they do in any of the neighbouring colonies.

425. In 1885 the marriage rate of Victoria, New South Wales, Queensland, Western Australia, and Tasmania, was above the mean of the whole period, as shown in the last line of the table, but that of South Australia and New Zealand was considerably below it; it was above the rate in the previous year in Queensland, Western Australia, and Tasmania, almost identical with it in Victoria, and below it in New South Wales, South Australia, and New Zealand. In New Zealand, during the last six years, the marriage rate has been low, and although for many of the earlier years it was higher than in any of the other colonies, latterly it has averaged less than 7 per 1,000, which is lower than in any other colony. This is a remarkable instance of a high marriage rate coincident with an influx of adult immigrants, and a low one consequent upon such influx being stopped. †

Comparison
of marriage
rates of
colonies
in 1885 and
former
years.

* See figures following paragraph 97 *ante*.

† 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."

426. 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 years :—

ORDER OF COLONIES IN REFERENCE TO MARRIAGE RATES.

Order in Latest Year.	Order in a Series of Years.
1. Queensland.	1. Queensland.
2. New South Wales.	2. South Australia.
3. Tasmania.	3. New South Wales.
4. South Australia.	4. New Zealand.
5. Victoria.	5. Tasmania.
6. Western Australia.	6. Western Australia.
7. New Zealand.	7. Victoria.

427. Since the last publication of the *Victorian Year-Book*, Tasmania and South Australia have changed places in the list showing the order in the latest year, and New South Wales and New Zealand in that showing the order in a series of years. It will be noticed that Victoria, which for several years had been at the bottom, stood in 1885 above Western Australia and New Zealand.

428. In 1885 the marriage rate of the colonies situated upon the Australian continent was lower than in the previous two years; but the rate in those colonies, with the addition of Tasmania and New Zealand, was higher than in 1884, although lower than in 1883 or 1882:—

MARRIAGE RATES IN AUSTRALIA AND AUSTRALASIA,
1873 TO 1885.

Year.	Number of Marriages * per 1,000 of Mean Population.	
	Continent of Australia.	Australia with Tasmania and New Zealand.
1873	7.35	7.38
1874	7.07	7.32
1875	7.12	7.38
1876	6.93	7.15
1877	7.05	7.18
1878	7.08	7.27
1879	6.88	7.01
1880	7.15	7.08
1881	7.62	7.41
1882	8.04	7.87
1883	8.20	8.03
1884	8.22	7.72
1885	8.07	7.83
Means	7.44	7.43

429. Returns of marriages, births, and deaths are obtainable for 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 POSSESSIONS.

			Annual Rate per 1,000 of the Population.*				Annual Rate per 1,000 of the Population.*
		Years.				Years.	
Ceylon	...	1867-76	...	7·3	West Indies—		
Mauritius	...	1871-75	...	2·5	St. Vincent	1872-76	...
Seychelles	...	1875-77	...	8·7	Barbados	...	3·7
Nova Scotia	...	1871-75	...	7·7	Grenada	...	5·6
Bermudas	...	1871-75	...	8·3	Dominica	...	6·9
West Indies—					Trinidad	...	3·8
St. Lucia	...	1878-79	...	5·2			

430. The following table gives for each of the five years ended with 1885 a statement of the marriage rates in British and such Foreign countries as the information is available for. The figures have been taken from the reports of the Registrar-General of England :—

Marriage rates in European countries.

MARRIAGE RATES IN EUROPEAN COUNTRIES, 1879 to 1885.

Countries.	Number of Marriages* per 1,000 of Mean Populations.					Mean of Five Years.
	1881.	1882.	1883.	1884.	1885.	
Hungary	9·9	10·2	10·2	10·1	...	10·1
Austria	8·0	8·2	7·8	7·8	7·6	7·9
Prussia	7·7	7·8	7·8	8·0	8·1	7·9
Italy †	8·1	7·9	8·0	8·2	7·9	8·0
Denmark	7·8	7·7	7·7	7·8	7·6	7·7
German Empire	7·5	7·7	7·7	7·8	7·9	7·7
England and Wales	7·6	7·7	7·7	7·5	7·2	7·5
France	7·5	7·4	7·5	7·6	7·4	7·5
Holland	7·3	7·2	7·1	7·2	6·1	7·0
Belgium	7·2	7·0	6·7	6·7	6·8	6·9
Scotland	6·9	7·0	7·0	6·7	6·4	6·8
Switzerland	6·8	6·8	6·8	6·8	6·9	6·8
Spain	...	...	...	...	...	6·8 ‡
Norway	6·4	6·7	6·6	6·8	6·6	6·6
Sweden	6·2	6·4	6·4	6·5	6·6	6·4
Ireland §	4·2	4·3	4·3	4·5	4·3	4·3

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

† In Italy, for some years after 1866, when the civil became the only legal form of marriage, a low rate was recorded in consequence of the non-registration of the marriages solemnized only in churches. The number of such marriages, however, afterwards decreased, and of late years the registration of marriages has been less imperfect.

‡ Mean of 1876 and 1878.

§ 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.

European marriage rates in 1885 and former years.

431. It will be observed that, in eight of the fourteen countries of which particulars are given for 1885, viz., Austria, Italy, Denmark, England and Wales, France, Holland, Belgium, and Scotland, the marriage rates were below the average; whence it would appear that the depression which prevailed in Europe at that period had the effect of checking marriage in those countries. In Italy and France it was as low as, and in Austria, Denmark, England and Wales, Belgium, and Scotland it was lower than it had been, in any of the other years named. On the other hand, in the German Empire—especially Prussia—and in Switzerland, it was higher in 1885 than in any of the other years.

Australasian and European marriage rates compared.

432. In the same five years, the mean marriage rates in Queensland, New South Wales, South Australia, and Tasmania were above those in any of the countries named, except Hungary (four years); whilst the mean rates in Victoria and Western Australia were higher than those prevailing in eight, and the mean rate in New Zealand was higher than that prevailing in six, of those countries. The following are the rates referred to :—

MEAN MARRIAGE RATES IN AUSTRALASIAN COLONIES, 1881 TO 1885.

	Number of Marriages per 1,000 of Mean Population.					
Queensland	8·66
New South Wales...	8·51
South Australia	8·33
Tasmania	8·02
Victoria	7·35
Western Australia	7·05
New Zealand	6·83

Marriage rate in United Kingdom.

433. The following, according to the reports of the Registrar-General of England, is the marriage rate of the United Kingdom during the fifteen years ended with 1885. 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 1885 than in any previous year except 1879 :—

MARRIAGE RATE IN THE UNITED KINGDOM, 1871 TO 1885.

Marriages per 1,000 of the Population.			Marriages per 1,000 of the Population.		
1871 ... ..	...	8·21	1880 ... ..	...	6·83
1872 ... ..	...	7·98	1881 ... ..	...	7·01
1873 ... ..	...	8·03	1882 ... ..	...	7·17
1874 ... ..	...	7·79	1883 ... ..	...	7·15
1875 ... ..	...	7·67	1884 ... ..	...	7·04
1876 ... ..	...	7·70	1885 ... ..	...	6·72
1877 ... ..	...	7·32			
1878 ... ..	...	7·09	Mean	...	7·36
1879 ... ..	...	6·69			

* See footnote (§) on previous page.

434. Although rural rather than urban life tends to the promotion 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 1886, it was in town districts three and a half times as high as in rural districts, as will be seen by the following table, which contains a statement of the marriages celebrated in that year in the three classes of districts, together with the estimated mean populations of such divisions :—

Marriage rates in town and country.

MARRIAGES IN URBAN AND COUNTRY DISTRICTS, 1886.

Districts.	Estimated Mean Population.	Marriages, 1886.		Proportion per 1,000 of the Population 1881-1885.
		Total Number.	Number per 1,000 of the Population.	
Melbourne & suburbs (Greater Melbourne)	371,630	4,274	11.50	10.49
Extra-Metropolitan towns	187,980	2,089	11.11	10.99
Country districts ...	427,484	1,374	3.21	3.12
Total ...	987,094	7,737	7.84	7.30

435. 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 1886, however, the numbers in the spring and summer quarters were equal. 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.

MARRIAGES IN EACH QUARTER.

Seasons.	Quarter ended on the last day of—	Year 1886.		Percentage in—	
		Number of Marriages.	Percentage.	Ten Years: 1871 to 1880.	Five Years: 1881 to 1885.
Summer ...	March ...	1,934	25.00	24.43	23.46
Autumn ...	June ...	2,014	26.03	26.19	26.52
Winter ...	September ...	1,854	23.96	23.81	23.66
Spring ...	December ...	1,935	25.01	25.57	26.36
	Year ...	7,737	100.00	100.00	100.00

436. About four-fifths of the unions which take place are between bachelors and spinsters; and the next most numerous are generally those between widowers and spinsters, although they have sometimes been

Former condition of those marrying.

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 of the whole. For several years past the proportion of marriages between bachelors and spinsters has been increasing, and a corresponding decrease has occurred amongst the other classes, chiefly in the marriages of bachelors and widows. The following is the number and percentage in each of these groups during 1886, and the percentage during two previous periods :—

FORMER CONDITION OF PERSONS MARRIED.

Previous Condition.	Year 1886.		Percentage in—	
	Number of Marriages.	Percentage.	Ten Years : 1871 to 1880.	Five Years : 1881 to 1885.
Bachelors and spinsters ...	6,689	86·45	80·59	84·67
Bachelors and widows ...	352	4·55	7·10	5·01
Widowers and spinsters ...	441	5·70	7·75	6·63
Widowers and widows ...	255	3·30	4·56	3·69
Total ...	7,737	100·00	100·00	100·00

Former condition of those marrying in various countries.

437. The following is a statement of the proportions of marriages of persons of different conjugal conditions in various countries, the figures, except those in the first line, being taken from *Mulhall's Dictionary of Statistics** :—

FORMER CONDITION OF PERSONS MARRYING IN DIFFERENT COUNTRIES.

Countries.	Per 1,000 Marriages Celebrated, Number between—			
	Bachelors and Spinsters.	Bachelors and Widows.	Widowers and Spinsters.	Widowers and Widows.
Victoria ...	847	50	66	37
England ...	816	45	86	53
France ...	840	41	82	37
Prussia ...	794	53	108	45
Russia ...	762	46	102	90
Austria ...	755	64	131	50
Italy ...	825	38	99	38
Spain ...	811	40	101	48
Belgium ...	827	51	86	36
Holland... ..	794	54	104	48
Denmark ...	813	52	101	34
Sweden ...	847	36	93	24
Norway... ..	845	38	96	21
Greece ...	858	41	68	33
Roumania ...	850	30	62	58

* Page 304. London : Routledge and Sons, 1884.

438. The figures in this table appear to show that widows have less chance of re-marrying in Victoria than in most of the countries named, as the proportion of such re-marriages (87 per 1,000) is lower than in any of those countries, except France with 78, Italy with 76, Greece with 74, Sweden with 60, and Norway with 59 re-marriages of widows to every 1,000 marriages celebrated.

Low proportion of widows re-marrying.

439. Divorced persons marrying are classed as bachelors and spinsters, unless in cases where they had become widowers or widows before contracting the marriage from which they were released by divorce. Five divorced men and six divorced women were married in 1886; the former married spinsters, and four of the latter married bachelors, and two widowers.

Divorced persons, 1886.

440. The persons returned at the census of 1881 as living in a state of divorce numbered 19, viz., 9 males and 10 females. Of the 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.*

Divorced persons, 1881.

441. 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. Seven deserted wives, but only two deserted husbands, availed themselves of this provision in 1886. All of the former married bachelors; two had not heard of their former husbands for 7 years, one for 8, two for 9, one for 13, and one for 30 years. Of the two deserted husbands, one married a widow, and the other a spinster; one had not heard of his former wife for 7 years, and the other for 15 years. In the previous year thirteen deserted wives and two deserted husbands re-married.

Deserted husbands and wives.

442. In 1886, 696 widowers and 607 widows re-entered the marriage state. During the last thirteen years more widowers have re-married than widows. Formerly it was different. In the eight years ended with 1873 the widowers re-entering the marriage state numbered 4,344 and the widows 4,618, and at earlier periods in the history of the colony

Re-marriages

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

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-one years ended with 1886 :—

RE-MARRIAGES, 1866 TO 1886.

Year.	Number of Re-marriages of—		Year.	Number of Re-marriages of—	
	Widowers.	Widows.		Widowers.	Widows.
1866 ...	487	498	1878 ...	634	585
1867 ...	504	591	1879 ...	637	553
1868 ...	558	623	1880 ...	603	520
1869 ...	553	563	1881 ...	679	551
1870 ...	547	595	1882 ...	628	547
1871 ...	587	605	1883 ...	699	562
1872 ...	522	552	1884 ...	725	615
1873 ...	586	591	1885 ...	735	646
1874 ...	602	593	1886 ...	696	607
1875 ...	614	583			
1876 ...	678	623	Total ...	12,940	12,203
1877 ...	666	600			

Marriages of
Aborigines.

443. The marriages of 3 Aboriginal males with Aboriginal females are included in the returns of 1886. In the previous year, 4 marriages of Aborigines took place.

Marriages of
Chinese.

444. Eighteen Chinese males were married in Victoria in the year 1886, as against 31 (including 2 half-castes) in 1885, 19 Chinese in 1884, and 8 in 1883. Of the women who married Chinese in the year under review, 2 were full-bred Chinese, of whom one was born in Victoria and one in New South Wales. During the twenty years prior to 1886, 326 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 :—

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

NATIONALITY OF WOMEN MARRYING CHINESE, 1866 TO 1886.

Birthplace of Wives.	Number of Marriages of Chinese Males.		
	Twenty Years: 1866 to 1885.	Year 1886.	Total: 1866 to 1886.
Victoria	160	8*	168
Other Australian colonies ...	53	3*	56
England and Wales	56	6	62
Scotland	15	...	15
Ireland	25	...	25
Other British possessions ...	1	...	1
France	1	...	1
Germany	2	...	2
Spain	1	...	1
The United States	2	...	2
China	4	...	4
At sea	6	1	7
Total	326	18	344

445. The marriage ceremony in Victoria may be performed either by the registered clergy of any religious sect or by lay registrars. In 1886, 94 per cent. of the marriages were celebrated according to the former, and 6 per cent. according to the latter, system. Lay marriages, in 1886 numbered 453, and were fewer than in any previous year since 1878 except 1885, when they numbered 426. In 1884 they numbered 645; in 1883, 565; in 1882, 588. The following table gives a statement of the number and percentage of marriages celebrated by each religious sect and by lay registrars during 1886, also the percentage in the preceding quinquennial period and in the decennial period ended with 1880:—

MARRIAGES BY DIFFERENT DENOMINATIONS.

Marriages performed according to the usages of the—	Marriages in 1886.		Percentage of Marriages in—	
	Number.	Percentage.	Five Years: 1881 to 1885.	Ten Years: 1871 to 80.
Church of England	2,541	32·84	28·34	24·63
Presbyterians	1,252	16·18	17·77	20·46
Wesleyans	1,136	14·68	15·93	16·38
Bible Christians	143	1·85	2·09	1·69
Independents	393	5·08	5·04	5·42
Baptists	422	5·45	4·94	3·70
Lutherans	77	1·00	·98	1·02
Unitarians	6	·08	·03	·02
Society of Friends ... ..	...	...	...	·01
Calvinistic Methodists ...	5	·06	·07	·16
Roman Catholics	1,132	14·63	14·69	17·21
Jews	28	·36	·43	·42
Other sects	149	1·93	1·14	1·06
Lay registrars	453	5·86	8·55	7·82
Total	7,737	100·00	100·00	100·00

* Including in each case the marriage of one female of the Chinese race.

Duplicate marriages.

446. 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.

Sects of Aborigines married.

447. The 3 Aboriginal marriages which took place in 1886 were solemnized according to the rites of the Moravians.

Sects of Chinese married.

448. Of the 18 marriages of Chinese in 1886, 6 were celebrated according to the rites of the Church of England, and 2 according to those of the Free Church of England; 3 according to those of the Presbyterians, 4 according to those of the Wesleyans, 2 according to those of the Independents, and 1 in a manner not stated.

Marriages by different sects.

449. 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 NUMBERS OF EACH DENOMINATION.

Religious Denomination.	Persons of each Denomination 1881.	Marriages celebrated annually, 1880 to 1882.		Persons of each Denomination (mean of 1871 and 1881).	Marriages celebrated annually, 1871 to 1880.	
		Mean Number.	Proportion per 1,000 persons living.		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	815·5	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	4·68
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	8·2	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	5,830·3	6·76	796,937	4,978·4	6·25

* Including Buddhists, Confucians, &c., those of no denomination and of no religion, and the unspecified

† Marriages by lay registrars.

450. It will be observed that the denominations which solemnize most marriages in proportion to their numbers in the population are the Bible Christian, the Independent, and the Baptist, in the order 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 that shown for the decennium. In proportion to their respective 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.

Sects which perform most marriages and vice versa.

451. The numbers of either sex who evinced their want of elementary education by signing the marriage register with a mark instead of in writing were as follow in 1886, the proportion of those who signed with marks to the total numbers married being also shown:—

Signing with marks.

SIGNING MARRIAGE REGISTER WITH MARKS, 1886.

Persons Married.	Numbers Married.	Signing with Marks.	
		Total Number.	Number in every 100 Married.
Bridegrooms	7,737	155*	2.00
Brides	7,737	153	1.98
Mean	7,737	154	1.99

452. 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 1886, the proportion of both men and women signing with marks was much lower than in any previous year, as will be seen by the following figures, which show the proportions for the last fourteen years:—

Increased numbers signing in writing.

* Of these, 3 were Chinese, who signed in the Chinese character.—If these be excluded, the number signing with marks in every 100 married would be reduced to 1.96.

NUMBERS SIGNING WITH MARKS PER 100 MARRIED,
1873 TO 1886.

Year.	Men.	Women.	Mean.
1873	6·55	9·97	8·26
1874	6·52	9·91	8·22
1875	5·48	9·43	7·46
1876	5·31	7·50	6·41
1877	5·04	6·02	5·53
1878	4·12	5·30	4·71
1879	3·81	5·60	4·71
1880	4·18	4·09	4·13
1881	2·90	4·16	3·53
1882	2·88	3·27	3·07
1883	3·09	3·47	3·28
1884	2·55	2·77	2·66
1885	2·56	2·62	2·59
1886	2·00*	1·98	1·99

Signing with marks, 1853 to 1872.

453. 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 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.
9·18	20·71	14·95

Cases of both signing with marks.

454. The marriages in which marks instead of writing were made use of in 1886 numbered 287, but in only 21 of these, or about 1 in 14, did both parties use marks. In the 266 other instances either the husband or the wife signed in writing. Thus, whereas in the case of 1 marriage in 30 either the bride or the bridegroom was unable to write, it happened in the case of only 1 marriage in 370 that neither party was able to sign the marriage register in writing.

Signatures of Chinese.

455. Of the 18 Chinese who married in 1886, 6 signed with an ordinary cross, 3 with a Chinese character, and the rest in writing. All the women they married signed in writing.

Signatures of Aborigines.

456. In the case of the 4 marriages between Aborigines which took place in 1886, all the contracting parties signed the marriage register in writing.

Signing with marks in each sect.

457. The proportion of persons signing with marks is found to differ according to the religious denomination. Means are afforded by the

* See footnote to last page.

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 1886 and the average of the quinquennial period ended with 1885, and the decennial period ended with 1880. Considerable improvement will be noticed in respect to all the principal sects :—

SIGNING WITH MARKS IN EACH SECT.

Marriages performed according to the usages of the—	Number Signing with Marks in every 100 Married.								
	Year 1886.			Five Years : 1881 to 1885.			Ten Years : 1871 to 1880.		
	Men.	Women.	Mean.	Men.	Women.	Mean.	Men.	Women.	Mean.
Church of England ...	1·73	1·73	1·73	1·90	2·11	2·00	4·54	6·11	5·33
Presbyterians ...	1·52	1·28	1·40	1·71	2·06	1·88	3·67	5·97	4·82
Wesleyans ...	1·64	1·49	1·56	2·28	2·33	2·30	4·15	5·33	4·74
Bible Christians ...									
Independents ...	1·78	1·27	1·52	2·36	2·18	2·27	3·37	5·49	4·43
Baptists ...	2·84	2·13	2·48	2·17	2·77	2·47	3·48	5·22	4·35
Lutherans ...	...	...	...	...	...	...	1·77	4·13	2·95
Calvinistic Methodists ...	...	...	...	...	...	...	1·22	6·10	3·66
Roman Catholics ...	3·53	3·27	3·40	5·19	5·55	5·37	10·14	15·43	12·79
Jews ...	...	...	...	...	...	...	·95	·47	·71
Other sects ...	·70	·70	·70	3·66	4·45	4·05	7·01	3·79	5·40
Lay registrars ...	2·21	4·86	3·53	5·78	8·29	7·03	6·60	12·93	9·77
Total ...	2·00*	1·98	1·99	2·78	3·22	3·00	5·31	7·93	6·62

458. 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 1886 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 higher than amongst marriages by Roman Catholics.

459. In 25 marriages by Unitarians which took place in the sixteen years ended with 1886, not one instance occurred of either of the parties signing with a mark; this sect, therefore, finds no place in the above table. In 109 marriages by Calvinistic Methodists during the same period, all but two of the males signed in writing, but 5 of the

* See footnote (†) to table following paragraph 451 ante.

females signed with marks, and in 384 marriages of Jews only 5 persons signed with marks.

Signing with marks in Australasian colonies.

460. A statement of the numbers who sign the marriage register 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 1881 to 1885 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, 1881 TO 1885.

Colony.	Year.	Number Signing with Marks to every 100 Married.		
		Men.	Women.	Mean.
1. Victoria ...	1881	2·90	4·16	3·53
	1882	2·88	3·27	3·07
	1883	3·09	3·47	3·28
	1884	2·55	2·77	2·66
	1885	2·56	2·62	2·59
2. New Zealand ...	1881	3·20	6·79	4·99
	1882	2·50	4·97	3·73
	1883	2·91	4·62	3·76
	1884	2·82	4·45	3·63
	1885	2·83	3·82	3·32
3. South Australia ...	1881	4·37	6·85	5·61
	1882	4·43	5·14	4·78
	1883	4·02	5·36	4·69
	1884	2·86	3·80	3·33
	1885	4·00	4·30	4·15
4. New South Wales ...	1881	5·52	8·35	6·93
	1882	5·09	6·16	5·62
	1883	5·66	6·54	6·10
	1884	4·68	5·79	5·24
	1885	4·31	5·19	4·75
5. Queensland ...	1881	4·93	9·92	7·42
	1882	5·16	9·69	7·42
	1883	5·35	8·40	6·88
	1884	4·06	7·48	5·77
	1885	3·76	7·35	5·55

Victoria the least illiterate colony.

461. By these figures it appears that the proportion of persons able to sign in writing is 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., 1882 and 1883

—even larger than in this 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.

462. 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:—

Signing with marks in various countries.

SIGNING WITH MARKS IN VARIOUS COUNTRIES.

Country.	Year.	Number Signing with Marks to every 100 Married.		
		Men.	Women.	Mean.
Prussia	1884	3·31	5·11	4·21
Scotland	1883	6·36	12·10	9·23
Holland	1877	7·53	14·83	11·18
England and Wales	1885	10·70	12·90	11·80
France	1882	14·39	22·62	18·50
Ireland	1884	24·70	28·10	26·40
Italy	1884	44·97	66·65	55·81

463. By comparing these figures with those in the previous table, 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. Scotland comes next to Prussia, but is twice as illiterate. Holland, which comes next to Scotland, would probably rank higher were it not that the latest return available dates as far back as 1877, and adult education was probably not so advanced then as it is now. Attention is called to the very large proportion signing with marks in Italy and Ireland, especially the former.

Countries compared as to illiteracy.

464. The age of both bridegroom and bride was specified in the case of all but 74 of the 7,737 marriages which took place in 1886.*

Ages of bride-grooms and brides in combination.

* There is no reason to suppose that in Victoria the age of either party to a marriage is often wrongly stated, and the cases in which the age is not specified are but few. It may, however, not be amiss to quote the following from the 41st report of the Registrar-General of England, page xv:—“I should be glad if the clergy, at the time of registering the marriage, would state that it is of considerable importance, not only to the parties themselves, that their precise ages should be returned either for tracing pedigree or for proof of personal identification in establishing title to property, but that such particulars would also enhance the values of these national records for purposes of statistical investigation.”

In 63 of the defective entries the age of neither party was given; in 4 cases the age of the husband was stated, but not that of the wife; and in 7 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, 1886.

Ages of Bridegrooms.	Ages of Brides.														Unspecified.	Bridegrooms. Total					
	14 to 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.
16 to 17 years	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
17 to 18 "	1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
18 to 19 "	3	4	...	2	...	...	...	...	...	...	...	...	...	...	...	...	9
19 to 20 "	5	7	16	10	10	...	1	...	...	...	...	...	...	...	...	...	...	49
20 to 21 "	...	2	7	9	15	20	18	44	6	1	...	...	...	...	...	...	...	...	...	1	123
21 to 25 "	1	6	31	96	173	244	250	1372	300	28	4	2	...	...	...	...	...	...	...	1	2508
25 to 30 "	1	1	14	38	81	136	210	1342	860	89	28	2	2	...	...	...	...	...	...	1	2805
30 to 35 "	...	2	2	9	22	24	44	317	348	113	44	20	2	...	...	...	...	...	...	...	947
35 to 40 "	1	7	5	13	10	110	146	76	53	17	6	1	1	1	...	...	...	1	448
40 to 45 "	2	2	2	7	44	69	52	35	27	14	5	...	...	...	...	...	...	259
45 to 50 "	1	1	1	4	2	33	36	41	26	28	25	6	2	...	...	...	...	...	206
50 to 55 "	1	...	1	14	17	21	23	29	20	18	4	2	1	...	...	...	151
55 to 60 "	1	1	3	10	6	16	14	8	13	9	2	...	2	...	...	85
60 to 65 "	2	3	5	3	6	4	3	6	5	4	...	...	...	41
65 to 70 "	4	1	1	2	2	4	6	1	1	1	...	...	...	23
70 to 75 "	2	1	...	...	...	...	...	1	6
75 to 80 "	1	...	1	...	...	...	...	...	2
Unspecified	2	1	...	4	...	...	...	...	...	...	...	...	...	...	...	...	63	70
Total Brides	2	11	58	170	312	465	557	3297	1796	434	234	147	88	53	24	13	6	2	1	67	7737

NOTE.—This table may be read thus :—One man between 45 and 50 married a girl between 16 and 17; two women between 40 and 45 married men between 21 and 25, &c.

Relative ages of husband and wife.

465. An examination of the 7,663 cases in which the ages of both parties are specified will show that in 2,522 instances, or 33 per cent. of the whole, both parties to the marriage were about the same age; in 670 instances, or 9 per cent. of the whole, the wife was older than the husband; and in 4,471 instances, or 58 per cent. of the whole, the husband was older than the wife.

Inequalities of age.

466. Some striking inequalities of age amongst the parties married appear in several of the columns, as, for instance, two men between 60 and 65, and four men between 65 and 70, married women between 21 and 25; a man between 55 and 60 married a girl of 19, and another at the same age married a girl of 20; a man between 50 and 55 married a girl of 18; a man between 45 and 50 married a girl of 16; at the

same age another man married a girl of 17, another one of 18, and four others girls of 19. On the other hand, a woman between 30 and 35 married a youth of 19; another at the same age married a youth of 20; two women between 40 and 45 married men between 21 and 25, &c.

467. It will be noticed that a boy aged 16 took upon himself the cares of matrimony, his wife being of the same age as himself; also that four boys aged 17 got married, their partners being aged respectively 16, 17, 18, and 19. On the other hand an instance will be remarked of two men, who had passed the age of 75, entering the marriage state, their wives being respectively between the ages of 45 and 50 and 55 and 60; also of one woman, who had passed the same mature age, marrying, her husband being between 70 and 75 years of age.

Extreme ages of marriage.

468. The next table has been designed for the purpose of showing the age at which persons of either sex generally marry, the information being given for the year 1886 and for the decennial period 1871 to 1880:—

Age at which marriage is contracted.

PROPORTION OF MALES AND FEMALES MARRYING AT DIFFERENT AGES, 1871-80 AND 1886.

Ages.	Bridegrooms.			Brides.		
	Numbers, 1886.	Proportions per 1,000.		Numbers, 1886.	Proportions per 1,000.	
		Year 1886.	Ten Years, 1871-80.		Year 1886.	Ten Years, 1871-80.
Under 15 years ...	...	...	...	2	·26	·48
15 to 16 ,, ...	...	...	...	11	1·43	2·71
16 to 17 ,, ...	1	·13	·02	58	7·56	12·74
17 to 18 ,, ...	4	·52	·46	170	22·16	36·74
18 to 19 ,, ...	9	1·17	1·57	312	40·68	62·69
19 to 20 ,, ...	49	6·39	6·33	465	60·63	80·93
20 to 21 ,, ...	123	16·05	16·79	557	72·62	86·94
21 to 25 ,, ...	2,508	327·12	281·06	3,297	429·86	375·69
25 to 30 ,, ...	2,805	365·85	295·83	1,796	234·16	174·64
30 to 35 ,, ...	947	123·52	165·38	434	56·59	69·13
35 to 40 ,, ...	448	58·43	97·22	234	30·51	44·26
40 to 45 ,, ...	259	33·78	59·54	147	19·17	26·44
45 to 50 ,, ...	206	26·87	37·58	88	11·47	14·99
50 to 55 ,, ...	151	19·69	20·49	53	6·91	6·79
55 to 60 ,, ...	85	11·09	9·92	24	3·13	3·03
60 to 65 ,, ...	41	5·35	4·96	13	1·69	1·16
65 to 70 ,, ...	23	3·00	1·85	6	·78	·40
70 and upwards ...	8	1·04	1·00	3	·39	·24
Total ...	7,667*	1,000·00	1,000·00	7,670*	1,000·00	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 70 and the brides by 67. 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.

Frequency of marriage at 21 to 30.

469. The large proportion of both sexes marrying at between 21 and 30 years of age is very marked; thus in 1886 more than two-thirds of the males, and nearly two-thirds of the females, who married were between those ages. Owing, no doubt, to their relatively larger numbers in the population, the proportions marrying at the ages named were both in 1886 and 1885 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.

Ages of Chinese bridegrooms and their brides.

470. In the case of the marriages of Chinese which took place in 1886, all the men were older than the females with whom they formed unions. None of the former were under 27 years of age, but of the latter, four 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, 1886.

Ages of Bridegrooms.	Ages of Brides.											Total Bridegrooms.	
	17	18	19	22	24	26	27	28	29	30	36		48
27	1	...	...	...	...	...	...	...	1
29	1	...	...	...	...	...	...	...	...	...	...	...	1
32	1	...	...	...	...	...	1
34	1	...	...	...	...	...	...	...	...	1
35	2	...	...	...	...	...	...	...	...	...	...	2
36	1	...	...	...	1
38	1	...	...	...	...	...	...	...	...	1
39	1	...	...	...	...	...	...	...	...	1
40	1	...	1	...	1	...	1	...	...	3
45	1	1	...	1	...	...	...	...	...	...	3
47	1	...	...	...	...	...	1
52	1	1	2
Total Brides ...	1	2	1	5	1	1	2	1	1	1	1	1	18

Ages of Aborigines marrying.

471. Of the Aborigines who married in 1886, all the women were under 21 years of age. One aged 17 married a man of 24; one aged 18 married a man of 23, and another aged 18 married a man of 24.

Age at which persons may marry.

472. In almost all civilized countries, minors are not permitted to marry without the consent of their parents or guardians, but the youngest age at which persons may marry after obtaining such 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 1886 :—

AGE AT WHICH MARRIAGE MAY BE CONTRACTED IN DIFFERENT COUNTRIES.

Country.	Age at, and after, which persons may marry.	
	Males.	Females.
	Years.	Years.
Austria	14	14
Belgium	18	15
France	18	15
Germany	18	14
Greece	14	12
Hungary (Protestants) ...	18	15
” (Roman Catholics) ...	14	12
Portugal	14	12
Russia	18	16
Spain	14	12
Switzerland	14	12
Turkey	Puberty	Puberty
United Kingdom	14	12
United States	21	18

473. The minimum age at which persons may, with consent, marry, 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. Two of the females, however, who married in 1886 had not completed their fifteenth year, eleven had not completed their sixteenth year, and one male and fifty-eight females had not completed their seventeenth year ; as many as 186 of the males, or 1 in every 41, and no fewer than 1,575 of the females, or nearly a fifth, had not attained the full age of 21 years.

Marriages of minors.

474. From the experience of Victoria during the year 1886, 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 and Wales. The proportion of females marrying under age, which was formerly higher in Victoria than in England, has fallen considerably, and in 1886 was slightly lower than in England. This is shown by the figures in the following table :—

Marriages of minors in Victoria and England.

* See that work, page 600 : McCarty, San Francisco, California, 1886.

MARRIAGES OF MINORS IN VICTORIA AND ENGLAND AND WALES.

Persons Married.	In every 100 Marriages, Numbers under 21 Years of Age.			
	In Victoria.			In England and Wales.
	Year 1886.	Five Years: 1881 to 1885.	Ten Years: 1871 to 1880.	Ten Years: 1871 to 1880.
Bridegrooms ...	2·40	2·37	2·52	7·95
Brides ...	20·36	22·53	28·32	21·96
Mean ...	11·38	12·45	15·42	14·96

Marriage rate of minors.

475. As the proportion of minors at marriageable ages existing in the population may vary greatly in different countries, and in the 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 years 1885 and 1886, and the result is given in the following table:—

MARRIAGES OF MINORS, 1871, 1881, 1885, AND 1886.

Year.	Number of Marriageable Minors.*		Mean Annual Number of Minors who Married.†		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
1885 ...	45,590	61,750	177	1,504	3·88	24·35
1886 ...	45,428	62,374	186	1,575	4·09	25·25

Decreasing tendency to marry under age.

476. According to the table, the proportion of both males and females marrying under age has become reduced during the last 16 years. The reduction in the proportion of male minors marrying is only slight, but that of the female minors between 1871 and 1881 is

* Census figures for 1871 and 1881, estimated for 1885 and 1886.

† Mean number of minors who married in the years 1870 to 1872 and 1880 to 1882, and actual number who married in 1885 and 1886.

very striking, and is no doubt attributable to the area of selection having been widened by the increase which has taken place in the number of marriageable females at the older ages.

477. By means of the returns of the last census, it has been possible 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 :—

Ages of minors marrying in Victoria and England.

AGES OF MINORS † MARRYING IN VICTORIA AND ENGLAND AND WALES.

Age last Birthday.	Victoria.				Proportion of Marriages per 1,000 Marriageable Minors.			
	Marriageable Minors at Census of 1881.		Minors who Married. (Mean of Three Years, 1880 to 1882.)		Males.		Females.	
	Males.	Females.	Males.	Females.	Victoria. (Mean of 1880 to 1882.)	England and Wales. (Mean of 1870 to 1872.)	Victoria. (Mean of 1880 to 1882.)	England and Wales. (Mean of 1870 to 1872.)
15	...	10,076	...	11	...	...	1.09	.18
16	...	10,209	...	39	...	.02	3.82	1.53
17	9,718	10,100	3	146	.31	.41	14.45	9.33
18	9,763	9,966	10	282	1.02	4.04	28.29	36.39
19	9,580	9,352	36	443	3.76	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

478. 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. ‡ 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.

Marriage rate of minors lower in Victoria than England.

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

† In this table, and that following paragraph 475, 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 474 ante.

Age of marriage in various countries.

479. The following table contains a statement of the proportion of males and females marrying at different ages in various countries. The figures, except those relating to Victoria, which are for the year 1885, have been taken from the 46th Report of the Registrar-General of England* :—

AGES OF MALES AND FEMALES MARRYING IN VARIOUS COUNTRIES.

Countries.	Per 10,000 of All Ages Marrying, Numbers—						
	Under 20.	20 to 25.	25 to 30.	30 to 40.	40 to 50.	50 to 60.	Over 60
BRIDEGROOMS.							
Victoria	82	3,539	3,584	1,743	579	354	119
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	2,092		3,820	2,968	752	279	89
Norway	173	2,681	3,530	2,459	699	458	
Sweden	6	2,325	3,569	2,883	778	439	
Russia (in Europe) ...	3,784	3,063	1,230	1,183	549	191	
Austria	2,084		4,172	2,311	848	415	170
Hungary	3,173		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	1,244		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	1,343	5,267	2,124	816	297	124	29
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	11
Ireland	1,349	4,899	2,275	1,104	264	77	32
Denmark	616	3,608	3,076	2,054	515	112	19
Norway	824	3,919	2,889	1,749	476	143	
Sweden	555	3,413	3,089	2,225	573	145	
Russia (in Europe)†	5,801	2,120	699	616	229	35	
Austria	1,807		2,851	2,881	1,696	590	175
Hungary	3,604		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	14
Bavaria	644	3,532	2,949	2,061	761		53
Saxony	1,073	4,500	2,588	1,305	406	110	18
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	174	
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.

480. It appears by this table that, in proportion to the whole numbers marrying, fewer males marry under 20 in Victoria than in any of the countries named, except Sweden, Prussia, Bavaria, and Saxony, but, on the other hand, that more females marry under that age in Victoria than in any of those countries except England, 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.

Marriages of minors in different countries.

481. The returns of the Australasian censuses of 1881 give information respecting the conjugal condition of the people living within the borders of the various colonies. These are grouped so as to enable the results to be easily compared.

Conjugal condition in Australasian colonies.

482. The following are the numbers of husbands and wives in each Australasian colony, those under and over 21 years of age being distinguished :—

Husbands and wives in Australasian colonies.

HUSBANDS AND WIVES IN EACH AUSTRALASIAN COLONY, 1881.

Colony.	Husbands.			Wives.		
	Under 21 Years.	Over 21 Years.	Total.	Under 21 Years.	Over 21 Years.	Total.
Victoria	283	124,371	124,654	3,006	123,036	126,042
New South Wales	408	109,810	110,218	4,040	103,793	107,833
Queensland	118	30,004	30,122	1,285	28,839	30,124
South Australia	95	43,860	43,955	1,344	42,339	43,683
Western Australia	15	4,260	4,275	207	3,769	3,976
Total	919	312,305	313,224	9,882	301,776	311,658
Tasmania*	73	17,671	17,744	607	16,527	17,134
New Zealand... ..	97	73,234	73,331	2,374	70,433	72,807
Grand Total	1,089	403,210	404,299	12,863	388,736	401,599

483. It is to be regretted that no figures are at hand showing the conjugal condition of males and females at marriageable ages living 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* † :—

Conjugal condition in various countries.

* 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.

Countries.	Numbers in every 1,000 Living.		
	Unmarried.	Married.	Widowed.
Victoria	665	294	41
England	602	345	53
France	511	405	84
Prussia	606	336	58
Wurtemberg	623	319	58
Austria	605	342	53
Hungary	532	407	61
Italy	582	352	66
Switzerland	609	319	72
Spain	572	360	68
Portugal	628	310	62
Holland	611	328	61
Belgium	629	315	56
Scandinavia	618	330	52
Chili	688	260	52

Small proportion of married in Victoria.

484. It appears from this table that, in Victoria, in proportion to the numbers of the population, fewer persons are living in the marriage state than in any of the other countries named, except Chili; and fewer are living in the widowed state than in any of those countries. This is probably in part accounted for by the fact that the proportion living at marriageable ages, especially of males, is smaller in Victoria than in most of those countries.

Births, 1886.

485. The births registered in Victoria during 1886 numbered 30,824, as against 29,975 in 1885. The increase in the year under review, as compared with the previous one, was thus 849.

Births in 1886 and former years.

486. During the 20 years ended with 1883, the number of births in Victoria had remained almost stationary; but in 1884 a marked increase took place, which was more than sustained in 1885 and 1886, the number of births in the latter being the highest ever recorded.*

Birth rate.

487. In proportion to population, however, the births decreased steadily for a number of years. The marriage rate also declined until 1879, when a revival took place; but there has not been a corresponding improvement in the birth rate, which has advanced but slightly since 1883, that being the year in which it reached its absolutely lowest point. The following are the figures for the last twenty-seven years:—

* For number of births in each year, see Statistical Summary of Victoria (first folding sheet) *ante*.

ANNUAL BIRTH RATE, 1860 TO 1886.

			Births per 1,000 of Mean Population.				Births per 1,000 of Mean Population.
1860	...	...	42·81	1875	...	...	33·94
1861	...	...	43·46	1876	...	...	33·61
1862	...	...	44·50	1877	...	...	32·17
1863	...	...	42·46	1878	...	...	32·36
1864	...	...	43·79	1879	...	...	32·18
1865	...	...	42·40	1880	...	...	30·75
1866	...	...	39·76	1881	...	...	31·24
1867	...	...	39·75	1882	...	...	30·05*
1868	...	...	41·08	1883	...	...	30·23*
1869	...	...	37·89	1884	...	...	30·89*
1870	...	...	38·07	1885	...	...	31·27*
1871	...	...	37·15	1886	...	...	31·23
1872	...	...	36·33	Mean of 27 years ...			37·42
1873	...	...	36·71				
1874	...	...	34·46				

488. Birth rates, based upon a comparison of the number of events with the total population, are, like marriage rates calculated upon a similar basis, apt to mislead, unless the population is in a normal condition. It must be quite evident that, if there is not a sufficient 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.

PROPORTION OF BIRTHS TO POPULATION AND TO MARRIED WOMEN.

Year of Census.	Enumerated Population.	Married Women under 45 Years of Age.	Legitimate Births.†	Proportion of Legitimate Births.	
				Per 1,000 of the Population.	Per 1,000 Married Women under 45 Years of Age.
1871	731,528	88,561	26,805	36·64	302·67
1881	862,346	84,831	25,675	29·77	302·66

489. It will be noticed that the married women at reproductive ages were fewer by 3,730 in 1881 than in 1871, that the proportion of 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 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

Reason for decline of birth rate.

* Figures amended since last publication, in consequence of an alteration in the estimates of population.

† In both cases, these are the legitimate births which occurred during the twelve months of which the census was the middle.

birth rate, calculated in the ordinary way, which has been noticed for years past, 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.

Birth rates
in Austral-
asian
colonies.

490. Returns of the births in all the Australasian colonies are available to the end of 1885, 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 1885, or as many years between those periods as the figures are available for:—

BIRTH RATES IN AUSTRALASIAN COLONIES, 1865 TO 1885.*

Year.	Number of Births per 1,000 of Mean Populations.						
	Victoria.	New South Wales.†	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1865	42·40	43·21	43·65	43·90	...	32·56	41·12
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	39·63	43·25	38·34	...	30·16	40·64
1872	36·33	38·46	40·70	37·60	32·42	29·44	39·50
1873	36·71	39·38	40·82	36·42	31·43	29·43	39·00
1874	34·46	39·30	41·11	38·22	33·71	29·72	40·27
1875	33·94	38·53	38·90	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
1882	30·05†	37·37	35·85	37·40	35·84	33·50	37·32
1883	30·23†	37·49	36·92	37·37	33·87	34·25	36·28
1884	30·89†	38·54	36·23†	38·38	33·84	35·66	36·15†
1885	31·37†	37·64	37·80	38·47	35·22	35·08	34·78
Means ...	34·88	39·26	39·78	38·81	33·12	31·36	40·03

Birth rates
in Austral-
asian colonies
in 1885 and
previous
years.

491. In all the colonies, except Tasmania, the birth rates are now lower than they were in 1865 and the seven or eight subsequent years. There are, however, signs of a revival in some of the colonies. In Victoria and New South Wales the lowest point was reached in 1882, which or the following year appears also to have been a turning point in the birth rates of Queensland and South Australia. In Western

* For the number of births in the various colonies during the thirteen years ended with 1885, see General Summary of Australasian Statistics (third folding sheet) *ante*. For birth rates in 1885, see Appendix A *post*.

† Figures amended since last publication, in consequence of an alteration in the estimates of population.

Australia and Tasmania the rates have fluctuated, but the rate in the former was higher in the last year, and in the latter in the last two years, than at any previous period shown. In New Zealand the rate has been steadily declining since 1878, and in 1885 it was lower than in any of the previous years. The diminished birth rate in Victoria between 1871 and 1881 has already been accounted for by the falling-off which occurred in the number of mothers; and it is probable that the low birth rates now prevailing in some of the other colonies are due to a similar cause.

492. 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-one years. It will be observed that Victoria is absolutely last on the list for 1885, but stands fifth in the twenty-one-year series:—

ORDER OF AUSTRALASIAN COLONIES IN REFERENCE TO BIRTH RATES.

Order in 1885.	Order in a Series of Years.
1. South Australia.	1. New Zealand.
2. Queensland.	2. Queensland.
3. New South Wales.	3. New South Wales.
4. Western Australia.	4. South Australia.
5. Tasmania.	5. Victoria.
6. New Zealand.	6. Western Australia.
7. Victoria.	7. Tasmania.

493. On the continent of Australia, taken as a whole, and on that continent combined with Tasmania and New Zealand, the birth rate in 1885 shows some improvement on the rates which obtained in the three previous years. The following are the figures for the thirteen years ended with 1885:—

BIRTH RATE IN AUSTRALIA AND AUSTRALASIA, 1873 TO 1885.

Year.	Number of Births per 1,000 of Mean Populations.	
	Continent of Australia.	Australia with Tasmania and New Zealand.
1873	37·36	37·19
1874	36·46	36·70
1875	35·29	35·82
1876	35·20	36·04
1877	34·15	35·16
1878	34·31	35·51
1879	34·55	35·42
1880	35·33	36·20
1881	35·22	35·63
1882*	34·28	34·78
1883*	34·54	34·84
1884*	35·25	34·33
1885*	35·33	35·22
Means	35·17	35·60

* Figures in these lines amended since last publication.

494. The birth rates in certain British colonies outside Australasia, including all those for which the information is available, are shown in the following table. In some cases the figures are only for one or two years :—

BIRTH RATES IN BRITISH POSSESSIONS.

Colonies.	Years.	Number of Births per 1,000 of the Population.
Ceylon	1867-76	27·7
Straits Settlements	1873-7	9·3*
Hong Kong	1875	13·8
Mauritius	1876-7	36·5
Seychelles	1875-7	37·4
Nova Scotia	1871-5	32·0
Bermudas	1871-5	37·8
British Guiana	1871-9	35·5
West Indies—		
Bahamas	1874-5	39·0
Jamaica	1878-80	34·9
St. Lucia	1869-79	46·4†
St. Vincent	1870-9	46·0
Barbados	1872-8	43·2
Grenada	1871-5	45·2
Antigua	1875-6	40·4
Montserrat	1874-5	48·8
Dominica	1871-6	31·0
Trinidad	1880	34·9

Birth rates in European countries.

495. A statement of the birth rates in British and certain Foreign countries for each of the five years ended with 1885, is given in the following table. The figures have been taken from the reports of the Registrar-General of England :—

BIRTH RATES IN EUROPEAN COUNTRIES, 1881 TO 1885.

Countries.	Number of Births per 1,000 of Mean Population.					Mean of 5 years.
	1881.	1882.	1883.	1884.	1885.	
Hungary	43·7	44·6	45·3	46·0	...	44·9‡
Austria	38·7	38·9	38·2	38·4	37·4	38·3
Italy	38·0	37·1	37·1	38·7	38·1	37·8
Prussia	36·8	37·4	36·9	37·4	37·6	37·2
German Empire	37·1	37·3	36·7	37·3	37·1	37·1
Spain ... ..	...	...	...	...	...	34·9§
Holland	34·9	35·3	34·3	34·9	34·4	34·8
England and Wales	33·9	33·7	33·3	33·4	32·5	33·4
Scotland	33·7	33·3	32·5	33·4	32·3	33·0
Belgium	31·4	31·2	30·5	30·5	29·9	30·8
Norway	30·0	30·9	30·9	31·0	31·3	30·8
Sweden	29·1	29·4	28·9	30·0	29·6	29·4
Switzerland	29·8	28·8	28·4	28·1	27·5	28·5
France	24·9	24·8	24·8	24·8	24·3	24·7
Ireland	24·5	24·1	23·6	24·0	23·5	23·9

* Registrations incomplete.

† Including still-births.
‡ Mean of 1876 and 1878.

§ Mean of four years.

496. Comparing this table with that showing the marriage rates in the same countries, it is found that a high birth rate is generally 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 in any of the countries named, except Ireland. The low rate in the latter is attributed to the small 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."†

Low birth rates in Ireland and France.

497. In the same five years the mean birth rates in South Australia, and New South Wales were above those in any of the European countries named, except Hungary and Austria; the mean birth rates in Queensland and New Zealand were above those in any except the last named two countries, together with Italy and Germany; the mean birth rates in Western Australia and Tasmania were below those in 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 Sweden, Switzerland, France, and Ireland. The following are the birth rates referred to:—

Australasian and European birth rates compared.

MEAN BIRTH RATES IN AUSTRALASIAN COLONIES, 1881 TO 1885.

	Number of Births per 1,000 of Mean Population.				
South Australia	38·06
New South Wales	37·87
Queensland	36·79
New Zealand	36·50
Western Australia	34·49
Tasmania	34·38
Victoria	30·76

498. According to the reports of the Registrar-General of England, the birth rate of the United Kingdom was lower in 1885 than in any year since 1870, as will be seen by the following figures:—

Birth rate in United Kingdom.

* 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, says 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 occurring 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 xlvii.

BIRTH RATE IN THE UNITED KINGDOM, 1871 TO 1885.

Births per 1,000 of the Population.			Births per 1,000 of the Population.		
1871	...	35·0	1880	...	32·7
1872	...	34·4	1881	...	32·5
1873	...	34·1	1882	...	32·2
1874	...	34·5	1883	...	31·8
1875	...	34·0	1884	...	32·1
1876	...	34·9	1885	...	31·3
1877	...	34·5			
1878	...	34·1			
1879	...	33·5			
			Mean	...	33·4

Birth rates
in town and
country,
1886.

499. The following table shows the births and birth rates together with the estimated mean population in the metropolis, the extra-metropolitan towns, and the country districts of Victoria during 1886; also the average birth rates in the same divisions during the five years ended with 1885:—

BIRTHS IN URBAN AND COUNTRY DISTRICTS, 1886.

Districts.	Estimated Mean Population.	Births, 1886.		Average Birth rate in Five Years, 1881 to 1885.
		Total Number.	Number per 1,000 of the Population.	
Melbourne and suburbs (Greater Melbourne)	371,630	12,941	34·85	33·50
Extra-Metropolitan towns	187,980	5,970	31·76	32·54
Country districts ...	427,484	11,913	27·87	27·82
Total ...	987,094	30,824	31·23	30·74

Birth rates
in town and
country,
1873 to 1886.

500. 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 fourteen years:—

BIRTH RATES IN URBAN AND COUNTRY DISTRICTS, 1873 TO 1886.

Year.	Number of Births per 1,000 of the Population.			
	Greater Melbourne.	Extra-Metropolitan Towns.	Country Districts.*	Total of Victoria.*
1873	34·36	40·18	36·32	36·71
1874	32·98	39·81	32·46	34·46
1875	33·63	38·63	31·54	33·94
1876	33·20	37·80	31·61	33·61
1877	33·09	34·51	30·30	32·17
1878	33·67	35·42	29·89	32·36
1879	33·32	35·65	29·63	32·18
1880	31·19	34·21	28·72	30·75
1881	32·42	34·76	28·70	31·24
1882	32·85	31·35	27·43	30·05
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

* Figures for the years 1881 to 1885 amended since last publication.

501. 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 extra-metropolitan 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 extra-metropolitan towns. In 1882 and the subsequent years, however, owing to a falling-off in the birth rate in 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 the other urban districts. It will also be noticed that, whilst the birth rate in the metropolis in 1885 and 1886 was higher than in any previous year, in the extra-metropolitan towns it was lower than in any previous year except 1882, and in country districts it was lower than in any year except 1882, 1883, and 1884.

502. The mean population, the number of births, and the birth rate during 1886; also the birth rate during the ten years, 1871 to 1880, in the different municipalities, &c., forming the component parts of the district of Greater Melbourne, are shown in the following table:—

BIRTHS IN GREATER MELBOURNE.

Sub-districts.	Year 1886.			Ten Years : 1871 to 1880.
	Estimated Mean Population.	Births.		Annual Births per 1,000 of the Population.
		Total Number.	Number per 1,000 of the Population.	
Melbourne City	70,532	1,770	25·09	27·57
North Melbourne Town *	19,633	778	39·63	34·03
Fitzroy City	30,295	868	28·65	34·57
Collingwood City	28,800	1,250	43·40	36·28
Richmond City	31,286	1,163	37·17	35·96
Brunswick Borough	11,110	507	45·63	38·66
Northcote Borough	2,865	124	43·28	...
Prahran City	32,606	1,093	33·52	32·38
South Melbourne City	36,922	1,276	34·56	32·02
Port Melbourne Borough	10,246	446	43·53	38·99
St. Kilda Borough	16,036	395	24·63	29·03
Brighton Town †	6,165	167	27·08	31·14
Essendon Borough	5,976	185	30·95	} 37·72
Flemington & Kensington Borough	6,000	240	40·00	
Hawthorn Town †	10,477	369	35·22	34·13
Kew Borough	4,708	137	29·10	26·95

* Formerly Hotham. The name was changed to North Melbourne on the 22nd August, 1887.

† Brighton and Hawthorn were proclaimed towns on the 15th March, 1887.

BIRTHS IN GREATER MELBOURNE—*continued.*

Sub-districts.	Year 1886.			Ten Years: 1871 to 80.
	Estimated Mean Population.	Births.		Annual Births per 1,000 of the Population.
		Total Number.	Number per 1,000 of the Population.	
Footscray Town *	10,000	477	47·70	45·62
Williamstown Town *	12,200	459	37·62	38·88
Remainder of district	20,670	794	38·42	25·83
—				
Hospitals, asylums, &c. †	3,625	442	...	...
Shipping in Hobson's Bay and river	1,478‡	1	·68	·05
Total	371,630	12,941	34·82	33·50

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

503. It will be observed that during the ten years ended with 1880 the births in one municipality only, viz., Footscray, were above 40 per 1,000 of the population; that in six municipalities, viz., Williamstown, Essendon and Flemington, Port Melbourne, Brunswick, Collingwood, and Richmond, they were between 35 and 40 per 1,000; in six municipalities, viz., Fitzroy, North Melbourne, Prahran, South Melbourne, Brighton, and Hawthorn, they were between 30 and 35 per 1,000; and that in three municipalities, viz., St. Kilda, Melbourne, and Kew, they were below 30 per 1,000. The lowest rate was in "Remainder of District," viz., not quite 26 per 1,000, which was even lower than in the rural districts of the colony. §

504. During 1886, the birth rates in North Melbourne, Collingwood, Richmond, Brunswick, Prahran, South Melbourne, Port Melbourne, Hawthorn, Kew, Footscray, and "Remainder of District" were higher, but those in all the other sub-districts were lower, than they were in the decade ended with 1880. The sub-district with the highest birth rate in 1886 was Footscray, which was closely followed by Brunswick, Port Melbourne, Collingwood, Northcote, and Flemington; those with the lowest rates were St. Kilda, Melbourne City, Brighton, Fitzroy, and Kew, in all of which the rates were below 30 per 1,000.

505. In 1886, the birth rate in Melbourne was much lower than that in Brisbane, Sydney, Wellington, or Hobart, but above that in Adelaide, 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:—

* Williamstown was proclaimed a town on the 30th March, 1886, and Footscray on the 27th February, 1887.

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

‡ Census figures.

§ See table following paragraph 500 *ante*.

Birth rates
in sub-dis-
tricts, 1871
to 1880.

Birth rates
in sub-dis-
tricts, 1886.

Births in
Australasian
capitals.

BIRTHS IN AUSTRALASIAN CAPITAL CITIES, 1886.

Capital Cities.*	Estimated Mean Population.	Births, 1886.	
		Total Number.	Number per 1000 of the Population.
Brisbane	51,683	2,250	43·53
Sydney	307,541	13,132	42·70
Wellington	27,833	1,050	37·73
Hobart	30,805	1,107	35·94
Melbourne	371,630	12,941	34·82
Adelaide †	128,377	3,826	29·82

506. The mean birth rate in the Australasian capital cities in 1886 was 37·4, which was considerably higher than the rate in London, according to the average of the ten years 1870–79, viz., 35·4, which was slightly higher than that of England and Wales (35·3) during the same period. The rate in London was thus higher than that in Melbourne or Adelaide, but below that in any of the other Australasian cities named in the last table.

Birth rate in London.

507. The 43rd Report of the Registrar-General of England † contains a statement of the birth rates in twenty-three British towns, in which the mean rate per 1,000 persons living is 35·9, the rates in the respective towns ranging from 30·3 in Brighton to 41·5 in Salford. The birth rates in Brisbane and Sydney are above those in any of the towns named; the birth rate in Wellington is above that in all but 5, that in Hobart is above that in all but 11, and that in Melbourne is above that in all but 16; but that in Adelaide is below that in any of those towns, as will be seen by comparing the following figures with those in the last table:—

Birth rates in British towns.

BIRTH RATES IN TWENTY-THREE BRITISH TOWNS, 1880.

Births per 1,000 of Population.		Births per 1,000 of Population.	
Salford	41·5	Nottingham	35·3
Leicester	40·4	Bradford	35·3
Birmingham	38·4	Bristol	35·3
Sheffield	38·3	London	35·2
Liverpool	38·1	Portsmouth	34·8
Manchester	37·5	Norwich	33·9
Wolverhampton	37·4	Edinburgh	32·8
Hull	37·4	Dublin	32·1
Sunderland	37·4	Glasgow	31·9
Leeds	37·3	Plymouth	31·6
Newcastle-on-Tyne	37·1	Brighton	30·3
Oldham	35·5		

* With suburbs.

† There is strong reason to believe that the population of Adelaide and suburbs has been over-estimated. If this should be the case, the birth rate, as shown in the table, would obviously be lower than the true rate.

‡ See 43rd Annual Report of Registrar-General, page cxi: Eyre and Spottiswoode, London, 1882.

Birth rates
in Foreign
towns.

508. The same report* contains a statement of the birth rates in twenty-one Foreign towns (including two in British India), in which the mean rate is 34·5, the rates ranging from 22·9 in Geneva to 42·9 in Alexandria. The birth rate in Brisbane is above those in any of the towns named; the birth rate in Sydney is above that in all but 1, in Wellington above all but 9, in Hobart above all but 13, in Melbourne above all but 14, and in Adelaide above all but 18, of the towns. The following are the rates in these towns, also the rates in New York and in Boston, taken from the reports of the Health Department of the former city:—

BIRTH RATES IN TWENTY-THREE FOREIGN TOWNS, 1880.

	Births per 1,000 of Population.		Births per 1,000 of Population.		
Alexandria	42·9	Amsterdam ...	...	36·6
Buda-Pesth	40·6	Dresden ...	...	34·5
Hamburg (State)	39·5	Christiania ...	...	33·7
Madras	39·4	Brussels ...	...	31·2
The Hague	39·3	New York ...	...	30·4 †
Berlin	39·2	Turin ...	...	29·8
Rotterdam	38·3	Paris ...	...	28·7
Vienna	38·3	Boston (1883) ...	...	28·3
Munich	38·2	Bombay ...	...	26·6
Rome	37·3	Venice ...	...	23·9
Copenhagen	36·8	Geneva ...	...	22·9
Breslau	36·7			

Birth rates
in Victorian
towns.

509. The following are the birth rates in six Victorian towns during 1886; the rate in the metropolis being, as will be observed, below the rates in Stawell and Sandhurst, but above those in Geelong, Ballarat, and Castlemaine:—

BIRTH RATES IN SIX VICTORIAN TOWNS, 1886.

	Births per 1,000 of Population.		Births per 1,000 of Population.		
Stawell	48·81	Geelong ...	...	30·51
Sandhurst	38·62	Ballarat ...	...	30·14
Melbourne	34·82	Castlemaine...	...	27·95

Births of
males and
females.

510. The births of males in Victoria during 1886 numbered 15,753, those of females 15,071. These numbers furnish a proportion of 104·53 boys to 100 girls, as against a proportion of 106·44 in 1885. 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 boys to 100 girls.

* See 43rd Report, page cxiv.

† The number of births registered in New York would give a proportion of 22·8 per 1,000 of the population, but it is 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.

511. 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 thirteen years ended with 1885, although not in every one of those years so far as Western Australia and Tasmania are concerned. The following are the numbers of boys per 100 girls born in the respective colonies during each year of the period referred to :—

Births of males and females in Australasian colonies.

PROPORTION OF MALE TO FEMALE BIRTHS IN AUSTRALASIAN COLONIES, 1873 TO 1885.

Year.	Number of Boys to 100 Girls Born.						
	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1873 ...	102·65	104·38	106·13	102·77	109·04	98·44	103·48
1874 ...	103·94	104·31	105·74	103·44	103·25	107·02	106·83
1875 ...	104·95	102·08	104·01	103·85	98·95	109·51	107·80
1876 ...	105·76	102·47	105·26	101·08	106·76	111·48	106·01
1877 ...	104·19	106·34	106·78	102·91	101·32	105·04	104·59
1878 ...	107·19	106·83	103·89	107·14	101·15	105·52	101·57
1879 ...	104·69	105·71	103·36	102·53	117·59	99·11	105·93
1880 ...	104·44	104·99	103·63	110·98	92·37	101·56	104·71
1881 ...	104·99	105·59	106·64	106·48	108·07	107·41	104·90
1882 ...	103·63	103·23	107·55	106·36	110·64	104·81	104·46
1883 ...	105·04	104·89	106·17	103·29	104·64	110·42	105·17
1884 ...	105·98	105·37	102·25	104·40	106·42	103·37	104·28
1885 ...	106·44	104·88	102·50	101·57	108·00	104·36	103·59

512. In the Australasian colonies, taken as a whole, the proportion during the ten years ended with 1882 was 104·67 male to 100 female infants. In the different colonies, the proportions ranged from 105·3 per 100 females in Queensland to 104·6 per 100 females in Victoria and New South Wales. The following is the order of the colonies in respect to these proportions :—

Order of colonies in respect to sexes of those born.

ORDER OF COLONIES IN REFERENCE TO PROPORTION OF MALE TO FEMALE BIRTHS, 1873 TO 1882.

Queensland ...	Boys to 100 Girls.	105·30	Victoria ...	Boys to 100 Girls.	104·64
New Zealand ...	105·03	New South Wales ...	104·59		
Tasmania ...	104·99				
Western Australia ...	104·91	Mean ..	104·67		
South Australia ...	104·75				

513. In England and Wales, during the ten years ended with 1879, 103·9 boys were born to 100 girls, and the Registrar-General of England mentions it as “a curious fact, which has as yet received no certain explanation,” that the proportion of male to female births is not

Births of males and females in British and foreign countries.

only lower than in any other European country, but has been diminishing steadily. In support of which statement he publishes the following figures,* to which the figures for England from 1881 to 1885 have been added, the results of the last two years showing a higher proportion of male births than had taken place in any other years since 1870:—

PROPORTION OF MALE TO FEMALE BIRTHS IN CERTAIN COUNTRIES,
1870 TO 1879.

	Boys to 100 Girls.		Boys to 100 Girls.
Italy ...	... 107·1	Holland ...	... 106·1
Austria ...	... 106·8	Belgium ...	... 105·9
France ...	... 106·4	Scotland ...	... 105·7
Switzerland ...	... 106·3	Ireland ...	... 105·6
German Empire ...	... 106·2	England and Wales ...	... 103·9

PROPORTION OF MALE TO FEMALE BIRTHS IN ENGLAND AND WALES
AT DIFFERENT PERIODS.

	Boys to 100 Girls.		Boys to 100 Girls.
1856 to 1860...	... 104·6	1881 ...	... 103·9
1861 to 1865...	... 104·3	1882 ...	... 103·8
1866 to 1870...	... 104·1	1883 ...	... 103·5
1871 to 1875...	... 103·9	1884 ...	... 104·1
1876 to 1880...	... 103·8	1885 ...	... 104·0

Australasian
and other
countries
compared.

514. It will be observed that the proportion of male to female births in all the Australasian colonies is higher than the proportion in England and Wales, but below that in any of the other countries named.

Twins and
triplets.

515. In 1886, 236 twin births were registered but no triple birth, as against 237 twin births and 1 triple birth in 1885. 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 birth. Moreover, during the decade 1871 to 1880, 1 mother in every 111, on the average, gave birth to twins, and 1 in every 12,796 was delivered of three children at a birth.

Twins and
triplets in
various
countries.

516. If the following figures, taken from Mr. Mulhall's work,† are to be relied upon, a comparatively small number of double and triple births occur in Victoria, she being, in the latter respect, below all the countries for which information is given; and, in the former, below all except Spain:—

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

† *Dictionary of Statistics*, page 50.

TWINS AND TRIPLETS IN VARIOUS COUNTRIES.

Countries.	Per 1,000 Births.		Countries.	Per 1,000 Births.	
	Number of Twins.	Number of Triplets.		Number of Twins.	Number of Triplets.
Victoria ..	9·03	·08	Italy ...	11·8	·14
England ...	11·2	...	Switzerland ...	12·0	...
Scotland ...	11·7	...	Spain ...	8·4	...
Ireland ...	17·6	...	Belgium ...	9·1	·10
France ...	10·1	·12	Holland ...	12·8	...
Germany ...	12·9	·13	Denmark ...	13·7	·24
Russia ...	12·1	...	Sweden ...	13·6	·18
Austria ...	13·4	·18	Norway ...	11·8	·15
			Iceland ...	14·2	·33

517. According to the figures, the highest proportion of double births occurs in Ireland, and the highest proportion of triple births in Iceland. Countries in which most twins and triplets occur.

518. The illegitimate children born in 1886 numbered 1,465, or 1 to every 21 births registered, as compared with 1 to every 23 in the two previous 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.* Illegitimate births.

519. It was shown in a previous table† 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 1886, that, approximately, 97,000 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 1886, that, exclusive of public prostitutes (who, as they rarely have children, are omitted from the computation), at least 4,840 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 222,200—be deducted the approximate number of Women living in concubinage.

* 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 488 *ante*.

married women above referred to, viz., 97,000, the difference will give 125,200 as the number of unmarried women and widows at those ages. It therefore follows that 1 out of every 26 of these was living immorally.

Illegitimacy
and concu-
binage,
1873 to
1886.

520. The following table gives a statement of the number of illegitimate births and their proportion to the total number registered; 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 fourteen years:—

ILLEGITIMACY AND CONCUBINAGE, 1873 TO 1886.

Year.	Illegitimate 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	4·54
1874	984	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
1882	1,271	4·75	4,200	3·91
1883	1,292	4·69	4,268	3·72
1884	1,238	4·29	4,090	3·46
1885	1,308	4·36	4,320	3·54
1886	1,465	4·75	4,840	3·87
Means	1,161	4·22	3,836	4·04

Illegitimacy
in Austral-
asian
colonies.

521. All the Australasian colonies, except South Australia and Western Australia, now publish statistics of illegitimacy. According to these, which possibly may not in every case represent the whole truth,* illegitimacy is most rife in Tasmania, next so in New South Wales, next in Victoria, next in Queensland, and least of all in New Zealand. In 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:—

* See footnote to paragraph 518 *ante*.

ILLEGITIMACY IN AUSTRALASIAN COLONIES, 1872 TO 1886.

Year.	Illegitimate Births to every 100 Children Born.				
	Victoria.	New South Wales.	Queensland.	Tasmania.	New 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	4.15	4.03	3.68	...	2.41
1879	4.86	4.51	4.31	...	2.30
1880	4.80	4.35	4.31	...	2.43
1881	5.09	4.26	4.20	...	2.85
1882	4.75	4.24	4.40	4.40	2.87
1883	4.69	4.24	3.66	3.96	2.78
1884	4.29	4.40	4.05	4.46	2.96
1885	4.36	4.60	4.08	4.55	3.20
1886	4.75	4.65	...	4.13	3.12
Means	4.14	4.27	3.67	4.30	2.38

522. A calculation, based upon the illegitimate births which occurred 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 last-named 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.

CONCUBINAGE IN AUSTRALASIAN COLONIES, 1881.

Colony.	Single Women between 15 and 45 Years of Age.	Illegitimate Births, 1881.	Single Women living in Concubinage (exclusive of Public Prostitutes).	
			Total Number.	Number per 100 Single Women between 15 and 45.
1. Queensland ...	15,441	345	1,059	6.86
2. New South Wales	71,085	1,263	3,665	5.16
3. Victoria ...	101,451	1,382	4,551	4.49
4. New Zealand ...	38,659	534	1,686	4.36

523. The figures in the last column show the proportions which 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,

Proportion of concubinage in each colony.

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	”	”	22 ” ”
In New Zealand	”	”	23 ” ”

Illegitimacy
in United
Kingdom.

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

ILLEGITIMACY IN ENGLAND, SCOTLAND, AND IRELAND,
1871 TO 1885.

Year.	Illegitimate Births to every 100 Children Born.		
	England and Wales.	Scotland.	Ireland.
1871	5·6	9·5	2·7
1872	5·4	9·1	2·5
1873	5·2	9·0	2·4
1874	5·0	8·7	2·3
1875	4·8	8·6	2·3
1876	4·7	8·6	2·3
1877	4·7	8·4	2·4
1878	4·7	8·4	2·3
1879	4·8	8·5	2·5
1880	4·8	8·4	2·5
1881	4·9	8·3	2·5
1882	4·9	8·1	2·7
1883	4·8	8·1	2·6
1884	4·7	8·1	2·7
1885	4·8	8·5	...
Means	5·0	8·5	2·4

Illegitimacy
in France.

525. Statistics of illegitimacy in France for the years 1873 to 1881 were quoted by M. Toussaint Loua, Director of the Bureau of General Statistics of France, in a paper read by him before the Statistical Society of Paris on the 21st March, 1883; and M. Loua has since given the society the proportions in the three following years.* By M. Loua's figures, which are subjoined, it appears that illegitimacy in France is not so rife as in Scotland, but is much more so than in England, Ireland, or any of the Australasian colonies:—

* See *Journal de la Société de Statistique de Paris*, vingt-quatrième année, page 160: Berger-Levrault. Paris, 1883.

ILLEGITIMACY IN FRANCE, 1873 TO 1884.

Year.	Illegitimate Births to every 100 Children Born.	Year.	Illegitimate Births to every 100 Children Born.
1873 ...	7.46	1881 ...	7.48
1874 ...	7.26	1882 ...	7.62
1875 ...	7.03	1883 ...	7.90
1876 ...	6.96	1884 ...	8.08
1877 ...	7.08		
1878 ...	7.25	Mean ...	7.38
1879 ...	7.07		
1880 ...	7.41		

526. In a paper read by the same author before the Paris Statistical Society in October, 1885,* M. Loua points out that, whilst the legitimate births in France are diminishing in numbers year by year, the illegitimate births are increasing, and in proof of this he gives the following figures:—

Increase of illegitimacy in France.

LEGITIMATE AND ILLEGITIMATE BIRTHS IN FRANCE, 1881 TO 1884.

	Legitimate Births.	Illegitimate Births.
1881 ...	866,978	70,079
1882 ...	864,261	71,303
1883 ...	863,731	74,213
1884 ...	862,004	75,754

527. The following figures, taken—except as regards the Australasian colonies, England, Scotland, Ireland, and France—from Mr. Mulhall's book,† show certain countries arranged in order according to the extent of illegitimacy prevailing in each, the proportion of illegitimate births being also shown:—

Illegitimacy in various countries.

ILLEGITIMACY IN VARIOUS COUNTRIES.

Country.	Illegitimate Births to every 100 Children Born.	Country.	Illegitimate Births to every 100 Children Born.
Austria ...	12.9	England ...	5.0
Denmark ...	11.2	Switzerland ...	4.6
Sweden ...	10.2	New South Wales ...	4.2
Scotland ...	8.6	Victoria ...	4.1
Norway ...	8.5	Queensland ...	3.6
Germany ...	8.4	Holland ...	3.5
France ...	7.4	Russia ...	3.1
Belgium ...	7.0	New Zealand ...	2.8
Italy ...	6.8	Ireland ...	2.4
Portugal ...	5.6	Greece ...	1.6
Spain ...	5.5		

528. 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.

Position of Victoria in respect to illegitimacy.

* See *Journal de la Société de Statistique de Paris*, vingt-sixième année, page 404. Paris, 1885
 † *Dictionary of Statistics*, page 51.

Illegitimacy
in town and
country.

529. 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 1886, in the metropolitan district about 1 birth in 14, in extra-metropolitan towns 1 birth in 25, but in country districts only 1 birth in 44, was registered as illegitimate. In the previous year the proportions were 1 in 15, 1 in 25, and 1 in 45 respectively.

Illegitimacy
in large
cities.

530. 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 Births to every 1,000 children born.			Illegitimate Births to every 1,000 children born.
Vienna	...	449	Liège	...	174
Prague	...	439	Christiania	...	162
Munich	...	439	Stuttgart	...	160
Stockholm	...	396	Berlin	...	154
Moscow	...	300	Ghent	...	144
Buda-Pesth	...	299	Hamburg	...	138
Copenhagen	...	279	Frankfort	...	132
Paris	...	268	Turin	...	132
St. Petersburg	...	236	Antwerp	...	129
Trieste	...	211	Cologne	...	124
Leipsic	...	211	Palermo	...	101
Dresden	...	208	The Hague	...	90
Milan	...	204	Naples	...	89
Rome	...	194	Rotterdam	...	76
Venice	...	189	Buenos Aires	...	74
Breslau	...	186	Melbourne	...	69
Bucharest	...	175			

Fecundity of
women in
Austral-
asian colo-
nies.

531. To ascertain the relative fruitfulness of women in different countries, it is necessary to compare the number of married women at the reproductive ages with the legitimate births. This can be done in the case of Victoria, New South Wales, Queensland, and New Zealand; but not in that of the other 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 four 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

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

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.*

Colony.	Married Women under 45 Years of Age.	Legitimate Births, 1881.	
		Total Number.	Number per 100 Married Women under 45.
1. New South Wales ...	80,473	27,730	34·46
2. Queensland ...	24,183	7,875	32·56
3. New Zealand ...	57,464	18,198	31·67
4. Victoria ...	84,831	25,763†	30·37†

532. Another method of determining the fecundity of women is to find the average number of children born to a marriage, which may 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 thirteen years ended with 1886:—

Children to a marriage in Victoria.

CHILDREN TO A MARRIAGE, 1874 TO 1886.

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	5·17
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 ...	25,763	5,286	4·87
1882 ...	25,476	5,896	4·32
1883 ...	26,249	6,309	4·16
1884 ...	27,612	6,771	4·08
1885 ...	28,667	7,218	3·97
1886 ...	29,359	7,395	3·97
Sums and Mean ...	341,584	73,889	4·62

533. The figures show a steady diminution in the proportion of children born, amounting in the thirteen years to more than one child per

Decrease in children to a marriage 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 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 419 ante.

marriage. 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.

Children to a marriage in Australasian colonies.

534. According to this mode of reckoning, it would appear that there are, upon the average, fewer children to a marriage in Victoria than in New Zealand, New South Wales, Queensland, or Tasmania. For the other two colonies the information cannot be given, as their returns make no distinction between illegitimate children and children born in wedlock :—

CHILDREN TO A MARRIAGE IN AUSTRALASIAN COLONIES,
1880 TO 1885.

Year.	Average Number of Children to a Marriage.				
	Victoria.	New South Wales.	Queensland.	Tasmania.	New Zealand.
1880	4·99	5·00	4·89	...	5·54
1881	4·87	5·48	5·09	...	5·72
1882	4·32	4·53	4·78	4·51	5·63
1883	4·16	4·31	4·68	4·22	5·18
1884	4·08	4·38	4·28	3·91	5·33
1885	3·97	4·68	4·39	4·62	5·18
Means	4·40	4·73	4·68	4·31	5·43

Decrease in children to a marriage in each colony.

535. It seems, by the figures, that in four out of the five colonies there is a tendency for the average number of children to a marriage to decrease in numbers. In all except Tasmania the figures for the last year are smaller than those in the first, and are also smaller than those expressing the mean of the whole period.

Children to a marriage in various countries.

536. A statement of the average number of children born to a marriage in certain countries is given by Mr. Mulhall* for the period 1871-80, and his figures, together with the means for the Australasian colonies as just stated, are as follow, the country having the highest average being placed first in order, and the remainder in succession :—

* *Dictionary of Statistics*, page 50.

CHILDREN TO A MARRIAGE IN VARIOUS COUNTRIES.

					Births to each Marriage.
New Zealand	...	...	...	...	5·48
Ireland	...	...	...	...	5·46
New South Wales	...	...	...	...	4·74
Queensland	...	...	...	...	4·74
Victoria	...	...	...	...	4·48
Scotland	...	...	...	...	4·43
Holland	...	...	...	...	4·34
Tasmania	...	...	...	...	4·21
Belgium	...	...	...	...	4·21
England	...	...	...	...	4·16
Sweden	...	...	...	...	4·01
Denmark	...	...	...	...	3·55
France	...	...	...	...	2·98

537. New Zealand is at the head of the list, and Ireland follows immediately after, but it may be questioned whether the high proportion in the latter does not in some degree result from the fact that the registration of marriages there* is more defective than that of births. It will be observed that Ireland is the only country out of Australasia which stands above Victoria. It may be mentioned that Mr. Mulhall gives figures to show that the number of children to a marriage is increasing in England, Ireland, Holland, and Belgium, but decreasing in the other countries named.

Position of Victoria in reference to births to a marriage.

538. 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 slightly in favour of the former. The following are the numbers and percentage for 1886, and the percentage for a previous quinquennial and a decennial period:—

Births in each quarter.

BIRTHS IN EACH QUARTER.

Seasons.	Quarter ended on the last day of—	Year 1886.		Percentage in—	
		Number of Births.	Percentage.	Five Years: 1881 to 1885.	Ten Years: 1871 to 1880.
Summer	March	7,391	23·98	23·57	23·74
Autumn	June	7,740	25·11	25·64	25·10
Winter	September	8,087	26·24	26·62	27·15
Spring	December	7,606	24·67	24·17	24·01
	Year	30,824	100·00	100·00	100·00

* See footnote (H) to table following paragraph 430 ante.

Births in each quarter in various countries.

539. In the following table the proportion of births occurring in each quarter in Victoria is 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 BIRTHS IN EACH QUARTER IN VARIOUS COUNTRIES.

Countries.	Quarter ending on the last day of—			
	March in Victoria, September in other Countries.	June in Victoria, December in other Countries.	September in Victoria, March in other Countries.	December in Victoria, June in other Countries.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Victoria ...	23·6	25·6	26·6	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

Quarters in which most and fewest births occur.

540. It appears that in most countries the largest number of births take place in what may be called the winter quarter (ending September in Victoria, March in other countries), 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 other countries), 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.

Deaths, 1886.

541. The deaths registered in 1886 numbered 14,952, as against 14,364 in 1885. The increase in the year under notice was thus 588.

Deaths, 1886 and former years.

542. Deaths were more numerous in 1886 than in any previous year except 1875. The high mortality in the last-named year, in which 15,287 deaths were recorded, was due to the prevalence of measles and scarlatina in an epidemic form.†

Excess of births over deaths.

543. The births in 1886 exceeded the deaths by 15,872, or 106 per cent., as against 109 per cent. in 1885. 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-one years ended with 1886 the average was 120 per cent. The following were the births and deaths in each of those twenty-one years, and the excess of the former over the latter :—

* *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) *ante*.

EXCESS OF BIRTHS OVER DEATHS, 1866 TO 1886.

Year.	Births.	Deaths.	Excess of Births over Deaths.	
			Numerical.	Centesimal.
				Per Cent.
1866 ...	25,010	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 ...	28,100	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 ...	26,010	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
1882 ...	26,747	13,634	13,113	96
1883 ...	27,541	13,006	14,535	112
1884 ...	28,850	13,505	15,345	114
1885 ...	29,975	14,364	15,611	108
1886 ...	30,824	14,952	15,872	106
Total in 21 years	570,844	259,469	311,375	120

544. It will be noticed that the births more than doubled the deaths in all the years except 1882, 1876, and 1875.

Years in which births doubled deaths. Excess of births over deaths in Australasian colonies.

545. Of the Australasian colonies, New Zealand is the one in which the births have always exceeded the deaths by the highest proportion. This is due to the high birth rate and low death rate prevailing in that colony, the latter being no doubt promoted by the salubrity of the 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 above that of Queensland or Tasmania, but below that 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 1876 to 1885, both inclusive. The colonies are arranged in order, that with the highest mean percentage being placed first, and that with the lowest last:—

**EXCESS OF BIRTHS OVER DEATHS IN AUSTRALASIAN COLONIES,
1876 TO 1885.**

Colony.	Excess per Cent. of Births over Deaths.										Mean of 10 Yrs.
	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	
New Zealand ...	230	260	283	224	256	241	233	217	246	224	241
South Australia ...	132	167	148	177	162	167	147	152	147	202*	160
New South Wales ...	108	142	135	164	151	151	132	155	139	129	141
Western Australia...	140	111	121	138	144	144	153	89	55	100	120
Victoria ...	97	104	109	121	124	121	96	112	114	109	111
Queensland ...	99	113	75	145	172	148	99	96	56	87	109
Tasmania ...	82	58	106	111	104	126	112	101	130	128	106

Excess of
births over
deaths in
Australasian
capitals.

546. In 1886 (exclusive of the capital of Western Australia, respecting which no returns are issued) the percentage of excess of births over deaths in Melbourne was below that in any of the Australasian capital cities except Hobart, as will be seen by the following figures :—

**EXCESS OF BIRTHS OVER DEATHS IN AUSTRALASIAN CAPITAL
CITIES, 1886.**

Brisbane ...	...	Per Cent. 121·02	Adelaide ...	...	Per Cent. 108·27
Wellington ...	...	115·61	Melbourne ...	...	70·50
Sydney ...	...	109·04	Hobart ...	...	53·96

Excess of
births over
deaths in
European
countries.

547. The following table shows the percentage of excess of births over deaths in certain European countries during each of the five years ended with 1885. The countries are arranged in order according 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 :—

**EXCESS OF BIRTHS OVER DEATHS IN EUROPEAN COUNTRIES,
1881 TO 1885.**

Countries.	Excess per Cent. of Births over Deaths.					Mean of 5 Years.
	1881.	1882.	1883.	1884.	1885.	
Norway ...	80	68	81	89	91	82
Denmark ...	76	68	72	82	82	76
England and Wales ...	80	72	70	71	71	73
Scotland ...	75	73	63	72	69	70
Sweden ...	64	69	67	71	66	67
The Netherlands ...	63	70	57	57	64	62
Belgium ...	50	54	47	46	49	49
Prussia ...	48	48	45	46	48	47
German Empire...	45	45	41	43	44	44
Italy ...	38	35	35	45	43	39
Switzerland ...	33	32	40	40	31	35
Ireland ...	40	39	23	36	28	33
Hungary ...	23	22	39	47	...	33
Austria ...	27	26	27	31	25	27
France ...	11	12	12	9	10	11

* It is understood that the registration of births in South Australia was less defective in 1885 than in previous years. Hence, probably, this high proportion.

548. 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 favorable 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.*

Excess of births over deaths in Australia and elsewhere.

549. In 1886 the population of Victoria increased at the rate of 1·63 per cent. by excess of births over deaths, at which rate, irrespective of immigration, the population would double itself in 43 years. In each of the ten years ended with 1885 the rate of increase from the same cause was as follows:—

Natural increase of population

INCREASE OF POPULATION BY EXCESS OF BIRTHS OVER DEATHS, 1876 TO 1885.

				Per Cent.					Per Cent.
1876	...	...	...	1·67	1882	...	...	...	1·49
1877	...	...	...	1·65	1883	...	...	...	1·61
1878	...	...	...	1·70	1884	...	...	...	1·66
1879	...	...	...	1·78	1885	...	...	...	1·65
1880	...	...	...	1·70					
1881	...	...	...	1·73					
							Mean	...	1·66

550. Comparing the mean of the ten years with similar means for the other Australasian colonies during the same ten years, the figures are as follow:—

Natural increase in Australasian colonies.

MEAN ANNUAL INCREASE BY EXCESS OF BIRTHS OVER DEATHS IN AUSTRALASIAN COLONIES, 1876-1885.

			Per Cent.				Per Cent.
1. New Zealand	...	...	2·78	5. Western Australia	...	...	1·82
2. South Australia	...	...	2·39	6. Tasmania	...	...	1·72
3. New South Wales	...	...	2·28	7. Victoria	...	...	1·66
4. Queensland	...	...	1·90				

551. Sir Rawson W. Rawson, in the opening address delivered by him as President of the Statistical Society of London in 1885, 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

Natural increase in various countries.

* See paragraph 545 ante.

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.

	Per Cent.		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	1·24	Switzerland	·71
Prussia	1·23	Rhode Island	·69
Thuringia	1·19	Vermont	·67
Denmark	1·16	Croatia and Slavonia	·66
Sweden	1·13	Massachusetts	·65
Holland	1·13	Spain	·48
Württemberg	1·11	Hungary	·48
Baden	1·05	Roumania	·32
Belgium	·91	France	·16
Bavaria	·89		

Results in various countries compared.

552. According to the figures, the rate of natural increase (excess 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.

Daily increase in United Kingdom.

553. With regard to the rate of increase in the United Kingdom, it has been pointed out by Mr. Mulhall* that whereas the excess of births over deaths is 1,500 daily, and the immigration of returned colonists and foreigners amounts to 300 more, or 1,800 in all, the number of departures daily is 700, so that the net daily increase is only 1,100.

Deaths of males and females.

554. In Victoria, deaths of males in 1886 numbered 8,575, and deaths of females, 6,377. These numbers furnish a proportion of 74 females to every 100 males, as against a proportion of 73 in 1885, an average of 74 in the five years 1881-85, and of 75 in the ten years 1871-80. Females in the total population were in the proportion of 90 to every 100 males during the last two 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.

* *Fifty Years of National Progress*, page 16.

555. 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-six years :—

ANNUAL DEATH RATE, 1861 TO 1886.

Year.	Estimated Mean Population.		Number of Deaths.		Deaths per 1,000 of the Mean Population.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.*
1861 ...	324,988	214,836	6,124	4,398	18·84	20·47	19·49
1862 ...	322,916	225,164	5,900	4,180	18·27	18·56	18·39
1863 ...	325,680	237,280	5,646	3,856	17·34	16·25	16·88
1864 ...	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
1868 ...	367,752	295,340	5,865	4,202	15·95	14·23	15·18
1869 ...	379,396	307,806	6,221	4,409	16·40	14·32	15·47
1870 ...	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
1872 ...	409,081	344,117	6,308	4,523	15·42	13·14	14·38
1873 ...	412,597	352,914	6,565	4,936	15·91	13·99	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	18·29	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	395,467	7,033	5,087	16·04	12·86	14·53
1880 ...	446,445	403,898	6,610	5,042	14·81	12·48	13·70
1881 ...	456,107	412,835	7,024	5,278	15·40	12·78	14·16
1882† ...	467,630	422,590	7,900	5,734	16·89	13·57	15·32
1883† ...	478,865	432,117	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
Average of twenty-six years ...					16·69	14·56	15·71

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.

556. It will be noticed that in all the years, except 1861 and 1862, death bore more hardly upon males than upon females. The figures in the lowest line of the table show that, over a period of twenty-six years, the deaths of males per 1,000 of the same sex living exceeded by $2\frac{1}{8}$ the deaths of females per 1,000 of that sex living.

* For total of mean population in each year, see table "Breadstuffs Available for Consumption," in Part Production *post*; for total number of deaths, see Statistical Summary (first folding sheet) at the commencement of this work; or the totals may be obtained by adding the figures in the male and female columns together.

† Since last publication the population estimates for these years have been amended, and the figures in the last three columns have been altered in accordance therewith.

557. It has been held by high authority* that in countries in which the climate is healthy, hygiene properly 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 be also high; but if, on the other hand, the number of persons at the middle ages is excessive, the death rate will be low. It will be remarked that the mortality exceeded 17 per 1,000 seven times in the twenty-six years named in the table, but over the whole period it has averaged below 16 per 1,000. In the last ten years it has never 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.

558. In 1871 the death rate of both males and females was the lowest recorded during the whole period of twenty-six years, after which and the death rate in 1880 the next lowest death rate was in 1881; it has 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.

559. In 1886, the death rate of both males and females, although higher than in the three previous years in the case of the former, and higher than in the seven previous years in the case of the latter, was below the average. Taking the mean of the two sexes, the death rate was lower than in any of the previous years except the three ended with 1885, the three ended with 1881, 1872, 1871, and 1870.

560. The proportion which the deaths that occurred in each Australasian colony bore to the total population of that colony during each of the twenty-one years from 1865 to 1885 will be found in the following table :—

* See page ix of the late Dr. Farr's letter dated 5th February, 1875, published in the Supplement to the 35th Annual Report of the Registrar-General of England. London: Eyre and Spottiswoode, 1875. Also *Victorian Year-Book*, 1875, paragraph 342; *Victorian Year-Book*, 1876-7, paragraph 169; and *Victorian Year-Book*, 1877-8, paragraph 271.

Normal
death rate.

Low mor-
tality in
census
years 1871
and 1881.

Death rate,
1886 and
previous
years.

Death rates
in Austral-
asian colo-
nies.

DEATH RATES IN AUSTRALASIAN COLONIES, 1865 TO 1885.*

Year.	Number of Deaths per 1,000 of Mean Populations.						
	Victoria.	New South Wales.†	Queensland	South Australia.	Western Australia.	Tasmania.	New Zealand.
1865	16·97	16·49	21·42	14·30	...	13·40	15·13
1866	19·37	17·57	25·67	17·20	...	13·79	12·86
1867	18·06	19·76	17·80	17·48	...	14·48	12·78
1868	15·00	15·92	17·36	14·41	...	14·70	11·94
1869	15·47	14·17	16·20	12·37	...	13·20	11·73
1870	14·61	13·38	14·59	13·94	...	13·88	11·13
1871	13·46	12·61	14·83	12·87	...	13·38	10·13
1872	14·38	14·18	14·97	15·33	14·02	13·79	11·68
1873	15·02	13·98	16·06	13·48	16·24	14·52	12·67
1874	15·72	15·33	17·98	17·05	18·74	16·21	13·05
1875	19·42	18·42	23·80	19·45	17·88	20·00	15·92
1876	17·02	18·53	18·82	16·28	14·18	16·54	12·66
1877	15·80	15·69	17·29	13·99	15·70	19·17	11·47
1878	15·46	16·36	20·41	15·44	14·07	15·66	11·01
1879	14·53	14·76	14·97	14·09	14·46	15·18	12·46
1880	13·70	15·47	13·59	14·85	13·24	16·12	11·46
1881	14·16	15·17	15·02	14·49	13·80	14·77	11·13
1882	15·32†	16·12	17·99	15·15	14·16	15·79	11·19
1883	14·28†	14·68	18·82	14·83	17·93	17·06	11·45
1884	14·46†	16·14	22·97	15·52	21·87	15·50	10·39
1885	14·98	16·42	20·19	12·73	17·61	15·40	10·74
Means	15·58	15·77	18·15	15·01	15·99	15·36	12·05

561. Considerable fluctuations in the death rates have occurred from year to year, and the fact of such fluctuations being simultaneous indicates some connexion between the different colonies. Thus a high rate of mortality prevailed, more especially in the continental colonies, in 1866 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 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. It is a noteworthy circumstance that the interval between the two maxima, as well as between the two minima, embraces a period of about ten years; there does not, however, as yet appear any marked sign of the approach of a third period of high mortality, as in 1885 the death rate in Victoria, South Australia and New Zealand was below the average, and that in Tasmania only very slightly above it.

Fluctuations in the death rate coincident in different colonies.

* For the number of deaths in the various colonies during the last thirteen of the years named, see General Summary of Australasian Statistics (third folding sheet) *ante*.

† Figures amended since last publication.

Normal
death rate
in colonies.

562. In the twenty-one years over which the observations extend, the normal death rate of 17 per 1,000 persons living was reached in Queensland thirteen times, in Victoria, New South Wales, and South Australia four times, in Tasmania three times, and in New Zealand not at all. In the last fourteen of those years it was reached five 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.

Order of
colonies in
respect to
death rates.

563. According to the average of a series of years, the death rate of Queensland was much higher, and that of New Zealand much lower, than that of any of the other colonies. But with the exception of these colonies, the average death rates differ but slightly from one another; the rate in Victoria being somewhat lower than in New South Wales or Western Australia, but somewhat higher than in Tasmania and South Australia. In 1885, however, the rate of Victoria was much lower than that of any of the other colonies except South Australia and New Zealand. 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.

Order in 1885.	Order over a Series of Years.
1. Queensland.	1. Queensland.
2. Western Australia.	2. Western Australia.
3. New South Wales.	3. New South Wales.
4. Tasmania.	4. Victoria.
5. Victoria.	5. Tasmania.
6. South Australia.	6. South Australia.
7. New Zealand.	7. New Zealand.

Death rate
in Australia
and Aus-
tralasia.

564. The death rate of the colonies situated upon the continent of Australia taken in combination, and the death rate of those colonies with the addition of Tasmania and New Zealand, are shown in the following table for the thirteen years ended with 1885:—

DEATH RATE IN AUSTRALIA AND AUSTRALASIA, 1873 TO 1885.

Year.	Number of Deaths per 1,000 of Mean Population.		Year.	Number of Deaths per 1,000 of Mean Population.	
	Continent of Australia.	Australia with Tasmania and New Zealand.		Continent of Australia.	Australia with Tasmania and New Zealand.
1873	14·43	14·20	1881	14·62	14·01
1874	15·73	15·36	1882*	15·85	15·02
1875	19·08	18·63	1883*	15·06	14·51
1876	17·12	16·37	1884*	16·35	15·29
1877	15·23	14·77	1885	15·89	14·97
1878	15·72	14·94			
1879	14·06	13·84			
1880	14·47	14·01	Means	15·66	15·07

* Figures amended since last publication.

565. It will be noticed that in 1875 and 1876 the mortality on the 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 1879 the rate was as low as 14 per 1,000, but since then there has been a gradual rise, and in 1885 it stood at nearly 16 on the continent, and at nearly 15 in the Australasian colonies taken as a whole.

Normal death rate in Australia and Australasia.

566. 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:—

Death rates in certain British possessions

DEATH RATES IN BRITISH POSSESSIONS.

Colonies.	Years.	Number of Deaths per 1,000 of the Population.
Malta	1883	25·4
Ceylon	1867-76	21·6
Straits Settlements	1881-4	27·9
Hong Kong	1879-81	28·0
Mauritius	1882-3	35·1
Seychelles	1875-7	22·4
St. Helena	1871-5	13·2
Gambia	1882-3	51·5
Nova Scotia	1871-5	12·1
Bermudas	1875-84	24·3
British Guiana	1871-83	33·7
West Indies—		
Bahamas	1874-5	22·6
Jamaica	1883-4	22·6
St. Lucia	1869-84	25·3
St. Vincent	1870-9	28·4
Barbados	1872-8	23·8
Grenada	1883-4	21·0*
Tobago	1882-3	20·5
Antigua	1883-4	39·5
Montserrat	1883-4	22·5
Dominica	1882-3	17·3
Trinidad	1883-4	28·1*

567. In all the European countries of which the information is at hand, the mean annual death rates are much higher than in any of the Australasian colonies except Queensland, and the mean death rate in that colony is lower than in any of the countries named except Norway, Sweden and Ireland. Moreover, in all with the exception of Norway, the mean annual death rate is above 17 per 1,000, and, with the same exception, in not one of those countries did the annual death rate during

Death rates in European countries.

* Inclusive of still-births, which are recorded as deaths.

the five years ended with 1885 ever fall as low as 17 per 1,000; whilst in Hungary, on the other hand, the average death rate per 1,000 amounts to just 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 :—

DEATH RATES IN EUROPEAN COUNTRIES, 1881 to 1885.

Countries.	Number of Deaths per 1,000 of Mean Population.					
	1881.	1882.	1883.	1884.	1885.	Mean of 5 Years.
Hungary	35·6	36·6	32·6	31·0	...	34·0
Austria	30·6	30·8	30·1	29·2	29·9	30·1
Italy	27·6	27·5	27·5	26·7	26·6	27·2
Spain ... ..	...	...	...	...	...	25·8*
German Empire	25·4	25·7	25·9	26·0	25·7	25·7
Prussia	24·9	25·2	25·3	25·5	25·7	25·3
France	22·0	22·2	22·2	22·2	22·0	22·1
The Netherlands	21·5	20·7	21·8	22·2	21·0	21·4
Switzerland	22·4	21·9	20·3	20·1	21·1	21·2
Belgium	20·9	20·2	20·8	20·9	20·1	20·6
Scotland	19·3	19·3	20·1	19·4	19·1	19·4
England and Wales	18·9	19·6	19·5	19·6	19·0	19·3
Denmark	18·3	19·5	18·4	18·4	17·9	18·5
Ireland	17·5	17·4	19·2	17·6	18·4	18·0
Sweden	17·7	17·4	17·3	17·5	17·8	17·5
Norway	16·8	18·4	17·1	16·4	16·4	17·0

568. According to the reports of the Registrars-General of England and Scotland, the death rate of the latter country approximates very closely to that of the former, but in Ireland it is considerably lower than in the other two countries.† The figures for each of the fifteen years ended with 1885 were as follow :—

DEATH RATE IN THE UNITED KINGDOM, 1871 TO 1885.

		Deaths per 1,000 of the Population.				Deaths per 1,000 of the Population.	
1871	22·6	1880	...	...	20·4
1872	20·9	1881	...	...	18·7
1873	20·8	1882	...	...	19·2
1874	21·6	1883	...	...	19·5
1875	22·2	1884	...	...	19·3
1876	20·5	1885	...	...	18·9
1877	20·0				
1878	21·2	Mean	...	...	20·4
1879	20·5				

569. In every country the death rate is higher in towns than it is 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

* Mean of years 1876 and 1878.

† 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.

Death rate in United Kingdom.

Death rates in town and country, 1886.

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 1886, the death rate was higher in Melbourne and suburbs than in the country towns, but in both it was much more than twice as high as in the country districts. The following are the figures for that year:—

DEATHS IN URBAN AND COUNTRY DISTRICTS, 1886.

Districts.	Estimated Mean Population.	Deaths, 1886.	
		Total Number.	Number per 1,000 of the Population.
Melbourne and suburbs (Greater Melbourne)	371,630	7,590	20·42
Extra-metropolitan Towns	187,980	3,623	19·27
Country districts ...	427,484	3,739	8·75
Total ...	987,094	14,952	15·15

570. The number of deaths per 1,000 of the estimated population of the metropolitan towns (Greater Melbourne), the extra-metropolitan towns, and the country districts of Victoria is given in the following table for each of the last fourteen years:—

Death rate in town and country, 1873 to 1886.

DEATH RATES IN URBAN AND COUNTRY DISTRICTS, 1873 TO 1886.

Years.	Number of Deaths per 1,000 of the Estimated Population.			
	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	19·42
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

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.

Normal death rate in town and country.

571. It will be noticed that in ten of the years, including the last four 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 considerably below that rate.

Death rates in town and country districts of England.

572. In England and Wales, during the ten years 1876-85, the death rate in urban districts was 21·5 per 1,000, and in country districts, 18·0 per 1,000; the difference between these rates being not nearly so great as in similar divisions of Victoria.*

Death rates in Melbourne and suburbs.

573. The following table shows the mean population, the number of deaths, and the proportion of the latter to the former, in 1886, 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 where they occurred, and are shown separately near the foot of the table:—

DEATHS IN GREATER MELBOURNE.

Sub-districts.	Estimated Mean Population 1886.	Deaths.		
		Total Number 1886.	Number per 1,000 of the Population.†	
			1886.	Annual Mean 1881 to 1885.
Melbourne City	70,532	1,162	16·47	16·28
North Melbourne Town ‡	19,633	343	17·47	18·12
Fitzroy City	30,295	468	15·45	18·15
Collingwood City	28,800	584	20·28	19·40
Richmond City	31,286	657	21·00	18·09
Brunswick Borough	11,110	208	18·72	17·25
Northcote Borough	2,865	46	16·05	11·33
Prahran City	32,606	541	16·59	16·00
South Melbourne City	36,922	696	18·85	17·03
Port Melbourne Borough ..	10,246	213	20·79	18·73

NOTE.—It should be specially noted that the deaths in Hospitals, &c., have been eliminated from the districts in which they occurred, and are shown separately. Such deaths were in the proportion of 3·44 in 1886, and 3·84 during the period 1881-85, to every 1,000 of the population of Melbourne and suburbs taken as a whole.

* See 48th Report of the Registrar-General of England, page lxxv.

† In order to compare the death rate with density of population, see paragraph 110 *ante*.

‡ Formerly Hotham; name altered to North Melbourne on the 26th August, 1887.

DEATHS IN GREATER MELBOURNE—*continued.*

Sub-districts.	Estimated Mean Population 1886.	Deaths.		
		Total Number 1886.	Number per 1,000 of the Population.	
			1886.	Annual Mean 1881 to 1885.
St. Kilda Borough	16,036	220	13·72	13·31
Brighton Town *	6,165	86	13·95	13·82
Essendon Borough	5,976	65	10·88	12·85
Flemington and Kensington Borough	6,000	93	15·50	
Hawthorn Town *	10,477	163	15·56	12·79
Kew Borough	4,708	44	9·35	11·50
Footscray Town *	10,000	189	18·90	16·66
Williamstown Town *	12,200	170	13·93	16·53
Remainder of district	20,670	365	17·66	13·23
<i>Hospitals, asylums, &c.</i> †	3,625	1,277	...	...
Shipping in Hobson's Bay and river	1,478 ‡	...	...	9·20
Total	371,630	7,590	20·42	20·11

574. It will be observed that in 1886 the death rate in fifteen of the sub-districts, viz., Melbourne, Collingwood, Richmond, Prahran, and South Melbourne, Cities; Brighton, Hawthorn, and Footscray Towns; Brunswick, Northcote, Port Melbourne, St. Kilda, Essendon, and Flemington Boroughs; and the "Remainder of district," was above the average of the quinquennial period, the excess being especially large in the case of Richmond, Northcote, Hawthorn, Footscray, and the "Remainder of district." On the other hand, in Fitzroy, Kew, and Williamstown, the rate of mortality in 1886 was much, and in North Melbourne it was slightly, below the average.

Death rates in 1886 and series of years.

575. The only sub-district which, according to the average of five years, had a higher death rate than 19§ per 1,000, is the low-lying and still imperfectly drained locality of Collingwood; the next highest death rate prevailed in the shipping borough of Port Melbourne, and next in the densely populated suburbs of Fitzroy, North Melbourne,

Places in which death rate was highest and lowest.

* The following municipalities, which were formerly Boroughs, were proclaimed Towns on the dates named:—Williamstown, on the 30th March, 1886; Footscray, on the 22nd February, 1887; and Hawthorn and Brighton, on the 15th March, 1887.

† Includes the Melbourne, Alfred, Women's, Children's, and Homœopathic 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 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."

‡ Census figures.

§ It should be remembered that the deaths in charitable institutions 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.

and Richmond. In 1886 the highest death rates were in Richmond, Port Melbourne and Collingwood—all with rates above 20 per 1,000—followed by Footscray, South Melbourne, and Brunswick, in the order named; but the rate in Fitzroy was exceptionally low. 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 1886 the lowest death rate was in Kew, where it was unusually low; then in Essendon and Flemington, St. Kilda, Williamstown, and Brighton, in the order named.

Sub-districts
with death
rates over
17 per 1,000.

576. The death rate of Greater Melbourne taken as a whole, in the calculation of which the deaths in charitable institutions are included, was nearly $20\frac{1}{2}$ per 1,000 persons living in 1886, or a fraction 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 7 out of 18 sub-districts, viz., Collingwood, Port Melbourne, Fitzroy, North Melbourne, Richmond, Brunswick, and South Melbourne; and during 1886 it was above 17 per 1,000 in 8 of those sub-districts, viz., in the districts just named with the exception of Fitzroy, together with Footscray and “Remainder of district.” It will be borne in mind that the deaths in hospitals, asylums, &c., are excluded from the returns of individual districts.*

Death rates
in Austral-
asian
capitals.

577. In 1886 the death rate in Melbourne was considerably lower than that in Hobart, about the same as that in Sydney, but higher than that in Brisbane, Wellington, or Adelaide, as is shown in the following table:—

DEATHS IN AUSTRALASIAN CAPITAL CITIES, 1886.

Capital Cities.†	Estimated Mean Population.	Deaths, 1886.	
		Total Number.	Number per 1,000 of the Population.
Hobart	30,805	719	23·34
Sydney	307,541	6,282	20·43
Melbourne	371,630	7,590	20·42
Brisbane	51,683	1,018	19·70
Wellington	27,833	487	17·50
Adelaide‡	128,377	1,837	14·31

* See footnote (§) on previous page.

† With suburbs, except in the case of Wellington, which has none.

‡ There are some doubts as to whether too high an estimate has not been given of the population of Adelaide and suburbs. If this should be the case, the death rate, as shown in the table, would obviously be lower than the true rate.

578. The mortality in Brisbane, Adelaide, and Wellington during 1886 was lower than the average mortality of any of the 23 following towns in the United Kingdom. In the same year the mortality in Sydney and Melbourne was lower than the average of all except Portsmouth, and that in Hobart of all except Portsmouth, Brighton, Edinburgh, Plymouth, London, and Nottingham, as will be seen by comparing the following figures with those in the last table :—

Death rates in towns of United Kingdom.

DEATH RATES IN 23 BRITISH TOWNS, 1870 TO 1879.

		Annual Deaths per 1,000 of the Population.			Annual Deaths per 1,000 of the Population.
Manchester	...	29·9*	Birmingham	...	24·4
Dublin	...	29·6	Glasgow	...	24·2*
Liverpool	...	29·1	Hull	...	24·0
Salford	...	27·8	Norwich	...	23·8
Newcastle-on-Tyne	...	26·6	Bristol	...	23·7
Leeds	...	26·5	Nottingham	...	23·2
Oldham	...	26·5	London	...	22·8
Sheffield	...	25·8	Plymouth	...	22·3
Bradford	...	25·7	Edinburgh	...	20·8*
Leicester	...	25·2	Brighton	...	20·8
Wolverhampton	...	24·7	Portsmouth	...	20·2
Sunderland	...	24·6			

579. The death rates in all the Australasian capitals during 1886 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 foreign towns.

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	Bordeaux	...	26·7
Valparaiso	...	64·6	New York	...	26·2
St. Petersburg	...	51·4	Leipsic	...	26·1
Havanna	...	45·7	Turin	...	25·6
Rio Janeiro	...	39·4	Dresden	...	25·4
Madras	...	38·8	Stockholm	...	24·7
Madrid	...	37·4	Lyons	...	24·7
Montreal	...	37·2	Hamburg	...	24·5
Buda-Pesth	...	35·2	Bucharest	...	24·5
Bombay	...	33·7	Brussels	...	23·9
Breslau	...	32·5	Amsterdam	...	23·7
Rouen	...	31·3	Boston	...	23·5
Calcutta	...	31·1	Rotterdam	...	23·3
Mexico	...	30·9	Quebec	...	22·9
Milan	...	30·6	Venice	...	22·7
Buenos Aires	...	30·1	Copenhagen	...	22·1
Vienna	...	29·0	Geneva	...	21·2
Paris	...	28·6	Baltimore	...	21·1
Palermo	...	28·5	Philadelphia	...	20·3
Marseilles	...	28·0	St. Louis	...	19·3
Berlin	...	27·6	Christiania	...	18·8
Chicago	...	27·2	San Francisco	...	18·1
Rome	...	26·8			

* Average of years 1876 to 1879.
 † Taken from Mulhall's *Dictionary of Statistics*, page 126.

Death rates
in Victorian
towns.

580. Of the 4 principal towns in Victoria next in importance to Melbourne, 1 had in 1886 higher, and 3 had lower, death rates than that city; but in none of them was the death rate as high as in the majority of British and Foreign towns just referred to. This will be seen by the following figures:—

DEATH RATES IN 5 VICTORIAN TOWNS, 1886.

	Deaths per 1,000 of the Population.		Deaths per 1,000 of the Population.
Sandhurst ...	21·65	Geelong ...	19·12
Melbourne ...	20·42	Ballarat ...	16·78
Castlemaine ...	19·77		

Deaths in
each month.

581. The mortality of Victoria is highest in the first five months 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 1886, 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:—

DEATHS IN EACH MONTH.

Months.	Year 1886.		Percentage in—	
	Number of Deaths.	Percentage.	Five Years: 1881 to 1885.	Ten Years: 1871 to 1880.
January ...	1,455	9·73	9·34	10·29
February ...	1,311	8·77	8·46	9·09
March ...	1,354	9·05	9·57	10·17
April ...	1,257	8·41	8·68	9·73
May ...	1,325	8·86	8·40	8·55
June ...	1,181	7·90	7·69	7·44
July ...	1,224	8·19	7·79	7·89
August ...	1,186	7·93	8·22	7·37
September ...	1,073	7·18	7·31	6·81
October ...	1,052	7·04	7·39	7·09
November ...	1,174	7·85	7·76	7·12
December ...	1,360	9·09	9·39	8·45
Total ...	14,952	100·00	100·00	100·00

582. In Victoria the summer is the most trying portion of the year, especially to invalids and young children. It is not astonishing, therefore, that most deaths occur during that period. Next to the summer the autumn quarter is usually the most fatal. 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; 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:—

Deaths at different seasons.

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

Seasons.*	Mean Temperature in Shade.		Deaths per 100 at all Seasons.					
			Victoria.			England and Wales.	Scotland.	Ireland.
	Melbourne, Victoria.	Greenwich, England.	Year 1886.	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 ...	65·2	60·5	27·55	27·37	29·55	23·24	22·34	20·21
Autumn ...	53·8	44·3	25·17	24·76	25·72	24·65	24·71	23·45
Winter ...	50·2	40·0	23·30	23·32	22·07	27·49	27·95	30·19
Spring ...	60·3	52·8	23·98	24·55	22·66	24·62	25·00	26·15
Year ...	57·6	49·4	100·00	100·00	100·00	100·00	100·00	100·00

583. The deaths of Chinese recorded in 1886 amounted to 166—of which 4 (including at least 2 of half-castes) were of females, and those of Aborigines amounted to 26. The former furnish a proportion of 13·7 and the latter of 33·3 to every 1,000 of their numbers.† At the same time the proportion of deaths of all races to every 1,000 of the population was 15·15.

Deaths of Chinese and Aborigines.

584. The mortality of the Chinese would doubtless have been higher but for the fact that the Chinese population in Victoria consists almost entirely of persons at the adult period of life. In 1886 only 3 (2 being half-castes) of the Chinese who died were under the age of 5 years, and only 11 others were under 45 years of age; the great majority, or over two-thirds, were between 45 and 65; whilst the four oldest were

Ages at death of Chinese and Aborigines.

* 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.

† On the 3rd April, 1881, the Chinese numbered 12,128; Aborigines, 780.

said to be 80, 84, 85, and 89 respectively. Of the Aborigines who died, seven were under 5, whilst two males were stated to have attained the ages of 75 and 76 respectively; and two women, the age of 60.

Deaths at each age, 1886.

585. The following table shows the number of deaths at various periods of age registered in Victoria during the year 1886, and the proportion of the deaths at each age to the total at all ages :—

DEATHS AT EACH AGE, 1886.

Ages.	Number of Deaths at each Age, 1886.			Percentage of Deaths at each Age.		
	Males.	Females.	Total.	Males.	Females.	Total.
Under 5 years ...	2,868	2,550	5,418	33·45	39·99	36·24
5 years to 10 years ...	223	216	439	2·60	3·39	2·94
10 " 15 " ...	136	136	272	1·59	2·13	1·82
15 " 20 " ...	215	182	397	2·51	2·85	2·65
20 " 25 " ...	339	300	639	3·95	4·70	4·27
25 " 35 " ...	632	610	1,242	7·37	9·57	8·30
35 " 45 " ...	545	471	1,016	6·35	7·39	6·80
45 " 55 " ...	1,010	548	1,558	11·78	8·59	10·42
55 " 65 " ...	1,170	547	1,717	13·64	8·58	11·48
65 " 75 " ...	845	453	1,298	9·85	7·10	8·68
75 years and upwards ...	592	364	956	6·91	5·71	6·40
Total ...	8,575	6,377	14,952	100·00	100·00	100·00

Proportion of deaths at different ages.

586. It will be noticed that a third of the males and two-fifths of the females who died had not reached their fifth year; that nearly a fourth of the males and nearly a third of the females were between 5 and 45 years of age; that more than a fourth of the males, but only a sixth 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 12 years younger than the males—about half the former being under and half over 22 years of age, whilst about half the latter were under and half over 34 years of age.

Death rate at each age.

587. The exact ages of the population of Victoria were ascertained 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 1886 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 :—

DEATH RATE AT EACH AGE, 1871-80 AND 1886.*

Ages.		Number of Deaths per 1,000 of the Population at different Ages.					
		Males.			Females.		
		Mean of 10 Years : 1871 to 1880.	1886.	Increase + Decrease —	Mean of 10 Years : 1871 to 1880.	1886.	Increase + Decrease —
Under 5 years	...	47·34	46·09	— 1·25	42·19	42·85	+ ·66
5 to 10	”	6·10	3·87	— 2·23	6·00	3·89	— 2·11
10 to 15	”	3·30	2·44	— ·86	3·30	2·49	— ·81
15 to 20	”	4·43	3·73	— ·70	4·29	3·30	— ·99
20 to 25	”	5·38	5·91	+ ·53	5·39	5·58	+ ·19
25 to 35	”	7·60	8·20	+ ·60	8·50	8·56	+ ·06
35 to 45	”	12·18	11·80	— ·38	11·76	11·21	— ·55
45 to 55	”	18·67	19·49	+ ·82	14·31	14·09	— ·22
55 to 65	”	31·24	30·46	— ·78	24·20	24·27	+ ·07
65 to 75	”	60·47	57·61	— 2·86	48·10	50·81	+ 2·71
All ages	...	16·45	16·42	— ·3	14·15	13·72	— ·43

588. It has already been stated that in 1886 the death rate of both males and females was below the average. The above table shows this to have been the case as regards males at all age-periods except 20 to 35, and 45 to 55; and as regards females at all age-periods except under 5 years, 20 and 35, and 55 to 75.

Death rate at each age 1886 compared with average of previous years.

589. 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 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 table—although 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 it is desired to make comparisons, which is seldom if ever the case. To render accurate comparisons probable, 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.

“Ordinary” death rate seldom reliable.

590. This, in the two preceding issues of this work, was effected by a mode of computation—there termed the “Absolute Death Rate”—made by treating the deaths per 1,000 of the population at each quinquennial period of age as if they were the deaths actually occurring at

“Absolute” death rate.

* For population at each age in 1886, see table following paragraph 79 *ante*; the deaths at each age, are given in table following paragraph 584 *ante*

such age-period, then taking the sum of the death rates at the various periods for the total deaths, and the sum of the thousands with which they had been compared for the total population, and finding the relation of the one to the other.*

"Absolute"
death rate
slightly
unreliable.

591. For the "Absolute Death Rate" thus computed it may be claimed that it gives a result for comparative purposes closely approximating to the truth. It is not, however, strictly correct, as it assumes an equal number of persons to be living at each period of age, and it thus gives the same prominence to the mortality at the older ages as at the younger, thereby implying that the two are of equal importance, which is not the case, for whereas a high mortality at the younger ages undoubtedly proves that the circumstances of the country in which it occurs are unfavorable to longevity, the reverse is proved by a high mortality at the older ages, which indicates that the circumstances had been sufficiently favorable to enable life to be sustained until advanced age had been reached.

Johnston's
"Health
Standard."

592. Exception was taken to the "Absolute Death Rate," on this ground, by Mr. R. M. Johnston, the Government Statistician of Tasmania, in an exceedingly able paper read by him before the Royal Society of that colony, on the 19th April, 1887†; Mr. Johnston proposing, in its stead, a simple comparison of the deaths occurring to persons under 60 years of age with the living population at the same period of life, thereby giving, as he contended, "the true yield of deaths per 1,000 persons living under the same age limit in each country, and thus effecting the best form of index as regards the comparative health and sanitary condition of different countries by the elimination of the healthy old age element."‡

Objections
to "Health
Standard."

593. With reference to the death rate obtained by this means, which Mr. Johnston proposes to call the "Actual Health Standard," it may be remarked that the element of old age appears to be an especially disturbing one in Tasmania, where there is an exceptionally large proportion of old people; but whilst under Mr. Johnston's system this element is eliminated, allowance is not made for the very varying conditions in regard to age which may exist between different populations where the age limit is so wide as from birth to 60 years.

Model popu-
lation.

594. To construct a standard of comparison probably less open to objection than any other, it appears necessary arbitrarily to adopt the relative proportions in regard to age existing in a model population,

* Examples of this mode of computation were given in the *Victorian Year-Book*, 1885-6, page 265, and same work, 1884-5, page 244.

† The title of this paper is "How far can the general death rate for all ages be relied upon as a comparative index of the health or sanitary condition of any community?"

‡ Page 7.

and, upon the basis of the deaths which actually occurred at various age periods, to discover what number would have occurred if the proportions living at the same periods in the actual had corresponded with those in the model population. It is essential that the model population thus used should be in a normal condition in regard to age, or, in other words, free from such fluctuations and disturbances as are incident to the building up and growth of the population of a new country. Such a population appears to be that of England and Wales, in which the proportions, at various periods of age, when the census of 1881 was taken, were—with slight corrections—as follow:—

AGES OF MALES AND FEMALES IN A MODEL POPULATION.

(Approximating closely to the proportions existing in the Population of England and Wales, 1881.)

Ages.	Males.	Females.	Mean.
<i>Quinquennial Age-periods.</i>			
Under 5 years	1,375	1,325	1,350
5 to 10 "	1,225	1,180	1,200
10 to 15 "	1,100	1,050	1,075
15 to 20 "	1,010	975	1,000
20 to 25 "	900	900	900
<i>Decennial Age-periods.</i>			
25 to 35 years	1,475	1,475	1,475
35 to 45 "	1,125	1,140	1,125
45 to 55 "	810	850	825
55 to 65 "	560	610	600
65 to 75 "	310	350	325
Total under 75 years ...	9,890	9,855	9,875
75 to 85 years	100	125	110
85 years and upwards ...	10	20	15
All ages	10,000	10,000	10,000

NOTE.—In England and Wales, per 1,000 of the population, the births average 34·5, the deaths average 19·8, and the net emigration averages 5·3, annually. The net annual increase is thus 10 per 1,000, or 1 per cent.

595. It will be observed that the proportion of males differs but little from that of females at every period of life. It is therefore proposed to adopt the mean of both sexes as the standard on which to calculate the "Adjusted Death Rate," whichever sex may be under consideration. This it is proposed to use in future in lieu of the "Absolute Death Rate," given in the last two issues of this work. The method of calculating the "Adjusted Death Rate" is as follows, the deaths dealt with being those of males under 75 years of age which occurred in Victoria during the ten years ended with 1880:—

Mode of computing "Adjusted" death rate.

MODE OF COMPUTING "ADJUSTED DEATH RATE."

Ages.	Model Population. (From last table.)	Males under 75, 1881 to 1880.	
		Death Rates experienced.*	Deaths in Model Population accord- ing to rates in previous column.
<i>Quinquennial Age-periods.</i>			
Under 5 years	1,350	47·34	63·91
5 to 10 ,,	1,200	6·10	7·32
10 to 15 ,,	1,075	3·30	3·55
15 to 20 ,,	1,000	4·43	4·43
20 to 25 ,,	900	5·38	4·84
<i>Decennial Age-periods.</i>			
25 to 35 years	1,475	7·60	11·21
35 to 45 ,,	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

"Adjusted"
death rate.

596. 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 population of 10,000, of whom 9,875 were under 75 years of age—the ages of such population being in like proportions to those of the model population shown in the table—the total deaths of such males would have numbered 162·76, the proportion of which to the population (9,875) may be termed the "Adjusted Death Rate" of males, which will be found to be equivalent to a proportion of 16·48 per 1,000. 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.

* 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, $\frac{1,350 \times 47\cdot34}{1,000} = 63\cdot909$, and so on for the other lines.

597. For the decennium 1871 to 1880 and the year 1886, 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, and with the “Absolute Death Rates,” now superseded as a mode of computation by results obtained by means of the improved method here termed the “Adjusted Death Rate” :—

“ADJUSTED,” “ORDINARY,” AND “ABSOLUTE” DEATH RATES,
1871-1880 AND 1886.

Period.	Adjusted Death Rate.*	Ordinary Death Rate.†	Absolute Death Rate.‡
<i>Males.</i>			
1871 to 1880	16·48	16·45	21·79
Year 1886	15·85	16·42	21·14
Decrease	·63	·03	·65
<i>Females.</i>			
1871 to 1880	14·64	14·15	18·33
Year 1886	14·32	13·72	18·40
Increase	·32	·43	·07
Decrease	·32	·43	·07

598. It will be observed that in 1886, as compared with the mean of the decennial period 1871 to 1880, the “Adjusted” and the “Ordinary” death rates point to a diminished mortality in the case of both males and females, as also does the “Absolute” death rate in the case of the former, but the last-named death rate shows a slight increase in the mortality of females. This anomaly arises from the undue prominence given by this mode of calculation to the death rates at the higher age-periods, in which there was an actual increase, and, as a natural consequence to the insufficient value attached to the rates at lower age-periods, in which there was an actual decrease. This, as has been already pointed out, constitutes the weak point in the “Absolute” death rate. The results brought out by the “Adjusted” death rate, however, in favour of which the “Absolute” death rate has been abandoned, may be depended on as giving the more reliable proportion for comparative purposes.

599. Comparing the death rates as given in the table by the first and second modes of computation, it is found that in 1886, whilst the mortality of males was only 3 per 100,000 below the average according

* Per 1,000 of the model population.

† Per 1,000 of the actual population.

‡ Per 1,000 of a population composed of 200 at each year of age.

to the usual but unreliable method, it was as much as 63 per 100,000 below the average according to the newest and most correct one; and that in the case of the females, whilst the mortality was 43 per 100,000 below the average according to the former method, it was only 32 below the average according to the latter.

Death rates at various ages in Victoria, England, and France.

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

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

Ages.	Number of Deaths per 1,000 of the Population.					
	Victoria.		England and Wales.		France.	
	Average of 10 Years: 1871 to 1880.		Average of 10 Years: 1871 to 1880.		Average of 10 Years.	
	Males.	Females.	Males.	Females.	Males.	Females.
All ages ("Ordinary" death rate)	16·45	14·15	22·6	20·0	23·80	23·19
„ ("Adjusted" death rate)	16·48	14·64	20·7	18·0	23·15	21·67
Under 5 years	47·34	42·19	68·1	58·1	84·55	75·45
5 to 10	6·10	6·00	6·7	6·2	10·49	11·04
10 to 15	3·30	3·30	3·7	3·7	5·36	6·41
15 to 20	4·43	4·29	5·2	5·4	10·34	8·41
20 to 25	5·38	5·39	7·3	6·8		
25 to 35	7·60	8·50	9·3	8·6	10·02	9·69
35 to 45	12·18	11·76	13·7	11·6	10·96	11·03
45 to 55	18·67	14·31	20·0	15·6	14·76	14·88
55 to 65	31·24	24·20	34·8	28·5	29·19	27·27
65 to 75	60·47	48·10	69·6	60·8	60·69	63·49
75 to 85	114·80	102·94	150·9	155·8	160·22	153·76

Death rates, "Ordinary" and "Adjusted," in Victoria, England, and France.

601. It will be observed that the average mortality of both males and females at all ages is much lower in Victoria than in England or France, but the difference is not so striking when the new method of comparison is used ("Adjusted" death rate) as it is when the old 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.

Death rate at certain ages higher in Victoria than in France.

602. 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 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 25 to 45.

603. 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 children less in Victoria than in England or France.

604. According to the table, the death rate of females exceeds that of males at from 20 to 35 in Victoria (during a term of years), at 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 of males and females in three countries compared.

605. 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:—

Death rate at various ages in different countries.

DEATH RATE AT VARIOUS AGES IN DIFFERENT COUNTRIES.

Countries.	Number of Deaths per 1,000 living at each Age.						
	Under 5.	5 to 10.	10 to 25.	25 to 45.	45 to 55.	55 to 65.	65 to 75.
Victoria ...	38·6	3·5	3·9	10·2	16·2	29·1	59·4
England ...	63·6	6·6	5·5	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	8·8	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 ...	68·1	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

606. The death rate of infants in 1886 was higher than in any other of the last twenty years except 1882, 1875, 1867, and 1866.† The total number who died under 1 year of age in 1886 was 3,924, and as the births numbered 30,824, it follows that 1 infant died to every 8 births, or 12·73 infants to every 100 births. In the twenty years 1866 to 1885, the proportion of infants dying before completing their first year was 12·33 to every 100 births.†

Infantile mortality, 1886.

607. It has been already stated that more boys are born than girls, but the balance of the sexes is to a certain extent maintained by more

Mortality of male and female infants.

* Dictionary of Statistics, page 127.

† See table following paragraph 615 ost.

male than female infants dying. This is shown in the following table, which contains a statement, for the sixteen years ended with 1886, 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:—

MORTALITY OF MALE AND FEMALE INFANTS, 1871 TO 1886.

Year.	Births.		Deaths at under 1 Year of Age.			
			Total Number.		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	10·69
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 ...	13,612	13,135	2,049	1,673	15·05	12·74
1883 ...	14,109	13,432	1,702	1,448	12·06	10·78
1884 ...	14,844	14,006	1,853	1,428	12·49	10·20
1885 ...	15,455	14,520	2,046	1,725	13·24	11·88
1886 ...	15,753	15,071	2,127	1,797	13·50	11·92

Mortality of male greater than of female infants.

608. 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.

609. 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 that of female infants dying from 103 in 1876 to 134 in 1875—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.

* See paragraph 510 *ante*.

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 in 1885 and 1886 the rate again rose above the average.

610. 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 1886 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 1886 the mortality of both males and females 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:—

Deaths of infants at different ages.

AGE AT DEATH OF MALE AND FEMALE INFANTS.

Ages.	Deaths at under 1 Year of Age.				
	Year 1886.			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 ...	666	31·31	4·23	34·23	4·42
1 to 3 months ...	371	17·44	2·35	17·30	2·23
3 to 6 „ ...	462	21·72	2·93	19·43	2·51
6 to 12 „ ...	628	29·53	3·99	29·04	3·75
Total ...	2,127	100·00	13·50	100·00	12·91
GIRLS.					
Under 1 month ...	491	27·32	3·26	30·81	3·46
1 to 3 months ...	361	20·09	2·40	17·23	1·94
3 to 6 „ ...	397	22·09	2·63	20·14	2·26
6 to 12 „ ...	548	30·50	3·63	31·82	3·57
Total ...	1,797	100·00	11·92	100·00	11·23

611. During the period of eleven years, the mortality of male infants 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 fully a third; in the next two months this excess was reduced to about a fifth, in the next three months to about a seventh, and in the next six months to something less than a tenth. In 1886, however, the death rate of females at from 1 to 3 months was higher than that of males at the same age.

More deaths of male than female infants at all ages.

612. In the same period of eleven years over a third of the male and nearly a third of the female infants who died before they were a year old did so in the first month after birth; about a sixth of both males and females died in the next two months; about a fifth of both males

Periods at which infants die

and females died in the next three months ; between a third and a fourth of the males and nearly a third of the females died in the next six months. The proportions for 1886 are somewhat less for the first month of life, but slightly higher for the other age-periods than the proportions just alluded to.

Deaths in first month and second six months of life.

613. More male infants died in the first month of life than in the whole of the second six months, but the female infants who died in the second six months slightly exceeded those who died in the first month.

Probable mortality of infants.

614. As a practical result of these calculations, it may be mentioned that of every 20,000 newly-born boys and girls in equal numbers, 442 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 Australasian colonies.

615. It has been pointed out in previous issues of this work that, in proportion to the infants born, the number who die before completing one year of life is greater in South Australia* than in any of the other Australasian colonies. In 1885, however, the infantile death rate in South Australia was by far the lowest recorded during a period of 20 years, being considerably lower than in Victoria, New South Wales, or Queensland, and only slightly higher than in Tasmania. In all the colonies, except South Australia and New Zealand, the infantile death rate in 1885 was above 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, except Western Australia (which does not publish any statement of the number of infants who die), for each of the twenty years ended with 1885. All the calculations were made in the office of the Government Statist, Melbourne :—

* The high infantile death rate in South Australia was first pointed out in a paper by the present writer, read before the Adelaide Philosophical Society (now the Royal Society of South Australia) on the 19th March, 1878. Up to that date the fact seems to have been entirely unsuspected, and its announcement caused considerable discussion, together with some alarm, in that colony. From certain remarks in the Report for 1886 of the newly appointed Registrar-General of Births, Deaths, and Marriages of South Australia, it would appear, however, that the apparent high infantile death rate in that colony has been partly due to defective registration of births. The Registrar-General states, "In reference to infant mortality, facts have come within my knowledge which tend to show that the rate calculated from the records of the office is in excess of the correct figures. Under the compulsory Vaccination Act it becomes necessary to mark the names of all children registered in the colony when certificates of their having been successfully vaccinated are received. It has been found that a large number of certificates of vaccination come to hand of children whose births have not been registered. These are much more numerous than can be accounted for by immigration of children born in other countries, and there is reason to believe that the number of children born in the colony and not registered is sufficient to cause a marked increase in the apparent ratio of deaths during infancy. I am informed by gentlemen of longer experience in the registration department that, amongst a certain portion of the community, the registration of births has been greatly neglected, the baptismal certificate being looked on by parents as equivalent."

INFANTILE MORTALITY IN AUSTRALASIAN COLONIES.

Year.	Births.	Deaths at under 1 Year of Age.		Births.	Deaths at under 1 Year of Age.		Births.	Deaths at under 1 Year of Age.	
		Total Number.	Number to 100 Births.		Total Number.	Number to 100 Births.		Total Number.	Number to 100 Births.
VICTORIA.			NEW SOUTH WALES.			QUEENSLAND.			
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	9.50	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	16.68
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	13.91	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
Sums and means	540,020	66,602	12.33	485,633	55,095	11.34	138,415	18,270	13.20

SOUTH AUSTRALIA.				TASMANIA.			NEW ZEALAND.		
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	260	8.52	10,592	882	8.33
1872	7,105	1,145	16.12	3,010	306	10.17	10,795	1,074	9.95
1873	7,107	990	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	407	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	9.24
1882	10,844	1,647	15.19	4,043	419	10.36	19,009	1,678	8.83
1883	11,173	1,627	14.56	4,259	528	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
Sums and means	174,393	25,326	14.52	68,592	7,192	10.49	291,348	28,078	9.64

616. 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

Order of colonies in respect to infantile mortality.

list for 1885, as compared with that it occupied in the list extending over a series of years :—

ORDER OF COLONIES IN REFERENCE TO INFANTILE MORTALITY.

Order in 1885.	Order over a Series of Years.
1. Queensland.	1. South Australia.
2. New South Wales.	2. Queensland.
3. Victoria.	3. Victoria.
4. South Australia.	4. New South Wales.
5. Tasmania.	5. Tasmania.
6. New Zealand.	6. New Zealand.

Waves of
infantile
mortality.

617. It appears from the figures in the last table that a wave of high infantile mortality spread in 1882 over the four continental colonies, but did not reach Tasmania and New Zealand until the following year, when the infantile death rate in the former was the highest with one exception, and in the latter with four exceptions, during a period of eighteen years. Again, in 1885 another such wave appears to have arisen in all the colonies, except South Australia and New Zealand, as in all the former the infantile death rates in that year were higher than in the great majority of previous years.

Infantile
mortality
in United
Kingdom
and France

618. In England and Wales, the infantile mortality is somewhat lower than the average in South Australia, but higher than that in any of the colonies, deaths at under 1 year of age having occurred during the ten years 1875 to 1884 in the proportion of 14·4 to every 100 births. In Scotland, the infantile death rate, during the year 1883, was somewhat higher than the average in Victoria, being in the proportion of 11·8 to every 100 births. In Ireland, during the year 1874 the returns show only 9·2 deaths of infants to 100 births, a smaller proportion than that obtaining in any Australasian colony. In France, during the year 1879, infants under 1 year died in the proportion of 15·7 per 100 births, or a higher rate than in the United Kingdom or any of its divisions. In the urban districts of France the proportion was 17·5, and in the rural districts 15·0, per 100 births. The percentage of illegitimate infants who died was 29·8, whilst that of legitimate infants was only 14·7.*

Infantile
mortality in
Melbourne
and
country.

619. The infantile mortality of large towns is naturally always above that in country districts. Thus the deaths at under 1 year of age in Melbourne and suburbs (Greater Melbourne) during the fourteen years ended with 1886 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 fourteen years named :—

* See Mons. E. Cheysson's paper on the mortality of infants, *Journal de la Société de Statistique de Paris* for January, 1883, page 7.

INFANTILE MORTALITY IN AND OUTSIDE OF GREATER MELBOURNE, 1873 TO 1886.

Year.	Births.	Deaths at under 1 Year of Age.		Births.	Deaths at under 1 Year of Age.	
		Total Number.	Number to 100 Births.		Total Number.	Number to 100 Births.
	Greater Melbourne.			Victoria, outside Greater 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	16·61	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
1884 ...	10,911	1,832	16·79	17,939	1,449	8·08
1885 ...	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
Sums and means }	131,611	22,408	17·03	253,396	24,757	9·77

620. As compared with the births, the infantile mortality of Greater Melbourne is, on the average, higher than that of Portsmouth, London, Brighton, Bristol, Plymouth, or Wolverhampton, but is less than that of fourteen other English towns of which particulars are available. The following are the towns in question, arranged in order according to the infantile death rate prevailing within their respective limits; the town with the highest death rate being placed first, and that with the lowest last. It is a remarkable fact that a low infantile death rate prevails in London, whilst that in Liverpool is higher than in any other large town in England :—

Infantile mortality in English towns.

INFANTILE MORTALITY IN TWENTY TOWNS OF ENGLAND, 1870 TO 1879.

Deaths under 1 Year of Age to 100 Births.			Deaths under 1 Year of Age to 100 Births.		
Liverpool ...	...	22·2	Birmingham ...	...	17·7
Leicester ...	...	21·9	Sunderland ...	...	17·0
Leeds ...	...	19·5	Wolverhampton ...	...	16·9
Bradford ...	...	19·1	Plymouth ...	...	16·3
Norwich ...	...	19·1	Bristol ...	...	16·2
Manchester ...	...	19·0	Brighton ...	...	16·1
Salford ...	...	18·6	London ...	...	16·0
Nottingham ...	...	18·4	Portsmouth ...	...	14·4
Newcastle-on-Tyne ...	...	18·1			—
Sheffield ...	...	17·9			—
Oldham ...	...	17·9	Mean of towns named		17·4
Hull ...	...	17·8			—

621. In, or in connexion with the Women's* Hospital, Melbourne, 514 children were born alive during the year ended with 30th June, 1886,

Deaths of infants in Women's Hospital.

* Formerly known as the Lying-in Hospital.

and of these, 24, or about $4\frac{2}{3}$ per cent., died whilst under the care of the institution. In the previous two years, 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 proportion in the year under review is 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.

622. In the year 1886, deaths of male children under 5 years of age numbered 2,868, and deaths of female children under that age numbered 2,550—the former being in the proportion of about 33 per cent. and the latter of about 40 per cent. to the total number of deaths at all ages. These proportions are considerably 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 1886 and in each of the previous fifteen years:—

DEATHS OF CHILDREN UNDER 5 YEARS OF AGE, 1871 TO 1886.

Years.	Years of Age at Death (last birthday).					Total Deaths under 5 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	2,664	42·23
1873 ...	1,679	456	186	146	97	2,564	39·06
1874 ...	1,839	504	184	159	128	2,814	40·43
1875 ...	2,071	917	383	234	217	3,822	44·78
1876 ...	1,637	511	312	261	210	2,931	38·04
1877 ...	1,838	512	216	123	108	2,797	38·08
1878 ...	1,763	465	176	140	87	2,631	36·65
1879 ...	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	102	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

DEATHS OF CHILDREN UNDER 5 YEARS OF AGE, 1871 TO 1886—*continued.*

Years.	Years of Age at Death (last birthday).					Total Deaths under 5 Years.	
	0.	1.	2.	3.	4.	Number.	Proportion per 100 Deaths at All Ages.
FEMALES.							
1871 ...	1,404	413	136	94	68	2,115	51.93
1872 ...	1,533	473	155	106	94	2,361	52.20
1873 ...	1,502	427	160	132	119	2,340	47.41
1874 ...	1,502	472	171	135	99	2,379	45.58
1875 ...	1,740	864	408	256	169	3,437	51.22
1876 ...	1,343	469	275	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	43.22
1879 ...	1,402	353	156	100	89	2,100	41.28
1880 ...	1,436	386	143	89	51	2,105	41.75
1881 ...	1,423	331	124	95	65	2,038	38.61
Means ...	1,477	468	191	135	103	2,374	45.93
1882 ...	1,673	358	121	94	86	2,332	40.67
1883 ...	1,448	310	125	86	68	2,037	36.40
1884 ...	1,428	423	182	128	87	2,248	38.56
1885 ...	1,725	370	125	92	75	2,387	39.36
1886 ...	1,797	460	155	76	62	2,550	40.00

623. 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 1886, the mortality of boys under 5 amounted to 33 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 did the former exceed 45 per cent., or the latter exceed 53 per cent., of that mortality. The epidemic period, the centre of which was 1875, is easily recognised by the increased mortality which occurred thereat.

More boys die than girls.

624. The average number of male and female children at each year 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 of children under 5 and their deaths.

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

Age last Birthday.	Males.				Females.			
	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 ...	12,152	1,775	65·07	146·07 *	11,809	1,477	62·22	125·07 *
1 ...	11,228	494	18·11	43·99	11,004	468	19·71	42·53
2 ...	11,943	200	7·33	16·75	11,635	191	8·04	16·42
3 ...	11,807	144	5·28	12·20	11,469	135	5·69	11·77
4 ...	11,261	115	4·21	10·21	11,138	103	4·34	9·25
Total ...	58,391	2,728	100·00	46·72	57,055	2,374	100·00	41·61

Proportion of children dying annually.

625. 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 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.

Proportion of infants dying annually.

626. Of every 1,000 boys under 1 year of age, 146, and of every 1,000 girls under 1 year of age, 125, died annually. These are larger 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.†

More boys died than girls.

627. In proportion to their respective numbers in the population, more boys than girls died at every year of age, the difference per 1,000 living being as much as 21 at under 1,‡ but only about 1½ at from 1 to 2, and less than 1 at subsequent ages.

Boys and girls dying under 1.

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

Proportion of deaths of children at each age.

629. Of the whole number of children who died before they attained the age of 5, nearly two-thirds, viz., 65 per cent. of the boys 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.

* These results, being based upon infants living instead of births, are naturally in excess of those in total lines of last column of table following paragraph 610 ante.

† See table following paragraph 610 ante.

‡ See also paragraph 611 ante.

630. It results from actuarial calculations, based upon the figures in this and a previous table,* that of every 20,000 boys and girls in 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 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.

Probable mortality of children under 5.

631. The persons who died at the age of 80 or upwards numbered 517 in 1886, as against 487 in 1885, 378 in 1884, and 355 in 1883. Those in 1886 consisted of 309 males and 208 females. Twenty-three of the males and 25 of the females had passed the age of 90, and 1 of the males and 3 of the females had passed the age of 100. The following are the exact registered ages of such persons in the last sixteen years:—

Deaths of octogenarians.

DEATHS OF OCTOGENARIANS, 1871 TO 1886.

Years of Age.	Year 1886.		Year 1885.		Five Years, 1882-86.		Eleven Years, 1871-81.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
80 ...	55	26	52	27	221	141	253	144
81 ...	24	29	30	14	120	88	135	98
82 ...	38	20	29	18	182	93	119	97
83 ...	24	10	32	16	128	77	101	75
84 ...	38	22	28	23	141	105	115	79
85 ...	31	25	38	30	120	96	91	70
86 ...	27	18	18	14	80	58	63	61
87 ...	24	7	13	13	52	41	65	46
88 ...	12	14	10	5	45	41	48	38
89 ...	5	5	10	9	24	31	35	26
90 ...	8	7	4	9	30	26	26	37
91 ...	7	5	3	4	17	12	10	16
92 ...	4	2	8	2	17	13	18	18
93 ...	4	6	1	5	11	19	9	8
94 ...	2	2	3	2	13	8	14	8
95 ...	2	3	1	...	7	7	16	9
96 ...	1	1	...	1	3	3	11	4
97 ...	1	2	...	1	2	4	3	4
98 ...	1	1	3	2	4	5	5	2
99 ...	...	...	1	1	1	4	8	...
100 ...	...	1	1	1	6	3	2	5
101 ...	...	...	...	...	1	1	1	2
102 ...	...	1	1	...	3	1	3	...
103 ...	1	...	...	...	3	1	1	2
104 ...	...	...	2	...	2	...	2	1
105 ...	...	1	...	1	...	1	2	...
106 ...	...	...	...	...	3	1	...	1
110 ...	...	...	...	...	...	...	...	1
111 ...	...	...	1	...	1	...	...	...
114 ...	...	...	...	...	...	...	...	1
Unspecified	...	...	...	...	...	...	135†	98†
Total	309	208	289	198	1,237	880	1,291	951

* See paragraph 614, also table following paragraph 610, ante, from which probable deaths at under 1 year of age have been deduced. Probability of deaths at other ages under 5 has been calculated from the numbers in the last table.

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

Deaths of octogenarians, 1881 to 1885.

632. In the 5 years ended with 1886, 1,237 males and 880 females died in Victoria at the age of 80 or upwards. The deaths of males and females at all ages during the same period numbered 39,860 and 29,601 respectively, therefore 1 male in every 32, and 1 female in every 34, lived to be upwards of 80 years of age. In the same period, 124 of the males, or 1 in 321, and 109 of the females, or 1 in 271, lived to be 90 years of age or upwards; and 19 of the males, or 1 in 2,098, and 8 of the females, or 1 in 3,700, lived to be upwards of 100 years of age. Owing to the rapidly increasing proportion of old people in the 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 80 years of age; only 1 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 of 100 years of age.

Average age at death.

633. The average age at death in 1886 was 30·79 years, or nearly 30 years 10 months. For males the average age was 33·32 years, or 33 years and 4 months, and for females, 27·40 years, or 27 years and 5 months. Until 1882, the average age at which both males and females die in Victoria had a tendency to advance from year to year, but since then it has remained tolerably steady, as will be seen by the following figures:—

AVERAGE AGE AT DEATH IN VICTORIA.

				Males.	Females.	
				Years.	Years.	
23 years—1852 to 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	...	...	...	32·63	...	25·98
„ 1882	...	...	...	32·04	...	26·58
„ 1883	...	...	...	33·13	...	27·55
„ 1884	...	...	...	32·24	...	27·50
„ 1885	...	...	...	33·48	...	27·52
„ 1886	...	...	...	33·32	...	27·40

Expectation of life in Victoria and England.

634. 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 life—technically 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 recently constructed 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.

635. The causes of death in England, prior to 1881, and in Victoria and the other Australian colonies, until quite recently, were arranged in classes and orders, according to the system proposed by the late Dr. William Farr, C.B., F.R.S., then of the General Register Office, London, in conjunction with Dr. Marc d’Espine, and first made public by the former in his report, dated 15th February, 1856, to the International Statistical Congress held in Paris in 1855–6. The steps which led up to this classification were thus described by Dr. Farr in his report on the causes of death in 1875* addressed to the Registrar-General of England:—

Classifica-
tion of
causes of
death.

“In casting about for a classification, it struck me that it should have special reference to the causation and prevention of death; and that would be most effectually accomplished by making three distinct groups of (1) deaths by epidemic, endemic, and contagious diseases; (2) deaths by sporadic diseases; and (3) deaths by evident external causes. This classification was framed and used in forming the abstracts of causes of death for 1837.

“After more than three years’ experience, I discussed the principles of nosological nomenclature, and drew up the statistical nosology on the same basis as before, but with some extensions and improvements, the following being the grouping adopted:—

- (1.) *Epidemic, endemic, and contagious diseases.*
- (2.) *Sporadic diseases of uncertain or variable seat.*
- (3.) *Sporadic diseases of special systems and organs.*
- (4.) *External causes: Poisoning, asphyxia, injuries.*

“This classification was in use with little alteration until I was requested by the International Statistical Congress, in conjunction with Dr. Marc d’Espine, to frame a project based on this resolution, passed at Brussels: ‘*Il y a lieu de former une nomenclature uniforme des causes de décès applicable à tous les pays.*’ My report was presented to the Congress convened by the French Government at Paris, and appears in the Appendix to the Registrar-General’s 16th Annual Report (published in 1856). Profiting by experience and by criticism, I carefully revised the English classification, and submitted it in proof to the most eminent physicians, surgeons, and statisticians of England, Scotland, and Ireland, to whom I was indebted for many valuable suggestions. The causes of death were thus definitely divided into five classes, and the classes were further subdivided into twenty-three new orders.”

* See 38th Report of the Registrar-General of England, page 227 *et seq.*

636. In the year after Dr. Farr's classification was published, the matter of a universal system of classification of diseases was considered by the Royal College of Physicians, London, who appointed out of their own body a committee, consisting of 18 members, to deal with the subject, which number was subsequently increased, by the addition of representative men throughout the United Kingdom, to 51 in all. It appears that the meetings of this committee were suspended in 1858 in consequence of the passing of the Medical Act in that year, and were not resumed until 1863, whilst the classification itself was not published until 1869. This classification is based on *anatomical* considerations, and being intended to become universal, the names of all diseases are given in five languages, viz.:—Latin, English, French, German, and Italian. It is, moreover, subject to decennial revision, and accordingly* the first revision began to be considered in 1880, and the result was duly published in 1885.† The revision committee consisted altogether of about 41 members, who, with few exceptions, were different individuals from those who completed the original classification 16 years previously. Several important changes were made in the revised edition, in the names and classification of certain diseases, partly with a view of making the classification more conformable to an etiological basis. The following extract from the preface to the second edition of this Nomenclature will give some idea of the aims and method of the classification:—

“The perfecting the statistical registration of diseases is the object of our undertaking. This object has certainly not been as yet attained. No complete statistical registration of diseases has been attempted. Failing completeness, we have to note the existence of several important departments of registration having, individually, distinct objects. The Registrar-General's Department tabulates deaths and causes of death; the Army and Navy Medical Departments tabulate diseases as well as deaths occurring in the two services; under the Local Government Board a certain regard is had to the prevalence of diseases in various parts of the kingdom. The inquiries conducted by these authorities have, in addition to their statistical value, a common etiological intent. The reports of the registrars of hospitals and of medical officers of infirmaries, on the other hand, being more particularly constructed to further the study of disease, deal chiefly with the distribution of morbid processes within the body, and, in estimating the fatality of diseases, seek rather to find the proportion of deaths to attacks than the proportion of the number of attacks or deaths to the population.

“The complexity of the arrangement by which the nomenclature should be fitted to these several purposes grows at each step. Deaths are, in at least the final reports of the Registrar-General, recorded under one name only—under the name of that disease which is the most obvious cause, whether ultimate or proximate. The registration of the Army and Navy Medical Departments, in

* The work is entitled:—“The Nomenclature of Diseases, drawn up by a Joint Committee appointed by the Royal College of Physicians of London.” London: Printed for the Royal College of Physicians, 1869.

† “Nomenclature of Diseases,” second edition, being the first revision. London: Harrison and Sons, 1885.

recording sickness as well as deaths, calls for many more names. There are many diseases, skin-disease for example, which are not likely to be returned as causes of death, and these must be provided for. In the ultimate returns of these departments, as in the Registrar-General's, each case comes under one name only, so that one kind of classification will meet the requirements of both registrations, and the only real difference is numerical. But the registration of hospitals and allied institutions takes note equally of ultimate and proximate causes of death, endeavours to state the complications of diseases, and seeks alike in fatal and non-fatal sickness to show the distribution of morbid processes among the organs of the body. Instead of simple returns under one name for each individual, ill or dead, there is required a, commonly, multiple return for each disease or morbid process, as affecting several parts at once, or for each organ as the seat of more than one nameable process.

"Keeping before us the necessary co-existence of these two dissimilar methods, we have endeavoured to make such arrangements as may serve each. But regarding the infinitely greater numerical importance and the public claims of the former, we have drawn our main lines of classification with a preponderant subordination to its objects.

* * * * *

"Bearing in mind the needs of the Registrar-General, and the suggestions of the United States National Board of Health, we have drawn up a classification of this part of the nomenclature on the basis of etiology. In the first place we have established four groups, viz.:—

- A. Diseases dependent on morbid poisons (specific febrile diseases).
- B. Diseases dependent on external agents other than morbid poisons.
- C. Developmental diseases.
- D. Not classified, or miscellaneous diseases.

Within these groups we have, by further division into sub-groups, indicated several closer alliances of causal relation.

"Group A. contains five sub-groups. The first and most typical comprehends the exanthemata, with other specific febrile diseases closely resembling them; the second, malarial fevers; the third, septic diseases; the fourth venereal diseases; the fifth, febrile diseases communicable from animals to man.

"Group B contains four sub-groups of diseases produced by parasites, poisons, injuries, and errors of diet respectively.

"Group C is not subdivided.

"In Group D lines are used to indicate alliances or isolation.

"No names are proposed for the sub-groups."

637. In England, prior to 1881, while Dr. Farr's classification was used for general purposes, the deaths for all England were also classified according to the nomenclature of the Royal College of Physicians; but as the use of the two systems was found cumbersome and inconvenient, it was decided by the present Registrar-General of England to substitute a new classification, based on the old one, but following also as closely as possible the lines laid down by the Royal College of Physicians.* The principles which guided him in framing the classification are thus described by the Registrar-General †:—

New classification adopted in England.

"It was decided to adopt a form of classification which should follow the lines thus laid down by the chief medical authority in the country as nearly as might be, considering that neither the things to be classified nor the objects of the

* See 44th Report of the Registrar-General of England, pp. xviii to xx. London, 1883: Eyre and Spottiswoode.

† The change of classification was made after due consultation with the Registrar-General for Ireland, and it was agreed that the same system should be followed in both countries.

classification were precisely the same, and that limitation of space would necessarily involve some considerable shortening of the full college list. In the first place, the college classification includes all varieties of morbid affections, serious or slight, and of these the majority are never fatal, and therefore never appear among the causes of death, with which alone the General Register Office has to deal. On the other hand, a very large number of deaths are ascribed on the certificates to causes which are not recognised by the college as distinct diseases, but are vague, indeterminate, names, equally applicable to several distinct ailments. If the Royal College of Physicians, besides providing an authoritative nomenclature of diseases, could also prevail on medical men to use no other terms in certifying as to causes of death than those thus sanctioned, the tabulation of deaths would be carried out with much greater precision, and in a much more satisfactory manner, than is possible with the present lax use of medical terms. As to the careless manner in which the causes of death are too often stated in certificates, some observations will have to be made presently. For the present purpose it is sufficient to have pointed out that, while the college classification is of diseases, the classification of the General Register Office must be of *assigned* causes of death, and that these are far from being one and the same thing. Secondly, the objects aimed at by the College of Physicians and by the General Register Office in their classifications are not precisely the same. The classification of the college is, in the main, pathological, but the classification of the Register Office, intended, as it mainly is, for the use of those engaged in devising methods of prevention, should, so far as possible, be etiological. This difference of object especially affects the classification of injuries. The college classifies these by their nature and position, but takes no cognizance of the cause to which they were due. A man has, let us say, a cut on the head, which lays bare the bone; this is classified by the college list as a 'scalp-wound, bone exposed,' and there is an end of the matter. Whether the wound was accidental, or homicidal, or self-inflicted, is, of course, from the purely medical point of view, a matter of complete indifference. But this consideration, pathologically so unimportant, is practically the only one, or at any rate the chief one, that is of interest from any other point of view than the strictly medical. How many persons are murdered, how many commit suicide, how many meet their deaths from accidents of various kinds, are points of much more importance to the general public and to those who are studying how to increase the security of life than how many die from injuries to this or that distinct part of the body, or from this or that special kind of wound.

"The college, again, give no names to their groups or sub-groups of diseases. To follow this example would, however, cause great practical inconvenience in an office where more than half-a-million of deaths have to be sorted out annually, and where the various groups and sub-groups have repeatedly to be referred to and spoken of in some way or other. Names, therefore, have been attached to the several groups and sub-groups, and, in selecting these, regard has of course been paid, so far as possible, to former usage in the annual reports. Doubtless some of the names thus given are open to considerable criticism, especially on the part of those who expect that a name shall not serve merely as a convenient distinguishing mark, but shall express with unexceptional accuracy the nature of the thing or things to which it is attached. When such more suitable names shall have been found, it will be easy to substitute them for those now adopted, which must, therefore, be looked on as merely provisional.

"Very probably there may be some other small points in which the classification now adopted for the annual reports may, for the sake of convenience or of brevity, be somewhat different from that of the College of Physicians. But speaking generally, and with the exceptions already mentioned, the lines laid down by the college have been followed throughout.

"One of the most important uses for a classification of deaths by their alleged causes, when it has been carried out year after year for a considerable period, is that it enables those who are engaged in preventive medicine, or who are studying the natural history of diseases, to compare the mortality from each cause in successive years, and thus to test, in some measure, the effect of sanitary interference, of climatic differences, and of other agencies by which the prevalence of diseases may be affected. It is, of course, impossible to make any notable change in the system of classification without interfering, more or less, with the possibility of such serial comparisons. It may, however, be noted that even when the same mode of classification is maintained throughout, without any modification whatsoever, large allowances have to be made for the changing fashion or caprices of medical nomenclature. There are times, for instance, to give a single

example, when the ordinary medical attendant designates all deaths from vaguely diagnosed affections of the respiratory organs as bronchitis, and other times when he prefers to designate them all as pneumonia. Allowance has also to be made for the greater precision in diagnosis which the advance of medical science brings about, and which causes a constant increase in the number of deaths ascribed to definite causes at the expense of deaths of which the causes are indefinitely described.

“Under these circumstances, it may be laid down as a general rule that the serial comparison of mortality from any specified cause in successive years is but of little value, unless the particular disease concerning which the investigation is made be some well-marked form, and, such as can be readily recognised by the ordinary practitioner, or unless the inquiry relate, not to some one special disease, but to some large natural group of diseases taken together, such as diseases of the nervous system, or diseases of the respiratory organs. Statistics must not be pressed into services to which the imperfection of the data on which they are based renders them inadequate.”

638. The following are the main differences between the old and new systems of classification:—Class I., entitled “Zymotic Diseases” under the old classification, is now described as “Specific Febrile or Zymotic Diseases”; moreover, “Parasitic and Dietic Diseases” have been excised therefrom, and now form independent classes (II. and III.); the original “Miasmatic Diseases” (Class I., Order 1) have been divided into four sub-classes, viz., “Miasmatic,” “Diarrhoeal,” “Malarial,” and “Septic” diseases—the last-named sub-class including such complaints as erysipelas, pyæmia, puerperal fever, &c. “Constitutional Diseases” (Class IV., new classification) combines under one head the complaints formerly placed in the same class (Class II., old classification) under Order 1, “Diathetic Diseases,” and Order 2, “Tubercular Diseases,” with the exception of dropsy, mortification, tumor, polypus, and abscess, which are transferred to Class VIII., a new class, entitled “Ill-defined and Not Specified Causes,” whilst a few other complaints are added to the class “Constitutional Diseases,” viz., rheumatism and purpura from the old Class I. (“Zymotic Diseases”), and diabetes mellitus from the old Class III. (“Local Diseases”). Under the head of “Local Diseases” (formerly Class III., now Class VI.), besides the original divisions, viz., diseases of the brain, heart, lungs, bowels, kidneys, generative organs, bones and muscles, and skin, which are still preserved, two new sub-classes are created, viz., Sub-class 2, “Diseases of the Organs of Special Sense” (ear, nose, and eye), and Sub-class 6, “Diseases of the Lymphatic System and Ductless Glands,” and at the same time Sub-class 8, “Diseases of the Organs of Generation,” is made more comprehensive by the addition of paramenia, formerly included with “Developmental Diseases” in the old Class IV.; whilst diseases of parturition, also formerly included with “Developmental Diseases,” are

Main differences between old and new classifications.

now classified with "Local Diseases," immediately after "Diseases of Organs of Generation." The old Class IV., "Developmental Diseases," has been reduced by the transfer of dentition to Sub-class 5, paramenia to Sub-class 8, and childbirth to Sub-class 9, of the new Class VI., "Local Diseases"; and of atrophy and debility to the new Class VIII., "Ill-defined and Not Specified Causes." The last-named class includes such indefinite affections as dropsy, tumor and polypus, mortification, and abscess, formerly classed under the head of "Constitutional Diseases"; and atrophy and debility, formerly classed under that of "Developmental Diseases." The class "Violent Deaths" remains unaltered. In regard to other points of minor importance, it may be mentioned that the names of some of the diseases have been changed, such as "Typhoid" to "Enteric," "Metria" to "Puerperal Fever," "Hydrocephalus" to "Tubercular Meningitis," &c.; and that the positions of many have been much altered, thus—rheumatism, formerly classed as a "Miasmatic Disease," is now found under the head of "Constitutional Diseases"; quinsy, croup, and carbuncle, also formerly classed as "Miasmatic Diseases," are now placed with "Diseases of the Digestive System" (Sub-class 5), of the "Respiratory System" (Sub-class 4), and of the "Integumentary System" (Sub-class 11), respectively; in Class VI., "Local Diseases," dentition, formerly placed under "Developmental Diseases," has been transferred to "Diseases of the Digestive System" (Class VI., Order 5); diabetes mellitus, a disease of the urinary organs, has been transferred to "Constitutional Diseases" (Class IV.), &c. Many of the original comprehensive heads have been detailed into the various complaints of which they were respectively composed, this being the case especially in regard to diseases of the brain, heart, stomach, and reproductive organs; whilst a few other diseases are now specially distinguished which were formerly included under various heads—such as cerebro-spinal fever, pyæmia and septicæmia, anæmia, chlorosis and leucocythæmia, uræmia, &c. Then, again, in some cases, complaints formerly distinguished individually have disappeared from the list, having been taken into groups, or considered to be sufficiently described by the names of other affections; amongst these are congestion of the lungs, hepatitis, jaundice, pancreas disease, and gastritis.

639. The new classification was first adopted in England in 1881, and was used for the first time in Victoria in 1886. The returns of

causes of death for several back years, however, have been re-arranged so as to agree as far as possible with the new system, so that in the present work the new classification alone might be dealt with.

640. A Nosological Index was compiled by the present writer about 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.*

New Nosological Index.

641. From the date of its publication until the adoption of the new classification in 1886 the former Index has 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 are now adopting the new system, and its use will probably soon become general throughout the group. To all the colonies adopting this system the present Index will be found as indispensable as the former one proved itself to be during the last twenty-five years in connexion with the system which has now been abandoned.

Victorian Index in use throughout Australasia.

642. The following table shows the causes of death in classified arrangement; the total number and the number of Chinese and Aborigines who died from each cause during 1886, also the total number who died from each cause during the five years ended with 1885 and during the ten years ended with 1880:—

Causes of death classified

* A copy of the new Nosological Index will be found in Appendix D *post*.

CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT.

(Ten Years: 1871 to 1880; 1881 to 1885; and Year 1886.)

Class.	Sub-Class.	Causes of Death.*	Number of Deaths.				
			Ten Years: 1871-1880	Five Years: 1881-1885	Year 1886.		
					Total. †	Chinese.	Aborigines.
		All causes	122,570	66,811	14,952	166	26
		CLASSES.					
I.	...	SPECIFIC FEBRILE OR ZYMOTIC DISEASES:—Zymotici (ζύμη, leaven). Diseases of the whole body, dependent on morbid poisons.	28,430	10,447	2,278	5	4
II.	...	PARASITIC DISEASES:—Parasitici (παράσιτος, parasite) Diseases dependent on animal or vegetable parasites.	734	391	76	...	...
III.	...	DIETIC DISEASES:—Dietici (δίαιτα, way of life; diet) Diseases produced by errors of diet.	1,979	1,124	179	1	...
IV.	...	CONSTITUTIONAL DISEASES:—Cachectici (καχεξία, bad habit of body). This class, according to the nomenclature 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 definition being as follows:—"Sporadic diseases; affecting several organs in which new morbid products are often deposited; sometimes hereditary."	17,205	10,617	2,383	43	4
V.	...	DEVELOPMENTAL DISEASES:—Metamorphici (μεταμόρφωσις, change of form). Special diseases, the incidental result of the formative and nutritive processes.	6,042	4,431	1,051	7	3
VI.	...	LOCAL DISEASES:—Monorganici (μόνος, alone, without others; ὄργανον, organ). Sporadic diseases, in which the functions of particular organs or systems are disturbed or obliterated, with or without inflammation.	51,209	30,575	6,846	81	6
VII.	...	VIOLENT DISEASES OR DEATHS:—Thanatici (θάνατοι, 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	942	18	3
VIII.	...	ILL-DEFINED AND NOT SPECIFIED CAUSES:— This group includes several diseases which were formerly classed under specific heads, such as dropsy, debility, tumor, abscess, &c.	8,364	4,983	1,197	11	6

* 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; 1881 to 1885; and Year 1886.)

Class.	Sub-Class.	Causes of Death.	Number of Deaths.				
			Ten Years: 1871-1880	Five Years: 1881-1885	Year 1886.		
					Total.*	Chinese.	Aborigines.
SUB-CLASSES.							
I.	1	Miasmatic diseases ...	15,459	4,588	917	2	3
	2	Diarrhœal diseases ...	11,036	4,886	1,127	3	1
	3	Malarial diseases ...	213	39	13	...	...
	4	Zoogenous diseases ...	1	...	4	...	...
	5	Venereal diseases ...	377	218	40	...	...
	6	Septic diseases ...	1,344	716	177	...	...
II.	...	Parasitic diseases ...	734	391	76	...	...
III.	...	Dietic diseases ...	1,979	1,124	179	1	...
IV.	...	Constitutional diseases ...	17,205	10,617	2,383	43	4
V.	...	Developmental diseases ...	6,042	4,431	1,051	7	3
VI.	1	Diseases of the nervous system ...	13,532	7,414	1,614	7	4
	2	Diseases of the organs of special sense	?	?	14	...	...
	3	Diseases of the circulatory system...	6,804	4,453	989	17	...
	4	Diseases of the respiratory system...	15,534	9,966	2,245	36	2
	5	Diseases of the digestive system ...	11,240	6,135	1,382	15	...
	6	Diseases of the lymphatic system and ductless glands	44	23	14	...	...
	7	Diseases of the urinary system ...	1,875	1,511	364	4	...
	8	Diseases of the organs of generation	295	120	18	...	...
	9	Diseases of parturition ...	1,267	624	122	1	...
	10	Diseases of the organs of locomotion	290	137	36	...	...
	11	Diseases of the integumentary system	328	192	48	1	...
VII.	1	Accident or negligence ...	7,447	3,662	803	7	2
	2	Homicide ...	190	110	37	...	1
	3	Suicide ...	951	463	101	11	...
	4	Execution ...	19	8	1	...	...
VIII.	...	Ill-defined causes, or unspecified ...	8,364	4,983	1,197	11	6
DISEASES, ETC.							
I.	1	Small-pox ...	2	6	...	...	...
		Chicken-pox ...	13	6	2	...	...
		Measles ...	2,080	386	20	...	...
		Scarlet fever ...	4,101	282	14	...	...
		Influenza ...	276	162	19	...	...
		Whooping-cough ...	1,974	701	209	...	3
		Mumps ...	?	?	1	...	...
		Diphtheria † ...	3,040	681	121	...	...
		Cerebro-spinal fever ...	...	...	1	...	...
		Simple continued fever ...	3,973	2,364	7	2	...
		Typhoid (or enteric) fever ...					
	2	Cholera (simple) ...	523	263	106	...	...
		Diarrhœa ...	7,667	3,994	906	1	1
		Dysentery ...	2,846	629	115	2	...
	3	Remittent fever ...	169	25	6	...	...

* The Chinese and Aborigines are included in this column.

† See also Croup (VI. 4).

CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT—*continued.*

(10 Years: 1871 to 1880; 1881 to 1885; and Year 1886).

Class.	Sub-Class.	Causes of Death.	Number of Deaths.				
			Ten Years: 1871-1880	Five Years: 1881-1885	Year 1886.		
					Total *	Chinese.	Abori- gines.
DISEASES, ETC.— <i>continued.</i>							
I.	3	Ague	44	14	7	...	...
	4	Glanders	1	...	...	...	...
		Cow-pox and other effects of vac- cination	?	?	4	...	...
	5	Syphilis	286	178	31	...	...
		Gonorrhœa, stricture of the urethra	91	40	9	...	...
	6	Phagadæna	?	?	2	...	...
		Erysipelas	619	260	55	...	...
		Pyæmia, septicæmia	† 264	† 142	50	...	...
		Puerperal fever †	461	314	70	...	...
II.	...	Thrush	327	119	25	...	...
		Others from vegetable parasites	?	?	...	...	...
		Hydatids	379	268	51	...	...
		Others from animal parasites	28	4	...	...	...
III.	...	Starvation, want of breast-milk	1,322	726	69	1	...
		Scurvy	§	§	3	...	...
		Intemperance	646	394	107	...	...
		Other dietic diseases	11	4	...	...	...
IV.	...	Rheumatic fever, rheumatism of } heart	817	379	21	1	...
		Rheumatism } Gout } Rickets... .. } Cancer, malignant disease ... } Tabes mesenterica } Tubercular meningitis (acute hydro- cephalus)	133	80	17	...	...
		Phthisis	?	3	1	...	...
		Other forms of tuberculosis, scrofula, &c.	|| 2,957	|| 2,065	496	10	1
		Purpura, hæmorrhagic diathesis ...	723	484	141	...	...
		Anæmia, chlorosis, leucocythæmia ...	1,394	719	185	...	...
		Diabetes mellitus ††	10,155	6,428	1,375	32	3
		Other constitutional diseases ...	780	301	31	...	...
V.	...	Premature birth	¶ 100	¶ 44	13	...	...
		Atelectasis	**	**	10	...	...
		Cyanosis	¶¶ 146	¶¶ 114	29	...	...
		Spina bifida	?	?	10	...	...
		Imperforate anus	2,715	1,689	367	...	...
		Cleft palate, harelip	¶¶ 29	¶¶ 29	29	...	...
		Other congenital defects	203	115	29	...	...
		Old age	108	51	8	...	...
			289	122	4	...	...
			25	...	...	...	...
			2,727	2,454	584	7	3

* 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; 1881 to 1885; and Year 1886.)

Class.	Sub-Class.	Causes of Death.	Number of Deaths.				
			Ten Years: 1871-1880	Five Years: 1881-1885	Year 1886.		
					Total *	Chinese.	Aborigines.
DISEASES, ETC.—<i>continued.</i>							
VI.	1	Inflammation of brain or its membranes	2,383	1,249	295	...	1
		Apoplexy	2,750	1,674	367	3	...
		Softening of brain	†	†	91	...	...
		Hemiplegia, brain paralysis	1,596	968	152	3	1
		Paralysis, undefined			56	...	...
		Insanity (general paralysis of insane)			96	1	...
		Chorea	20	9	7	...	...
		Epilepsy	588	365	79	...	...
		Convulsions	3,390	1,454	333	...	2
		Laryngismus stridulus ... ..	?	?	...	...	...
		Idiopathic tetanus	2,805	1,695	5	...	...
		Paraplegia, diseases of spinal cord			48	...	...
		Other diseases of nervous system			85	...	...
	2	Otitis, otorrhœa	†	†	10	...	...
		Epistaxis and diseases of nose			4	...	...
		Ophthalmia and diseases of eye			...	...	...
	3	Endocarditis, valvular disease	377	229	133	3	...
		Pericarditis			34	1	...
		Hypertrophy of heart			25	1	...
		Angina pectoris	‡	‡	14	...	...
		Syncope	785	322	41	...	...
		Aneurism			71	...	...
		Senile gangrene			§	§	7
		Embolism, thrombosis	5,642	3,902	22	1	...
		Phlebitis			4	...	...
		Varicose veins			2	...	...
		Other diseases of the circulatory system			636	11	...
	4	Laryngitis	359	253	49	...	...
		Croup †	1,897	795	160	...	...
		Other diseases of larynx and trachea	?	?	8	...	...
		Asthma, emphysema	392	261	71	2	...
		Bronchitis	4,588	3,039	688	8	1
		Pneumonia	5,077	3,769	903	18	1
		Congestion of the lungs	1,812	1,049	186	...	...
		Pleurisy	811	540	120	2	...
		Others	598	260	60	6	...
	5	Stomatitis	¶ 3	¶ 2	15	...	...
		Dentition	1,469	464	158	...	...
		Sore throat, quinsy	153	42	15	...	...

* 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 stomach

CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT—*continued.*

(10 Years: 1871 to 1880; 1881 to 1885; and Year 1886.)

Class.	Sub-Class.	Causes of Death.	Number of Deaths.						
			Ten Years: 1871-1880	Five Years: 1881-1885	Year 1886.				
					Total. *	Chinese.	Aborigines.		
		DISEASES, ETC.— <i>continued.</i>							
VI.	5	Dyspepsia	1,971	1,294	25	...	...
		Hæmatemesis			11	...	...
		Melæna			4	1	...		
		Diseases of stomach			270	1	...		
		Enteritis			2,134	1,137	216	1	...
		Ulceration of intestine			160	121	13
		Ileus, obstruction of intestine			424	244	55
		Stricture or strangulation of intestine			44	35	13
		Intussusception of intestine			93	60	10	1	...
		Hernia			191	139	23
		Fistula			17	8	2
		Peritonitis			771	442	110	3	...
		Ascites			184	58	13
		Gallstones	3,623	2,084	5	...	...
		Cirrhosis of liver			103	...	...
		Other diseases of liver			317	8	...		
		Other diseases of the digestive system			3	5	4
	6	Diseases of lymphatic system	?	?	5	...	...
		Disease of spleen	44	19	5	...	...
		Bronchocele	?	4	3	...	...
		Addison's disease	†	†	1	...	...
	7	Nephritis	218	182	47	1	...		
		Bright's disease	749	777	179	...	...
		Uræmia	†	†	27	1	...		
		Suppression of urine	29	32	5	...	...
		Calculus	48	50	7	...	...
		Hæmaturia	†	†	3	...	...
		Diseases of bladder and prostate	203	140	51	1	...		
		Other diseases of the urinary system	628	330	45	1	...		
	8	Ovarian disease	44	33	1	...	...
		Diseases of the uterus and vagina	170	58	14	...	...
		Disorders of menstruation	52	27	2	...	...
		Pelvic abscess ... ..	†	†	...	...	...
		Perineal abscess ... ..	†	†	...	...	...
		Diseases of the testes, penis, scrotum, &c.	29	2	1	...	...
	9	Abortion, miscarriage	1,267	624	13	...	...
		Puerperal mania... ..			2	...	...
		Puerperal convulsions			13	...	...
		Placenta prævia, flooding			28	1	...		
		Phlegmasia dolens			2	...	...
		Other accidents of childbirth			64	...	...
	10	Caries, necrosis	§	§	13	...	...
		Arthritis, ostitis, periostitis	87	58	20	...	...
		Other diseases of the organs of locomotion	203	79	3	...	...

* 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.*

(Ten Years : 1871 to 1880; 1881 to 1885; and Year 1886.)

Class.	Sub-Class.	Causes of Death.	Number of Deaths.					
			Ten Years : 1871-1880	Five Years : 1881-1885	Year 1886.			
					Total.*	Chinese.	Aborigines.	
DISEASES, ETC.—<i>continued.</i>								
VI.	11	Carbuncle	37	27	13	...	...
		Phlegmon, cellulitis	20	4	3	...	...
		Lupus	†	†	2	...	...
		Ulcer, bed sore	86	59	8	...	...
		Eczema... ..	?	?	17	...	...
		Pemphigus ... ..	?	?	...	...	...
		Other diseases of the integumentary system	185	102	5	1	...	
VII.	1	Fractures, contusions	3,152	1,632	352	2	...	
		Wounds	262	124	31	...	...
		Burn, scald	885	434	87	1	1	
		Sunstroke	218	70	15	...	...
		Lightning	25	12	2	...	...
		Poison	178	93	24	2	...	
		Bite of snake or insect	37	18	4	...	...
		Drowning	1,937	933	198	2	...	
		Suffocation	625	283	54	...	...
		Otherwise	128	63	36	...	...
	2	Murder and manslaughter	190	110	37	...	1	
	3	Gunshot wounds	254	{	69	24
		Cut, stab			74	21	1	...
		Poison	188	71	13	...	...
		Drowning	217	95	12	...	...
		Hanging	256	138	26	10	...	
		Suicide by other means	36	16	5	...	...
	4	Judicial hanging... ..	19	8	1	...	...
VIII.	...	Dropsy	‡ 613	‡ 322	25	2	...	
		Debility, atrophy, inanition	§ 6,987	§ 4,279	1,049	7	5	
		Mortification	131	55	4	...	...
		Tumour	269	204	40	...	...
		Abscess	38	3	21	...	...
		Hæmorrhage ... ..	...	...	4	...	...
		Sudden (cause unascertained) ... ..	...	...	8	...	...
		<i>Causes not specified</i>	326	120	46	2	1	

643. The next table shows the same causes of death, arranged in the order of their fatality, during 1886, with the numbers who died 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 :—

* 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 1886.)

Order of Fatality.			Causes of Death.	Number of Deaths.*		
Ten Years: 1871-80.	Five Years: 1881-85.	Year 1886.		Ten Years: 1871-80.	Five Years: 1881-85.	Year 1886.
1	1	1	Phthisis	10,155	6,428	1,375
2	2	2	Diarrhœa	7,667	3,994	906
5	4	3	Pneumonia	5,077	3,769	903
3	5	4	Accidents	7,447	3,662	803
4	3	5	Heart diseases, &c. (exclusive of pericarditis and aneurism)	5,642	3,902	751
6	6	6	Bronchitis	4,588	3,039	688
16	7	7	Old age	2,727	2,454	584
8	8	8	Typhoid (or enteric) and simple continued fever	3,973	2,364	530
12	10	9	Cancer, malignant disease ...	2,957	2,065	496
9	9	10	Liver diseases	3,623	2,084	425
15	13	11	Apoplexy	2,750	1,674	367
17	12		Premature birth	2,715	1,689	367
10	14	12	Convulsions	3,390	1,454	333
22	15	13	Dyspepsia and other diseases of stomach	1,971	1,294	310
26	19	14	Hemiplegia, paralysis, insanity ...	1,596	968	304
18	16	15	Inflammation of brain or its membranes	2,383	1,249	295
19	17	16	Enteritis	2,134	1,137	216
21	25	17	Whooping-cough	1,974	701	209
25	20	18	Childbirth and puerperal fever ...	1,728	938	192
24	18	19	Congestion of the lungs	1,812	1,049	186
28	24	20	Tubercular meningitis (acute hydrocephalus)	1,394	719	185
36	22	21	Bright's disease	749	777	179
48	48	22	Endocarditis, valvular disease, pericarditis	377	229	167
23	21	23	Croup	1,897	795	160
27	30	24	Dentition	1,469	464	158
37	29	25	Tabes mesenterica	723	484	141
14	11	26	Diseases of spinal cord and other diseases of nervous system	2,805	1,695	138
11	26	27	Diphtheria	3,040	681	121
32	28	28	Pleurisy	811	540	120
13	27	29	Dysentery	2,846	629	115
35	32	30	Peritonitis	771	442	110
38	33	31	Intemperance	646	394	107
44	43	32	Cholera (simple)	523	263	106
30	31	33	Suicide... ..	951	463	101
41	40	34	Malformation	600	288	100
...	...	35	Softening of brain	†	†	91
43	36	36	Epilepsy	588	365	79
31	35	37	Rheumatic fever and rheumatism...	817	379	75
46	44	38	Asthma, emphysema	392	261	71
33	38		Aneurism	785	322	71
29	23	39	Starvation, want of breast-milk ...	1,322	726	69
42	45	40	Diseases of the respiratory system not classed	598	260	60

* See notes to previous table.

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

CAUSES OF DEATH IN ORDER OF FATALITY—*continued.*

(10 Years: 1871 to 1880; 5 years: 1881-85; and Year 1886.)

Order of Fatality.			Causes of Death.	Number of Deaths.*		
Ten Years: 1871-80.	Five Years: 1881-85.	Year 1886.		Ten Years: 1871-80.	Five Years: 1881-85.	Year 1886.
45	47	41	Ileus, obstruction of intestine ...	424	244	55
40	45		Erysipelas ...	619	260	55
55	53	42	Diseases of bladder and prostate ...	203	140	51
47	42		Hydatids ...	379	268	51
53	52	43	Pyæmia, septicæmia ...	264	142	50
49	46	44	Laryngitis ...	359	253	49
54	49	45	Nephritis ...	218	182	47
39	37	46	Diseases of the urinary system not classed	628	330	45
57	58	47	Murder and manslaughter ...	190	110	37
51	50	48	Syphilis ...	286	178	31
34	39		Other forms of tuberculosis, scrofula, &c.	780	301	31
64	57	49	Diabetes mellitus ...	146	114	29
...	...	50	Uræmia ...	?	?	27
50	56	51	Thrush ...	327	119	25
56	54	52	Hernia ...	191	139	23
69	64	53	Arthritis, ostitis, periostitis ...	87	58	20
20	34		Measles ...	2,080	386	20
52	51	54	Influenza ...	276	162	19
65	60	55	Gout ...	133	80	17
...	...		Eczema ...	?	?	17
83	81	56	Stomatitis ...	3	2	15
63	67		Sore throat, quinsy ...	153	42	15
60	64	57	Diseases of the uterus and vagina ...	170	58	14
...	...		Diseases of the eye and ear ...	?	?	14
7	41	58	Scarlet fever ...	4,101	282	14
74	71		Carbuncle ...	37	27	13
73	69	59	Stricture or strangulation of intestines	44	35	13
66	66		Purpura, hæmorrhagic diathesis ...	100	44	13
59	58	60	Ascites... ...	184	58	13
62	55		Ulceration of intestines ...	160	121	13
...	...	61	Caries, necrosis ...	?	?	13
67	62		Intussusception of intestine ...	93	60	10
...	...	62	Other constitutional diseases not classed	?	?	10
...	...		Anæmia, chlorosis, leucocythæmia	?	?	10
68	68	63	Gonorrhœa, stricture of the urethra	91	40	9
70	63		Ulcer, bed sore ...	86	59	8
...	...	64	Other diseases of larynx and trachea not classed	?	?	8
77	75		Chorea... ...	20	9	7
73	74	65	Ague ...	44	14	7
72	65		Calculus ...	48	50	7
61	72	66	Remittent fever... ...	169	25	6
73	73		Diseases of spleen ...	44	19	5
75	71	67	Suppression of urine ...	29	32	5
58	59		Diseases of the integumentary system not classed	185	102	5
...	...	68	Diseases of lymphatic system ...	?	?	5

* See notes to previous table.

CAUSES OF DEATH IN ORDER OF FATALITY—*continued.*

10 Years: 1871-80; 5 years: 1881-85; and Year 1886.

Order of Fatality.			Causes of Death.	Number of Deaths.*		
Ten Years: 1871-80.	Five Years: 1881-85.	Year 1886.		Ten Years: 1871-80.	Five Years: 1881-85.	Year 1886.
83	78	65	Diseases of the digestive system not classed	3	5	4
...	...		Cow-pox and other effects of vaccination	?	?	4
77	79	66	Phlegmon, cellulitis	20	4	3
...	79		Bronchocele	?	4	3
55	61	67	Diseases of the organs of locomotion not classed	203	79	3
...	...		Scurvy	?	?	3
...	...	68	Hæmaturia	?	?	3
80	77		Chicken-pox	13	6	2
79	76	67	Fistula	17	8	2
71	71		Disorders of menstruation	52	27	2
...	...	68	Phagedæna	?	?	2
...	...		Lupus	?	?	2
75	81	68	Diseases of testes, penis, scrotum, &c.	29	2	1
...	80		Rickets	?	3	1
78	76	68	Judicial hanging	19	8	1
73	70		Ovarian disease	44	33	1
...	...	68	Mumps	?	?	1
...	...		Cerebro-spinal fever	?	?	1
...	...	68	Addison's disease	?	...	1
84	77		Small-pox	2	6	...
76	79	...	Other parasitic diseases	28	4	...
81	79	...	Other dietic diseases	11	4	...
85	...	...	Glanders	1	...	...
Deaths from well-defined causes ...				14,206	61,828	13,755
Deaths from "atrophy and debility" and other ill-defined and unspecified causes				8,364	4,983	1,197
Deaths from all causes				122,570	66,811	14,952

Death rate from various causes in Victoria and England.

644. 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 years 1886, 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:—

* See notes to previous table.

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

Class.	Sub-Class.	Causes of Death.	Number of Annual Deaths per 100,000 of Mean Population.			
			Victoria.			England and Wales.
			Year 1886.	Average of 5 Years: 1881-1885.	Average of 10 Years: 1871 to 1880.	Average of 5 Years: 1876 to 1880.
		All causes	1,514·75	1,464·31	1,538·01	2,081·74
		CLASSES.				
I.	...	Specific febrile or zymotic diseases	230·78	228·97	356·74	332·00
II.	...	Parasitic diseases	7·70	8·57	9·21	5·74
III.	...	Dietic diseases	18·13	24·64	24·83	6·72
IV.	...	Constitutional diseases ...	241·42	232·70	215·89	358·26
V.	...	Developmental diseases ...	106·47	97·11	75·82	163·14
VI.	...	Local diseases	693·55	670·12	642·57	1,004·80
VII.	...	Violent deaths	95·43	92·99	108·00	72·00
VIII.	...	Ill-defined and not specified causes	121·27	109·21	104·95	139·08
		SUB-CLASSES AND DISEASES.				
I.	1	Miasmatic diseases	92·90	100·56	193·98	219·26
		Measles	2·03	8·47	26·10	38·54
		Scarlatina	1·42	6·18	51·46	68·04
		Diphtheria *	12·26	14·93	38·15	12·18
		Whooping-cough	21·17	15·36	24·77	52·76
		Typhoid or enteric fever, &c.	52·98	51·81	49·85	34·66
	2	Diarrhœal diseases	114·17	107·09	138·48	85·40
		Diarrhœa	91·78	87·54	96·21	} 83·36
		Dysentery	11·65	13·79	35·71	
	3	Malarial diseases	1·32	·85	2·67	·74
	4	Zoogenous diseases	·41	...	·01	·36
	5	Venereal diseases	4·05	4·78	4·73	9·56
	6	Septic diseases	17·93	15·69	16·87	16·68
		Puerperal fever (see also Childbirth and Puerperal <i>infra</i>)	7·09	6·88	5·78	6·20
IV.	...	Constitutional diseases—				
		Cancer, malignant disease	50·25	45·26	37·10	49·60
		Phthisis	139·30	140·88	127·42	204·24
		Other tubercular and scrofulous diseases	36·17	32·96	36·35	77·78
V.	...	Developmental diseases—				
		Of children (premature birth or malformation)	47·31	43·33	41·60	55·80
		Of old age	59·16	53·78	34·22	107·34

* 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.

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

Class.	Sub-Class.	Causes of Death.	Number of Annual Deaths per 100,000 of Mean Population.			
			Victoria.			England and Wales.
			Year 1886.	Average of 5 Years 1881-1885.	Average of 10 Years: 1871 to 1880.	Average of 5 Years: 1876 to 1880.
VI.	...	SUB-CLASSES AND DISEASES— <i>continued.</i>				
	1	Diseases of the systems— Nervous (brain diseases, &c.)	163·51	162·50	169·80	277·80
	2	Organs of special sense (nose, ear, and eye diseases)	1·42	?	?	1·34
	3	Circulatory (heart diseases, &c.)	100·19	97·59	85·37	141·70
	4	Respiratory (lung diseases, &c.)*	227·44	218·43	194·92	395·50
	5	Digestive (stomach, bowel, liver diseases, &c.)	140·01	134·46	141·04	117·60
	6	Lymphatic, and ductless glands	1·42	·50	·55	1·26
	7	Urinary (kidney, bladder diseases, &c.)	36·88	33·12	23·53	37·50
	8	Generative (diseases of ovary, uterus, and vagina, &c.)	1·82	2·63	3·70	5·88
	9	Childbirth (see also Childbirth and Metria <i>infra</i>)	12·36	13·68	15·90	7·96
	10	Locomotive (arthritis, osteitis, &c.)	3·64	3·00	3·64	10·78
	11	Integumentary (carbuncle, phlegmon, ulcer, &c.)	4·86	4·21	4·12	7·48
VII.	1	Accident or negligence ...	81·35	80·26	93·45	63·12
	2	Homicide	3·75	2·41	2·38	1·40
	3	Suicide	10·23	10·15	11·93	7·38
	4	Execution	·10	·17	·24	·10
I. IV.	6 } 9 }	Childbirth and metria ...	19·45	20·55	21·68	14·16

NOTE.—See notes to table following paragraph 642 *ante*.

Diseases more fatal in Victoria than in England.

645. By means of the results shown in this table, it is found that, over a series of years, the mortality from the following causes is greater in Victoria than in England and Wales:—Diphtheria,† typhoid fever, diarrhoeal diseases, dietic diseases (including want of breast-milk and alcoholism), parasitic diseases (including thrush, hydatids, &c.);

* See footnote to preceding page.

† 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.

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.

646. It should be pointed out that under the altered nosological classification, now adopted for the first time in Victoria, the increased number of distinct diseases specified, and the numerous changes made in the grouping of diseases, have rendered it impossible to ascertain the number of deaths resulting from many diseases now stated separately, but formerly grouped with other complaints in such a way as to be no longer distinguishable; consequently, many of the classes, sub-classes, and diseases contain sometimes an excess above, and sometimes a deficiency below, the correct number, and, as a matter of course, the results cannot in such cases be strictly compared with those for 1886. Such discrepancies have, as far as possible, been pointed out in the foot-notes to a previous table, and it is believed it will be possible in most cases to institute a fair comparison.

New nosology prevents returns from being strictly comparable.

647. In 1886, 231 deaths per 100,000 of the population were set down to specific febrile or zymotic diseases, which number was slightly higher than the average of the previous five years, but one-third lower than the average of the decade ended with 1880, during portion of which period epidemics were prevalent. Of the deaths referred to, 93 per 100,000 persons living were set down to miasmatic diseases, 114 to diarrhoeal diseases, 18 to septic diseases, 4 to venereal diseases, and still smaller numbers to malarial and zoogenous diseases. Of miasmatic diseases, one which is almost invariably more fatal here than in England is typhoid fever, which caused as many as 53 deaths per 100,000 of the population, which was slightly above the average. Next to typhoid fever in point of fatality is whooping-cough, with 21 deaths per 100,000 in 1886, or nearly 50 per cent. above the average of the previous five years, but somewhat below the average of the decade 1871-80, and not half so fatal as in England; then diphtheria, with 12 deaths, the mortality from which has shown a considerable falling-off in the last six years as compared with several years prior to that period, but is still slightly higher than the average for England. As regards other miasmatic diseases, the mortality from measles has fallen off considerably since 1884; and the mortality from scarlatina has been for the last two years so low as scarcely to be worth mentioning, it having caused only $1\frac{1}{2}$ deaths per 100,000 living in 1886, as compared with an average of 6 in the previous five years, and as many as 51 in the ten years 1871-80. The mortality from diarrhoeal diseases—which

Specific febrile or zymotic diseases.

caused nearly one-half of the deaths from zymotic diseases, and nearly one-thirteenth of those from all causes—was somewhat above the average of the previous five years, but below that of the decade. These complaints press most hardly upon children under the age of five years. Septic diseases—which include pyæmia, septicæmia, erysipelas, and puerperal fever—were more than usually fatal in 1886; deaths from the last-named per 100,000 persons living having increased from $5\frac{3}{4}$ in the decade 1871-80, and nearly 7 in the five years 1881-85, to over 7 in the year under review. On examining the list of diseases arranged in order of fatality, it will be observed that two zymotic diseases occupy a prominent position, viz., diarrhœa and typhoid fever, which are, on the average, respectively the second and eighth most fatal of all diseases in Victoria; also that scarlatina and diphtheria, which occupied the high positions of seventh and eleventh place according to the average of the ten years 1871-80, have since fallen considerably, and now occupy only the fifty-seventh and twenty-seventh places respectively. As regards other zymotic diseases, the mortality from malarial diseases, such as ague and remittent fever, was much above, whilst that from venereal diseases was very slightly below, the average of the preceding five years.

Zymotic diseases, &c., in Australasian colonies.

648. The following is a statement of the number of deaths from 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 except Western Australia, respecting which no information is at hand. The colonies are placed in order according to the death rate from diseases of this class prevailing in each:—

ORDER OF COLONIES IN REFERENCE TO MORTALITY FROM
ZYMOTIC, PARASITIC, AND DIETIC DISEASES, 1873-82.

Colony.	Deaths from Zymotic, Parasitic, and Dietic Diseases, 1873-82.		
	Total Number.	Percentage of Total Deaths.	Annual Proportion per 10,000 Persons Living.
1. Queensland	10,245	30·11	52·7
2. Victoria	34,182	26·75	41·7
3. South Australia	9,171	25·11	38·6
4. New South Wales	23,871	22·73	36·4
5. Tasmania	3,416	19·07	31·2
6. New Zealand	12,600	25·20	30·6

649. It should be mentioned that the period named in the table can hardly be considered an average one, as it embraces the years from 1874 to 1876, in which epidemics of measles and scarlatina prevailed, which increased the death rate, it is true, more or less in all the colonies, but pressed with especial weight upon Victoria. In the five years ended with 1881 the mortality from zymotic diseases in Victoria was at the rate of 35·35 per 10,000, or slightly below the ten years' average in New South Wales, and in the last four years it averaged about 28 per 10,000, or below that in any of the other colonies.

Period unfavorable to Victoria.

650. Small-pox has never prevailed as an epidemic amongst the people of Victoria. On several occasions persons sickening from or 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 small-pox 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 be, however, 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 :—

Small-pox in various countries.

ANNUAL DEATH RATE FROM SMALL-POX IN VARIOUS COUNTRIES.

	Deaths from Small-pox Annually per 10,000 persons living.				
Spain (principal towns)	13·07
Spain	8·46
Austria (principal towns)	8·43
Austria	7·05
Belgium	4·09
Belgium (principal towns)	3·15
Russia	2·96
Italy	1·63
Switzerland (principal towns)	·80
Sweden (principal towns)	·69
England and Wales	·67
Holland	·57
Sweden	·41
Switzerland	·33
Prussia	·29
Germany (principal towns)	·23
Ireland	·20
Massachusetts	·18
Denmark (towns)	·08
Scotland (eight towns)	·05
Scotland	·03

* Bulletin de l'Institut International de Statistique, Tome I, 3 ème et 4 ème, Livraisons, page 193.

Small-pox
amongst the
aborigines.

651. The decline in the numbers of the Australian aborigines is attributed by Mr. Curr chiefly to small-pox, which he says has carried off probably one-third to one-half of the race. Mr. Curr thinks it had no existence with them until after the arrival of the whites, but broke out amongst the tribes surrounding Port Jackson about 15 months after Phillip established a settlement there. From inquiries made, Mr. Curr found reason to believe that the disease spread from Sydney over a great portion of the continent, reaching the shores of Port Phillip Bay on the south, Keppel Bay on the north-east, Rawlinson Range in the western interior, finding its way to Perth in Western Australia, and along the west coast from Perth to Port Essington. He has ascertained that the traditions of several tribes point to the conclusion that in the country through which it spread it killed something like one-half of the aboriginal population. Although there was no small-pox amongst the whites when Phillip first arrived in Australia, there had been small-pox on board one of the vessels (the *Alexander* transport), and Mr. Curr, thinks it probable it was communicated to the blacks by means of some infected clothing which was inadvertently given them.*

Vaccina-
tions.

652. Intimately connected with small-pox is the subject of vaccination, the number of cases of which successfully performed in Victoria during 1886 was 21,506; and as the number of births was 30,824, it appears that 70 per cent. of the children born were vaccinated. Part of the remainder are accounted for by death—2,748, or nearly 9 per cent., of those born having died before they were 6 months old. In the previous year the vaccinations were equal to 69 per cent. of the children born; in 1884, 74 per cent.; in 1883, 67 per cent.; in 1882, 75 per cent.; in 1881 they even exceeded the births by 100—a circumstance due to the alarm occasioned by an outbreak of small-pox, first in Sydney and subsequently on board vessels arriving at Melbourne, which induced a large number of persons at all ages to be vaccinated; in 1880 they were equal to about 73 per cent.; in 1879 and 1878 to 82 per cent.; in 1877 to 87 per cent.; in 1876 to 80 per cent.; and in 1875 to 82 per cent.

Vaccinations
in various
countries.

653. Dr. Raseri† gives the following as the proportions of successful vaccinations to births in different countries, generally during the years 1880 to 1884. To these has been added the proportion in Victoria during the period 1875 to 1885 (omitting the exceptional year 1881) which it will be noticed is above 4 but below 8 of the proportions relating to the other countries named:—

* *The Australian Race*, vol. I., page 208 *et seq.*, by Edward M. Curr: Ferres, Melbourne, 1886.

† *Bulletin*, &c., page 189.

PROPORTION OF VACCINATIONS TO BIRTHS IN VARIOUS COUNTRIES.

	Vaccinations per 100 Births.
Ireland	89
Scotland	88
Norway	87
England and Wales	86
Hungary	86
Holland	82
Sweden	80
Austria	78
Victoria	75
Italy	73
Germany	71
France	64
Russia in Europe	56

654. Doubts being, from time to time, raised as to the efficacy of vaccination in preventing or modifying the effects of small-pox, the following particulars may be interesting; they have been founded on information given to the Medical Officer of the Local Government Board, by Mr. Marson, surgeon of the Small-pox Hospital, London, as the result of his observations made during twenty-five years in regard to nearly 6,000 cases of post-vaccinal small-pox:—

Cases where the patient—	Percentage of Deaths of Small-pox Patients.
Was stated to have been vaccinated, but had no cicatrix	21.75
Had one vaccine cicatrix *	7.50
„ two „ cicatrices †	4.50
„ three „ „	1.75
„ four or more „	0.75
Was unvaccinated	35.50

655. The number of public vaccinators in Victoria is 168, and the amount paid in 1886 for vaccinations, including fees to Deputy-Registrars and travelling allowances to vaccinators, was £4,776.

656. The seven zymotic diseases which chiefly affect children are measles, scarlatina, diphtheria, croup, whooping-cough, dysentery, and diarrhœa. The following table shows the number of deaths from such diseases which occurred during the twenty-three years ended with 1886, the annual means of the decade 1864–1873 and of the decade 1874–1883 being also given:—

* In cases of the one cicatrix being well marked the death-rate was 4.25 per cent.; in cases of its being badly marked it was 12 per cent.

† In cases of the two cicatrices being well marked the death-rate was 2.75 per cent.; in cases of their being badly marked it was 7.25 per cent.

DEATHS FROM ZYMOTIC DISEASES CHIEFLY AFFECTING CHILDREN,
1864 TO 1886.

Year.	Number of Deaths from—							
	Measles.	Scarlatina.	Diphtheria.	Croup.	Whooping-cough.	Dysentery.	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	243	220	640	2,232
1869 ...	24	224	493	162	100	306	858	2,167
1870 ...	3	24	418	99	50	244	706	1,544
1871 ...	4	27	255	90	318	316	626	1,636
1872 ...	7	135	320	121	227	424	747	1,981
1873 ...	1	188	420	142	299	357	629	2,036
Annual mean } 1864-1873 }	113·8	263·4	386·4	138·6	213·6	346·7	761·1	2,223·6
1874 ...	256	120	375	159	151	325	846	2,232
1875 ...	1,541	985	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 ...	5	136	336	331	291	197	877	2,173
1879 ...	3	61	337	275	193	140	698	1,707
1880 ...	252	26	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 ...	7	59	131	167	48	139	885	1,436
Annual mean } 1874-1883 }	215·2	398·5	241·2	197·8	145·4	218·5	818·9	2,235·5
1884 ...	233	34	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

Children's
zymotic
diseases,
1886.

657. Notwithstanding the increase of population, and especially in the number of children, the actual deaths from the seven diseases named in the table have, during the last four years, been considerably below the average, and in fact have been fewer than in most of the previous years shown. The deaths caused by them in 1886 very slightly exceeded those in 1885, 1884, and 1880, decidedly exceeded those in 1883 and 1881, were equal to those in 1870, but were fewer than those in any of the other years.

Measles

658. An epidemic of measles occurred in 1884, and caused in it 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. Reference to a previous table* will

* See table following paragraph 644 *ante*.

show that per 10,000 of the population, the proportion of deaths from measles was .20 in 1886 and .85 in the previous five years, both of which proportions are lower than those in any of the following European countries, the proportions given for which relate generally to the average of the four years 1881 to 1884:—

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

	Deaths from Measles per 10,000 persons living.
Spain (principal towns)	11.44
Spain	8.84
Italy	7.04
Scotland (eight towns)	5.34
Belgium	5.24
Austria	4.60
England and Wales	4.01
Denmark (towns)	3.66
Scotland... ..	3.58
Prussia	3.51
Sweden (principal towns)	3.27
Germany (principal towns)	3.15
Holland	2.88
Belgium (principal towns)... ..	2.80
Switzerland (principal towns)	2.46
Sweden	2.40
Austria (principal towns)	2.32
Ireland	1.81
Massachusetts	1.16
Russia in Europe... ..	1.09
Switzerland ... ..	.88

659. On the occasion of both the earlier visitations of measles just *Scarlatina*. referred to, the epidemic was accompanied or followed by one of 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 scarlatina 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 383 in the last eight years, or an average of 48 per annum; as against 3,987, or an average of 570 per annum, in the preceding seven years; and 2,260, or an average of 377 per annum, in the six years ended with 1869. In 1886, deaths from scarlatina were in the proportion of .14 per 10,000 of the population, as against .62 in the previous five years, and 5.1 in the ten years ended with 1880. Whilst the death rate from this complaint in the last six years was less than the average prevailing in any of the following countries, that in the decade preceding those years was higher than in the most of the countries named:—

* See Dr. Raseri's paper already alluded to, page 193.

ANNUAL DEATH RATE FROM SCARLATINA IN VARIOUS COUNTRIES,
1881 TO 1884.*

	Deaths from Scarlatina per 10,000 persons living.	Deaths from Scarlatina per 10,000 persons living.	
Sweden (principal towns) ...	6·10	Belgium ...	2·90
Austria ...	5·86	Denmark (towns) ...	2·64
Prussia ...	5·30	Massachusetts ...	2·54
England and Wales ...	5·29	Spain ...	2·00
Germany (principal towns) ...	5·09	Russia in Europe ...	1·79
Sweden ...	4·85	Belgium (principal towns) ...	1·58
Scotland (8 towns) ...	4·77	Switzerland (principal towns)	1·49
Austria (principal towns) ...	4·45	Spain (principal towns) ...	1·46
Scotland ...	4·44	Holland ...	1·15
Ireland ...	3·00	Switzerland ...	1·01
Italy ...	2·94		

Diphtheria
and croup.

660. In consequence of the similarity of the complaints, it is difficult to keep the deaths caused by diphtheria distinct from those caused by croup. Taking the two affections together, they were to every 10,000 of the population in the proportion of 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 in 1886 was lower than the average rate in any of the following countries except Ireland, that in the previous five years was lower than in any except Ireland and England; whilst that in the decade preceding these five years was higher than in those countries or in Holland, Belgium, Scotland, Russia, or Switzerland.

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

	Deaths from Diphtheria per 10,000 persons living.
Austria ...	16·63
Prussia ...	15·45
Spain (principal towns) ...	11·83
Germany (principal towns) ...	11·54
Massachusetts ...	11·13
Austria (principal towns) ...	10·36
Sweden ...	9·79
Sweden (principal towns) ...	9·74
Italy ...	9·18
Switzerland (principal towns) ...	8·49
Belgium ...	7·72
Spain ...	6·85
Denmark (towns) ...	6·28
Switzerland ...	6·09
Scotland (8 towns) ...	4·99
Russia in Europe ...	4·67
Scotland ...	4·55
Belgium (principal towns) ...	3·79
Holland ...	3·76
England and Wales ...	3·05
Ireland ...	2·70

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

661. Deaths from whooping-cough in 1886 were in the proportion 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 are lower than those generally prevailing in most of the following countries:—

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

	Deaths from Whooping-cough per 10,000 persons living.
Austria	10·63
Scotland (8 towns)	9·64
Belgium	7·18
Denmark	6·62
Scotland	6·23
Pussia	5·40
England and Wales	4·67
Holland	3·82
Germany (principal towns)	3·48
Belgium (principal towns)	3·37
Ireland	3·18
Spain	3·14
Sweden (principal towns)	2·98
Switzerland (principal towns)	2·74
Austria (principal towns)	2·74
Spain (principal towns)	2·68
Italy	2·45
Switzerland	2·31
Sweden	1·80
Massachusetts	1·16
Russia in Europe	·23

662. Deaths from typhoid fever in 1886 numbered 523, or 99 more than in 1885. In proportion to population, the mortality from typhoid fever in 1886 was slightly below the average. A steady increase in the death rate from that complaint had taken place between 1880 and 1883—in which latter year it was, with one exception, the highest recorded during a period of twenty years; it then fell to a low rate in 1885, but in 1886 it again showed an increase. During the period referred to the death rate from typhoid fever has fluctuated considerably, but, nevertheless, there were three pretty well-marked maximum periods, viz., 1866–7, 1877–8, and 1883, 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. 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. The following table shows the number of deaths from typhoid fever,

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

and their proportion to the population, during each of the past twenty-one years :—

DEATHS FROM TYPHOID FEVER, 1866 TO 1886.*

Year.	Deaths from Typhoid Fever.		Year.	Deaths from Typhoid Fever.	
	Total Number.	Number per 10,000 Persons Living.		Total Number.	Number per 10,000 Persons Living.
1866 ...	528	8.39	1878 ...	532	6.48
1867 ...	455	7.06	1879 ...	438	5.25
1868 ...	295	4.45	1880 ...	297	3.49
1869 ...	360	5.24	1881 ...	351	4.04
1870 ...	416	5.83	1882 ...	472	5.30
1871 ...	269	3.65	1883 ...	661	7.26†
1872 ...	323	4.29	1884 ...	456	4.88†
1873 ...	282	3.68	1885 ...	424	4.42†
1874 ...	470	6.04	1886 ...	523	5.30
1875 ...	455	5.78			
1876 ...	375	4.71			
1877 ...	532	6.58	Mean ...	424	5.34

Central Board of Health on typhoid.

663. A valuable report on typhoid fever, submitted by the Central Board of Health,‡ has recently been presented to Parliament. A few short extracts therefrom are subjoined :—

“Although typhoid fever is never entirely absent from the colony, it prevails chiefly towards the end of summer and especially in the autumn. This holds good not only in Australia, but also in England and America. Hence ‘autumnal or fall fever’ is a name by which it has been designated. * * * That season has considerable influence upon the prevalence of typhoid fever cannot be doubted. There is abundant evidence that it prevails more extensively after a long drought, when the air is warm and dry, than after a cool season. It is not merely the high temperature of the air in summer, but also the raised temperature of the water and the soil, as well as the want of rain, causing drought, and stagnation and liquid filth, that promote the prevalence of the disease. A large amount of ozone has probably a good effect in checking its spread, and peculiarities of the season may not only affect the severity of the epidemic, but also the time of its appearance. * * * It is calculated that from 15 to 25 deaths occur in every 100 cases of illness from this disease. Taking 15 per cent. as the average for Victoria, it would follow that 3,133 persons suffer from typhoid every year, and out of that number 470 die. * * * The following four points stand prominently forward as necessary in the suppression of typhoid fever:—1. Compulsory notification. 2. Isolation. 3. Prompt removal by special service and destruction of typhoid excreta. 4. General cleanliness and speedy abatement of nuisances—cleansing drains, abolition of cesspits, and protection of potable waters.”

Typhoid fever in Australasian colonies.

664. The following table shows the mortality from typhoid fever in all the Australasian colonies except Western Australia during the

* 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 which might possibly have been placed under the former head have, for the sake of comparison, been still placed under the latter.

† Figures amended since last publication.

‡ Parliamentary Paper No. 97, Session 1887.

thirteen years ended with 1885, or during as many of those years as the information is available for:—

DEATHS FROM TYPHOID FEVER* IN AUSTRALASIAN COLONIES,
1873 TO 1885.

Year.	Number of Deaths from Typhoid Fever.					
	Total.	Per 10,000 Persons Living.	Total.	Per 10,000 Persons Living. †	Total. ‡	Per 10,000 Persons Living.
	VICTORIA.		NEW SOUTH WALES.		QUEENSLAND.	
1873 ...	282	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	72	3·91
1877 ...	532	6·58	375	5·96	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	3·50	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
Total ...	5,745	5·22	4,152	5·13	2,473	8·78
	SOUTH AUSTRALIA.		TASMANIA.		NEW ZEALAND.	
1873 ...	68	3·48	24	2·32	127	4·41
1874 ...	97	4·82	44	4·22	161	5·05
1875 ...	94	4·53	50	4·81	340	9·47
1876 ...	92	4·22	26	2·49	195	5·03
1877 ...	84	3·63	41	3·86	133	3·26
1878 ...	106	4·37	50	4·61	131	3·11
1879 ...	101	3·97	38	3·42	208	4·64
1880 ...	63	2·39	29	2·55	177	3·73
1881 ...	85	2·95	33	2·81	137	2·78
1882 ...	146	5·03	36	2·98	128	2·51
1883 ...	135	4·51	64	5·15	182	3·44
1884 ...	151	4·89	50	3·89	118	2·15 †
1885 ...	145	4·63	30	2·27	128	2·26
Total ...	1,367	4·11	515	3·49	2,165	3·97

665. In Victoria, Tasmania, and New Zealand the death rate from typhoid fever in 1885 was much below, but in New South Wales and South Australia it was slightly above, and in Queensland considerably

Deaths from typhoid fever in the colonies, 1885, and previous years compared.

* 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.

† Figures amended since last publication.

‡ In Queensland "enteric fever" is classified as if it were a distinct disease from typhoid fever. The two, as well as "simple and undefined fever," to which 252 deaths are set down, have been combined for the purpose of this table.

above, the average. The rates in Victoria and Tasmania show a marked falling off from the exceptionally high rates which prevailed in 1883, whilst the rates in Tasmania and New Zealand were the lowest recorded during the whole period of thirteen years. But in Queensland the mortality from typhoid fever during the last two years has been simply enormous, amounting to 19 per 10,000 of the population in 1884 and $17\frac{1}{2}$ in 1885, the former being nearly two-and-a-quarter times as high as the average; never before did the proportion in that or any of the other colonies reach even as high as 10 per 10,000 persons living. Mr. William T. Blakeney, the Registrar-General of Queensland, gives no explanation in his latest report of the continuance of this high rate, but wrote as follows upon this subject in his report for 1884:—*

“It may be that the drought from which Queensland suffered during 1884 has largely contributed to this result. The absence of the ordinary rain—which in the colony frequently falls with force and volume similar to that in the tropics, cleansing the open watercourses and drains in our large centres of population, and also washing all impurities from the surface—rendered the task imposed on the various Boards of Health of cleansing our cities and towns a very difficult one. It is evident from the result that, unaided by nature in the manner indicated, they have been unable to combat successfully with the death-dealing germs engendered during the hot and dry season experienced in 1884. The increased mortality from this cause—the highest ever recorded in this colony—must be looked upon with the utmost gravity, and those charged with the sanitary condition of our townships should make strenuous efforts to fight against this fatal disease, one which in nearly all cases attacks the very flower of the population, those in the prime of life and strength. The more glaring sanitary defects may have been dealt with by them, but it is apparent that many death-dealing nuisances are still in existence to cause such a heavy loss of life from typhoid fever as that which occurred last year.”

666. In England and Wales the mortality from typhoid fever† has been considerably reduced of late years, and is now lower 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 five years ended with 1885 only 2·49 per 10,000 persons living, the latter being even lower than the minimum rate (3·49) recorded in Victoria during the last twenty-one years.

667. In the returns of most European countries deaths from typhoid fever are not distinguished from those caused by typhus, 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

* See 25th Annual Report of the Registrar-General of Queensland, page xxxi.

† 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.

Typhoid
fever in
England
and Wales.

Typhoid and
typhus in
various
countries.

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.*

	Deaths from Typhoid and Typhus per 10,000 persons living.					
Italy	9·37
Spain (towns)	8·35
Austria	7·31
Belgium	6·17
Spain	5·63
Massachusetts	5·30
Prussia	5·14
Belgium (principal towns)	4·69
Austria (15 towns)	4·49
Switzerland (17 towns)	4·31
Holland	4·24
Sweden (principal towns)	3·95
Denmark (towns)	3·85
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

666. Deaths from venereal diseases numbered 377 in the ten years ended with 1880, 218 in the five years ended with 1885, and 40 in the year 1886; being in the ratio per 10,000 of the population annually of ·47 at the first period, of ·48 at the second period, and of ·41 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, and 31, and the proportions ·36, ·39, and ·31, which contrast favorably with those in most of the following countries:—

ANNUAL DEATH RATE FROM SYPHILIS IN VARIOUS COUNTRIES, 1881 TO 1884.†

	Deaths from Syphilis per 10,000 persons living.					
Italy	1·65
Sweden (towns)	1·16
Scotland (8 towns)	1·01
Denmark (towns)	·94
England and Wales	·84
Scotland	·63
Massachusetts	·32
Switzerland	·24
Ireland	·16
Holland	·11

* See Dr. Raseri's paper, page 193. The fevers referred to are there termed "Febbre tifoide e tifo esantematico."

† See Dr. Raseri's paper, page 193.

Venereal
disease
amongst the
aborigines.

669. Venereal disease has long prevailed amongst the Australian aborigines, and was no doubt first communicated to them by Europeans. Mr. Curr* says "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.

670. Parasitic diseases, chief amongst which are thrush and hydatids, caused not quite 8 deaths in 1886 per 100,000 of the population, which was nearly 1 below the average of the previous five years, and $1\frac{1}{2}$ below the average of the ten years 1871 to 1880. These diseases appear to be about 50 per cent. more prevalent in Victoria than in England.

Hydatids.

671. 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 fourteen years ended with 1886 has caused 654 deaths, or an average of 47 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 seven years being 5·11, for the second seven years 5·74, and for the whole period 5·43. In the last two years, however, the mortality from hydatids was much below that of the previous six years. The following are the figures for the last fourteen years :—

DEATHS FROM HYDATIDS, 1873 TO 1886.

Year.	Deaths from Hydatid Disease.		Year.	Deaths from Hydatid Disease.	
	Total Number.	Number per 100,000 Living.		Total Number.	Number per 100,000 Living.
1873 ...	29	3·79	1881 ...	48	5·50
1874 ...	41	5·27	1882 ...	58	6·52†
1875 ...	47	5·97	1883 ...	56	6·15†
1876 ...	36	4·52	1884 ...	59	6·32†
1877 ...	37	4·57	1885 ...	47	4·90†
1878 ...	37	4·50	1886 ...	51	5·17
1879 ...	60	7·19			
1880 ...	48	5·64	Mean ...	46·7	5·43

Hydatids
in Aus-
tralasian
colonies.

672. According to the returns of the four years ended with 1885, as embodied in the following table, hydatids in a fatal form appear to be 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,

* Volume I., page 227

† Figures amended since last publication.

kidney, &c. 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 TO 1885.

Colony.	Year.	Number of Deaths from Hydatids.	
		Total.	Per 100,000 Persons Living.
Victoria ...	1882	58	6·52*
	1883	56	6·15*
	1884	59	6·32*
	1885	47	4·90
	Mean of 4 years	55	5·97
New South Wales ...	1882	12	1·51
	1883	10	1·20
	1884	20	2·27
	1885	†	†
	Mean of 3 years	14	1·66
Queensland ...	1882	3	1·26
	1883	4	1·50
	1884	8	2·71*
	1885	3	·97
	Mean of 4 years	4	1·61
South Australia ...	1882	12	4·14
	1883	6	2·01
	1884	13	4·21
	1885	5	1·60
	Mean of 4 years	9	2·99
Tasmania ...	1882	4	3·31
	1883	4	3·22
	1884	6	4·67
	1885	2	1·51
	Mean of 4 years	4	3·18
New Zealand ...	1882	7	1·37
	1883	1	·19
	1884	3	·55*
	1885	3	·53
	Mean of 4 years	3	·66

NOTE.—In Western Australia no deaths are set down to this disease.

* Figures amended since last publication.

† Information not furnished.

Hydatids in
England.

673. Hydatid disease is much more fatal in all the Australasian colonies than it is in England and Wales, where there were only 51 deaths from it in 1881, 59 in 1882, and 53 in 1883, which numbers indicate respectively proportions of $\cdot 19$, $\cdot 23$, and $\cdot 20$, or a mean of $\cdot 21$ in the three years per 100,000 persons living.

Seat of
hydatid
disease.

674. Almost any part of the body may be affected by hydatid disease. The affected part is not always mentioned in the returns, but Dr. J. D. Thomas, of Adelaide, South Australia, in his exhaustive work upon the subject of hydatids,* gives information, obtained from Australasian, European, Indian, and American sources, of the following 1,897 cases, which are here arranged according to the frequency with which the respective parts were found to be affected with the disease :—

SEAT OF HYDATID DISEASE.

Locality of Hydatid Cyst.	Cases of Hydatid Disease.	
	Number.	Proportions per cent.
Liver	1,084	57·14
Lungs	220	11·60
Kidney	90	4·75
Brain, its membranes, and cranial cavity	83	4·38
Spleen	40	2·11
Pelvis	40	2·11
Heart, pericardium, and organs of circulation	37	1·95
Abdominal cavity, place unspecified	35	1·85
Bones	31	1·63
Uterus	29	1·53
Peritoneum, omentum, and mesentery	26	1·37
Abdominal wall	21	1·11
Subcutaneous cellular tissue	21	1·11
Face, orbit, and mouth	20	1·06
Female breast	20	1·06
Pleura	19	1·00
Ovary	16	·84
Spinal canal, spinal cord and its membranes	15	·79
Muscles	13	·69
Neck	10	·53
Male organs of generation, chiefly the scrotum	7	·37
Discharged from intestines... ..	5	·26
Mediastinum	4	·21
Trunk and limbs	2	·10
Vomited... ..	2	·10
Expectorated	2	·10
Stomach	1	·05
Bladder	1	·05
Prostate gland	1	·05
Thorax	1	·05
Bile duct	1	·05
Total	1,897	100·00

* *Hydatid Disease; with special reference to its prevalence in Australia.* By John Davies Thomas, M.D., and F.R.C.S. Adelaide: Spiller, 1884. Page 124.

675. Dr. Thomas mentions (pp. 191 and 192) that he examined the intestines of a number of dogs in Adelaide and the south-eastern district of South Australia, and of ten dogs in Melbourne, and that 40 per cent. of the former, and 50 per cent. of the latter were found to contain echinococci. Tape worms
in dogs.

676. Dietic diseases, consisting principally of want of breast milk and alcoholism, caused 18 deaths in 1886 per 100,000 persons living, which proportion is about 25 per cent. below the average. These diseases appear to be nearly four times as fatal in Victoria as in England. Dietic
diseases.

677. In 1886, 107 deaths were set down to alcoholism, as against 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 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 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:— Alcoholism.

ANNUAL DEATH RATE FROM ALCOHOLISM IN VARIOUS TOWNS AND COUNTRIES.

						Deaths from Alcoholism per 1,000,000 persons living.
Denmark (towns) ...	...	...	...	...	...	274
Sweden (principal towns) ...	...	...	...	...	...	99
Paris ...	...	...	...	...	...	95
Switzerland ...	...	...	...	...	...	88
Scotland (8 towns) ...	...	...	...	...	...	83
Connecticut ...	...	...	...	...	...	80
Belgium ...	...	...	...	...	...	76
London ...	...	...	...	...	...	74
Russia in Europe ...	...	...	...	...	...	70
Massachusetts ...	...	...	...	...	...	65
Scotland ...	...	...	...	...	...	61
Italy ...	...	...	...	...	...	47
England and Wales ...	...	...	...	...	...	46
Berlin ...	...	...	...	...	...	40
Vienna ...	...	...	...	...	...	36
Sweden ...	...	...	...	...	...	34
Ireland ...	...	...	...	...	...	30
Holland ...	...	...	...	...	...	21

* Page 186.

Constitutional diseases.

678. The name "Constitutional Diseases," originally used in the old, has been continued in the new classification as applying to a group of complaints of obscure origin, which the committee of the Royal College of Physicians already alluded to* did not attempt to classify or even name. 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 mellitus. Under this class there were, in 1886, 241 deaths per 100,000 of the population, or 9 more than the average of the five years 1881-85, but as many as 26 above the average of the decade 1871-80. Of the 241 deaths referred to, 139 resulted from phthisis, or pulmonary consumption; 50 were set down to cancer; 36 to tabes mesenterica, acute hydrocephalus and other tubercular or scrofulous diseases; and 16 to other constitutional diseases.

Phthisis.

679. Phthisis, or pulmonary consumption, caused 1,375 deaths in 1886, or 9 less than in 1885, but 16 more than in 1884. Except during the prevalence of epidemics, phthisis is the occasion of more deaths in Victoria than any other disease†; next to phthisis, diarrhoea is the most fatal disease on the list,† but this complaint causes less than two-thirds of the number of deaths set down to phthisis. It should also be borne in mind, as showing its baneful effects as compared with those of the other diseases named, that the deaths ascribed to diarrhoea 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 twenty-six years:—

DEATHS FROM PHTHISIS IN VICTORIA, 1861 TO 1886.

Year.	Deaths from Phthisis.	
	Total Number.	Number per 10,000 Persons Living.†
1861 	753	13·94
1862 	707	12·90
1863 	717	12·74
1864 	686	11·70

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

* See paragraph 636 *ante*.

† See table following paragraph 643 *ante*.

‡ For figures of mean population used in making these calculations, see table "Breadstuffs Available for Consumption" in Part "Production" *post*.

DEATHS FROM PHTHISIS IN VICTORIA, 1861 TO 1886--*continued.*

Year.	Deaths from Phthisis.	
	Total Number.	Number per 10,000 Persons Living.
1865	741	12·12
1866	782	12·43
1867	793	12·31
1868	746	11·25
1869	893	12·99
1870	888	12·45
1871	841	11·41
1872	876	11·63
1873	945	12·34
1874	1,011	13·00
1875	1,027	13·04
1876	1,010	12·68
1877	1,088	13·46
1878	1,124	13·68
1879	1,058	12·69
1880	1,175	13·82
1881	1,199	13·80
1882	1,274	14·31
1883	1,212	13·30 *
1884	1,359	14·55 *
1885	1,384	14·44 *
1886	1,375	13·93
Total in 26 years	25,664	13·05

680. 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 the whole period of twenty-six years the deaths from this complaint were in the proportion of 13 to every 10,000 persons living; during the first eleven of those years that proportion was $12\frac{1}{3}$ (12·38), and in the last fifteen years it was over $13\frac{1}{3}$ (13·38). In 1886, however, the rate was not so high as in 1885, 1884, or 1882, but was higher than in any previous year since 1861.

681. Phthisis in Victoria generally affects males more heavily than females. In 1886, 801 of the former, and 574 of the latter, died of that complaint; the males being in the proportion of 15·34, but the females of only 12·35, per 10,000 of their respective sexes living.

682. The following table gives the number of deaths from phthisis at each age in 1886 ; also the proportion which such deaths bore to the total deaths from all causes in 1886 and in the ten years ended with 1880 :—

* Figures amended since last publication.

DEATHS FROM PHTHISIS, 1886.—AGES AT DEATH.

Ages.	Number who Died from Phthisis, 1886.			Percentage of Deaths from Phthisis to those from all Causes.	
	Males.	Females.	Total.	1886.	Ten Years : 1871-80.
Under 5 years ...	5	14	19	·35	·51
5 to 10 " ...	10	6	16	3·64	1·40
10 " 15 " ...	6	21	27	9·93	5·15
15 " 20 " ...	40	44	84	21·16	21·22
20 " 25 " ...	110	107	217	33·96	32·22
25 " 35 " ...	196	172	368	29·63	29·18
35 " 45 " ...	114	96	210	20·67	20·27
45 " 55 " ...	166	68	234	15·02	13·69
55 " 65 " ...	119	35	154	9·00	8·30
65 " 75 " ...	32	10	42	3·24	2·97
75 years and upwards...	3	1	4	·42	·83
Total ...	801	574	1,375	9·20	8·29

683. From a comparison of the figures in the last two columns, it will be observed that in proportion to the total deaths the mortality from phthisis in 1886, at nearly all periods of life, was above the average. In the year under review, nearly one-third of the deaths in the colony between the ages of 20 and 35, over one-fifth of those between 15 and 20, and between 35 and 45, and over a seventh of those between 45 and 55, were caused by phthisis.

684. Of the 1,375 deaths from phthisis in 1886, 790 occurred in Melbourne and suburbs (Greater Melbourne) and 585 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 will be seen by the following figures, which are the results for twenty-six years :—

DEATHS FROM PHTHISIS PER 10,000 PERSONS LIVING IN AND OUTSIDE GREATER MELBOURNE, 1861 TO 1886.

Year.	Greater Melbourne.	Extra-Metropolitan Districts.	Year.	Greater Melbourne.	Extra-Metropolitan Districts.
1861 ...	23·44	10·63	1875 ...	21·46	9·25
1862 ...	24·64	8·71	1876 ...	22·46	8·28
1863 ...	23·71	8·79	1877 ...	22·74	9·29
1864 ...	20·08	8·70	1878 ...	22·62	9·63
1865 ...	22·11	8·57	1879 ...	21·77	8·45
1866 ...	20·42	9·53	1880 ...	23·95	8·92
1867 ...	21·56	8·87	1881 ...	22·71	9·45
1868 ...	20·83	7·63	1882 ...	23·09	10·03
1869 ...	23·87	8·83	1883 ...	22·27	8·80*
1870 ...	22·49	8·56	1884 ...	24·45	9·32*
1871 ...	22·08	7·20	1885 ...	23·92	9·10*
1872 ...	18·69	8·62	1886 ...	21·25	9·51
1873 ...	20·51	8·77			
1874 ...	22·04	8·94	Means	22·28	8·94

* Figures amended since last publication.

Phthisis most fatal to adults.

Phthisis in Melbourne and country.

685. In England and Wales, in the twenty-four years ended with 1885, the death rate from phthisis, per 10,000 persons, ranged from 26·02 in 1866 to 17·52 in 1885, the mean of the first five years of the period having been as high as 25·32, whilst that of the last five years was as low as 18·22.* 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 doubt the death rate from phthisis in the latter has for years past been swelled by the presence of persons who started from Europe whilst suffering from the disease in an advanced stage, having been 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.

Death rate
from
phthisis in
England.

686. Of the Chinese who died in Victoria in 1886, 32, or 19 per cent., fell victims to phthisis. In the previous year 14 per cent. of the deaths of Chinese were from phthisis.

Phthisis
among
Chinese.

687. Three out of the 26 deaths of Aborigines in 1886 were set down to phthisis. Mr. Henry Jennings, Vice-Chairman of the Board 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.” Mr. E. M. Curr, in his admirable and exhaustive work *The Australian Race*, remarks on the subject as follows § :—

Phthisis
among
Aborigines.

“During the first eight years of my residence amongst several large tribes near Echuca, in 1841, I can recollect no instance of consumption; nor, though I have made inquiries on the subject of a few old residents who were good observers, have I heard of more than one death of that disease at that period. Nowadays, a large portion of the blacks and half-castes located on the Aboriginal stations maintained by the Victorian Government fall victims to this complaint. Generally they are the offspring of parents who have suffered from venereal. With many about 17 years of age, very little work brings on spitting of blood. Others spit blood without work—many women, for instance; but those who were matured before consumption became common are strong and healthy. But besides blacks who live on our establishments, and under conditions new to the race, the reader will find my correspondents from localities far removed from civilization pointing out that, even there, the principal disease among the blacks is consumption, and that they are dying out of it, even in places where their primitive mode of life is but little interfered with. Can one help asking, what is the cause of this late great and apparently increasing prevalence of consumption amongst the race? Can it have come from the whites?”

* See Forty-eighth Report of the Registrar-General of England, pages lvi and lviii.

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

‡ See *Victorian Review* for April 1880, page lxxv.

§ Volume I., page 227: Ferres, Melbourne. 1883.

Phtthisis in
Austral-
asian
colonies.

688. The rate of mortality from phtthisis in Victoria would appear, 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 1,000, was most exceptionally high* :—

DEATHS FROM PHTHISIS IN AUSTRALASIAN COLONIES,
1873 TO 1885.

Year.	Number of Deaths from Phtthisis.					
	Total.	Per 10,000 Persons Living.	Total.	Per 10,000 Persons Living.	Total.	Per 10,000 Persons Living.
	VICTORIA.		NEW SOUTH WALES.		QUEENSLAND.	
1873 ...	945	12·34	...	...	145	10·35
1874 ...	1,011	13·00	...	...	163	10·51
1875 ...	1,027	13·04	614	10·50	228	13·22
1876 ...	1,010	12·68	616	10·21	260	14·12
1877 ...	1,088	13·46	597	9·49	225	11·53
1878 ...	1,124	13·68	652	9·91	263	12·72
1879 ...	1,058	12·69	746	10·80	281	13·12
1880 ...	1,175	13·82	803	11·06	301	13·56
1881 ...	1,199	13·80	874	11·50	292	13·21
1882 ...	1,274	14·31	927	11·66	404	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	11·58	593	19·20
Total...	14,866	13·47	8,873	10·88	4,198	14·27
	SOUTH AUSTRALIA.		TASMANIA.		NEW ZEALAND.	
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 ...	267	11·00	115	10·60	326	7·73
1879 ...	271	10·66	90	8·09	399	8·90
1880 ...	277	10·51	113	9·95	447	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	139	11·18	500	9·45
1884 ...	323	10·46	145	11·29	498	9·07 †
1885 ...	307	9·80	145	10·97	514	9·08
Total...	3,243	10·01	1,548	10·45	5,038	8·65

* It is pointed out by the Registrar-General of Queensland, in recent Annual Reports, that the death rate from phtthisis as well as from other complaints in that colony is considerably swelled by the high mortality amongst the Polynesians. For example, nearly half the deaths from phtthisis in 1884 and 1885 were of Polynesians, although they form less than 4 per cent. of the total population. Excluding the Polynesians from the calculation, the death rate from phtthisis in Queensland in 1884 was only 10·4, and in 1885 only 10·5 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 1,000!

† Figures amended since last publication.

689. Deaths from tubercular diseases, viz., *tubercular diseases*, *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, and 1,732 in the year 1886. These numbers furnish proportions per 10,000 of the population of 16·36 deaths annually at the first period, 17·38 at the second, and 17·55 at the third, which are 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.*

	Deaths from Tubercular Diseases per 10,000 persons living.			
Austria (principal towns)	72·20
Austria	38·39
Belgium (towns)	35·11
Germany (principal towns)	34·40
Massachusetts	34·25
Switzerland (towns)	32·50
Sweden (towns)	31·61
Scotland (8 towns)	31·12
Prussia	30·88
Belgium	30·48
Denmark (towns)	30·42
Spain (towns)	29·24
Scotland	25·93
Italy	25·54
Ireland	22·43
Switzerland	21·79
England and Wales	21·09
Holland	19·73
Spain	12·32

690. Next to *phthisis*, the most fatal of the constitutional diseases is cancer. This complaint caused 496 deaths in 1886, or 51 more than in 1885, and a larger number than in any 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 1886 the proportion had risen to 1 in 30; moreover, since 1861 the death rate from it has increased steadily from less than $\frac{1}{2}$ to over 5 per 10,000 of the population. The following table shows the number of deaths from cancer, and the number per 10,000 persons living, in each of the last twenty-six 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, 1861 TO 1886.

Years.	Deaths from Cancer.					
	Total Number.			Number per 10,000 Persons Living.		
	Males.	Females.	Total.			
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	226	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
Total in 26 years...			3,570	3,328	6,898	3·33

Proportions
of the sexes
who died of
cancer.

691. Cancer is a complaint which generally affects females more than males†. In the twenty-six years of which mention is made 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‡ been considerably below the proportion named. In 1886, 101 females died of cancer to every 100 males, although, in the population, females over the age of 30 were in the proportion of only 77 to every 100 males.

Cancer in
Austral-
asian
colonies.

692. Judging from the experience of the four years ended with 1885, cancer is more fatal in Victoria than in any other Australasian colony except Tasmania, the latter being a colony in which—as cancer is essentially a complaint of advanced life—the large proportion of old people would naturally result in a high death rate therefrom. The following are the figures for the four years referred to :—

* Figures amended since last publication.

† The difference may not really be so great as it appears to be from the figures. See paragraph 694 *post*.

‡ 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.

DEATHS FROM CANCER IN AUSTRALASIAN COLONIES, 1882 TO 1885.

Colony.	Year.	Number of Deaths from Cancer.	
		Total.	Per 10,000 Persons Living.
Victoria ...	1882	373	4.19
	1883	450	4.94*
	1884	446	4.78*
	1885	445	4.64
	Mean of 4 years	428	4.64
New South Wales ...	1882	215	2.71
	1883	215	2.58
	1884	233	2.65
	1885	267	2.87
	Mean of 4 years	232	2.70
Queensland ...	1882	54	2.27
	1883	70	2.61
	1884	94	3.19*
	1885	53	1.71
	Mean of 4 years	68	2.45
South Australia ...	1882	89	3.07
	1883	86	2.88
	1884	109	3.53
	1885	100	3.19
	Mean of 4 years	96	3.17
Western Australia ...	1882	9	2.96
	1883	10	3.20
	1884	10	3.09
	1885	17	4.99
	Mean of 4 years	12	3.56
Tasmania ...	1882	60	4.97
	1883	67	5.39
	1884	65	5.06
	1885	60	4.54
	Mean of 4 years	63	4.99
New Zealand ...	1882	147	2.88
	1883	158	2.99
	1884	191	3.48*
	1885	177	3.13
	Mean of 4 years	168	3.12

693. In England and Wales there has for years past been a progressive increase in the death rate from cancer. This rate, in the five years ended with 1885, was somewhat higher than that prevailing in Tasmania, but much higher than that in any other Australasian colony.

Deaths from
cancer in
England
and Wales.

* Figures amended since last publication.

The following figures are taken from the forty-eighth report of the Registrar-General* :—

DEATHS FROM CANCER IN ENGLAND AND WALES.

	Deaths from Cancer per 10,000 persons living.			
1861 to 1865	3·68
1866 to 1870	4·04
1871 to 1875	4·46
1876 to 1880	4·96
1881 to 1885	5·45
	Mean	...	...	4·51

Increase
of cancer
in England
doubtful.

694. In the following remarks the Registrar-General of England, Sir Brydges Henniker, indicates that he entertains doubts as to whether the whole of the increase in the death rate from cancer shown in the returns is warranted by the facts† :—

“How much, if any, of this increase was real cannot be stated with any certainty, but that some part of the apparent increase was only apparent, and due to improved diagnosis and more careful statement of cause, can scarcely be doubted. Year by year the number of deaths ascribed to ‘abdominal disease,’ and other imperfectly stated causes, has been undergoing diminution, and there has been of course a corresponding addition to the mortality under the more definite headings. Moreover, the increase of mortality from cancer has been considerably greater in the male than in the female sex. Now, were the rise not only apparent but real, there would seem to be no reason why males should have suffered more than females, whereas the difference is really intelligible on the hypothesis that the rise was, at any rate in great measure, merely due to improved diagnosis. For the cancerous affections of males are in much larger proportion internal or inaccessible than are those of females, and consequently are more difficult of recognition, so that any improvement in medical diagnosis would add more to the male than to the female figures.”

Deaths from
cancer in
various
countries.

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

ANNUAL DEATH RATE FROM CANCER IN VARIOUS COUNTRIES,
1881 TO 1884.‡

	Deaths from Cancer per 10,000 persons living.		Deaths from Cancer per 10,000 persons living.
Austria (15 principal towns) ...	11·20	England and Wales ...	5·35
Denmark (towns) ...	10·98	Massachusetts ...	5·30
Sweden (towns) ...	8·71	Scotland (8 towns) ...	5·27
Switzerland ...	8·46	Scotland ...	5·26
Italy ...	6·13	Austria ...	4·23
Holland ...	5·82	Ireland ...	3·69
		Prussia ...	3·13

* Page lviii.

† See his Forty-sixth Annual Report, page xviii.

‡ See Dr. Raseri's paper, page 193.

696. Developmental diseases,* Class V., caused 106 deaths in 1886 to every 100,000 of the population. Of these 47 were due to diseases peculiarly affecting infants, such as premature birth and malformations, and 59 to old age. The rate of mortality from the whole class in 1886—viz., 106 per 100,000—appears to have been about 9 more than the average of the previous five years, and 30 more than the average of the ten years ended with 1880; the increase 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 in the population has increased since 1871–80 by 91 per cent., whilst the average age of such persons has advanced also. The deaths of infants born prematurely numbered 367 in 1886—which number gives a proportion of $9\frac{1}{3}$ per cent. of the total deaths under 1 year, or of $1\frac{1}{5}$ per cent. of the total births recorded, as compared with an average of 9 per cent. of the deaths under 1 year, or of $1\frac{1}{5}$ per cent. of the births recorded, during the five years ended with 1885.

697. Local diseases, Class VI., or diseases of special organs or systems, usually cause a much higher mortality than any other class of complaints; thus, in 1886, 6,846 deaths, or 46 per cent. of the deaths from all causes, were ascribed to them, that being the same proportion as in the five years 1881 to 1885. The deaths from diseases now placed in this class were in 1886 in the proportion to every 100,000 of the population of 694, or 23 above the five years' average. Nearly a fourth of these diseases were due to affections of the brain and nerves; over a seventh to diseases of the circulatory system, including heart diseases; nearly a third to lung and throat diseases—viz., croup, bronchitis, pneumonia, pleurisy, &c.; over a fifth to diseases of the digestive organs; 6 per cent. to diseases of the urinary organs; not quite 2 per cent. to the accidents of childbirth; and the remainder to diseases of the integumentary, locomotive, and generative systems, of the lymphatic and ductless glands, and of the organs of special sense, in the order named. In the year under review the death rates from diseases of all the principal sub-classes of local diseases, except diseases of the generative system and childbirth, were above the average of the previous five years; the latter also showing a marked increase as compared with the earlier period of 1871–80; whilst diseases of the circulatory, respiratory, and urinary systems were considerably above the average of that period.

698. The mortality from diseases of the respiratory system in 1886, although not so high as in 1885, was much above the average. The

* 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. See also paragraph 638 *ante*.

proportion in 1886 was 227 to every 100,000 persons living, whilst it was 218 in the five years 1881-5, and only 195 during the ten years 1871-80. The diseases in this group cause, on the average, more than half as many deaths again as phthisis (which is not included amongst "lung diseases," being classed as a "constitutional" disease), and in recent years more than one-seventh of the total mortality. 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 2,245, being equal to much more than one-seventh of the total mortality; and of these pneumonia caused 903, bronchitis 688, congestion of the lungs 186, and croup 160. Of those who died from these complaints 808 were under 5 years—more than half of these being under 1 year—and 860 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 3,620 deaths in 1886 were from diseases particularly affecting the organs of respiration, which is equal to nearly one-fourth of the total mortality.

699. Bronchitis and pneumonia, with congestion of the lungs, caused 11,477 deaths in the ten years ended with 1880, 7,857 deaths in the five years ended with 1885, and 1,777 deaths in 1886, which numbers furnish proportions per 10,000 of the population of 14·40 deaths annually for the first period, of 17·22 deaths annually for the second period, and of 18·00 deaths for the third. From these results it would appear that the complaints referred to are gradually becoming more and more fatal in this colony; they are, however, according to the following figures, still much less fatal here than in any of the countries named except Prussia. It is not known whether congestion of the lungs is generally 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.*

	Per 10,000 persons living.		Per 10,000 persons living.
Spain (principal towns) ...	53·15	Germany (principal towns)	27·87
Italy ...	45·31	Denmark (towns) ...	27·47
Scotland (8 towns) ...	38·06	Belgium (principal towns)	27·06
Austria (principal towns)	37·95	Ireland ...	26·76
Holland ...	36·32	Switzerland (principal towns) ...	26·69
Scotland ...	34·13	Spain ...	24·12
Belgium ...	32·87	Sweden (principal towns)	24·10
England and Wales ...	32·25	Massachusetts ...	21·03
Switzerland ...	31·52	Prussia ...	16·63
Austria ...	28·09		

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

700. The death rate from a given complaint is usually ascertained 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 child-bearing without specific disease, it is set down as 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 1886 the proportion of deaths of child-bearing women to the number of children born was much higher than the unusually low proportion which prevailed in the previous year, and was also somewhat above the average:—

DEATHS OF WOMEN IN CHILDBIRTH, 1864 TO 1886.

Year.	Number of Mothers who died of—			Deaths of Mothers to every 10,000 Children Born Alive.
	Childbirth.	Puerperal Fever (Metria).	Total.	
1864	100	21	121	47·12
1865	99	24	123	47·46
1866	112	26	138	55·18
1867	117	20	137	53·51
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	60·85
1874	142	109	251	93·66
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	50·09
1881	155	78	233	85·84
1882	117	59	176	65·80
1883	115	43	158	57·37
1884	131	72	203	70·36
1885	106	62	168	56·05
1886	122	70	192	62·29
Total in twenty-three years	2,771	986	3,757	60·20

701. 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-one 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.

Deaths in
childbed in
Victoria and
United
Kingdom.

702. The proportion of women dying in childbed during the whole period of twenty-three years was 1 to 166 births, and in 1886 the proportion was 1 to every 161 births. In 1885, the proportion was 1 to every 178 births; in 1884, it was as high as 1 to every 142 births; and in 1883, it was 1 to every 174 births. All these proportions are much higher than those in England and Wales, where, in the five years ended with 1885, 202 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 to every 151 births.

Deaths from
childbirth in
Women's
Hospital.

703. In the Midwifery Department of the Melbourne Women's Hospital‡, 550§ women were confined, and 514|| infants were born alive, during the year ended 30th June, 1886. Sixteen deaths of mothers occurred during or shortly after parturition; or 1 death of a mother to every 34 deliveries, or to every 32 births; which shows a great improvement on the very excessive rate of mortality which occurred in 1884-5, viz., 1 death of a mother to every 17 deliveries, or to every 16 births; which proportion was nearly twice as high as that which prevailed in 1883-4 or 1881, in the latter of which the mortality of child-bearing women in the colony generally was at its maximum, and as much as four or five times as high as it has been in many previous years. In 1883-4, 1 death of a mother took place in this institution to every 31 deliveries, or 28 births; in 1882-3, 1 to 86 deliveries or 77 births; in 1882 (first six months), 1 to 60 deliveries

* See table following paragraph 656 *ante*.

† There is reason to believe, however, 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 10 per cent. If this correction be applied to the average above stated, the proportion would be one death of a mother to as few as 185 births.—See 45th Annual Report of the Registrar-General of England, page xvii.

‡ Formerly known as the Lying-in Hospital.

§ Including 71 cases occurring outside the hospital at houses provided by the committee, amongst whom only 1 death occurred.

|| Including 2 cases of twins.

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; in 1878, 1 to 92 deliveries or 86 births; in 1877, 1 to 65 deliveries or 61 births; in 1876, 1 to 68 deliveries or 65 births; and in 1875, 1 to 67 deliveries or 62 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 death rate of the inmates is higher than that which prevails amongst child-bearing women in the general population.

704. 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 childbed 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, &c., 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 childbirth occurring is not known. The inaccuracy with which such deaths are often described has recently excited attention 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 childbirth.* Such a practice has been followed for some years in Victoria, and it is much to be wished it should be adopted by the other colonies of this group. The following table contains a statement of the deaths recorded as having occurred from childbirth and metria in all the Australasian colonies except Western Australia during the thirteen years ended with 1885, and the proportion of such deaths to every 10,000 children born alive in each colony:—

Deaths in
childbed in
Austral-
asian
colonies.

* See 45th Annual Report for the year 1882.

DEATHS FROM CHILDBIRTH AND PUERPERAL FEVER (OR METRIA)
IN AUSTRALASIAN COLONIES, 1873 TO 1885.

Year.	Number of Deaths from Childbirth and Puerperal Fever.					
	Total.	Per 10,000 Children Born Alive.	Total.	Per 10,000 Children Born Alive.	Total.	Per 10,000 Children Born Alive.
	VICTORIA.		NEW SOUTH WALES.		QUEENSLAND.	
1873 ...	171	60·85	...	...	23	40·21
1874 ...	251	93·66	...	...	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	73·93
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	39·73	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	*	*	69	59·12
Sums & } Means }	2,425	68·57	1,254	45·77	612	57·85
	SOUTH AUSTRALIA.		TASMANIA.		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	63·51	74	45·77
1877 ...	45	52·08	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	35·73	92	49·11
1882 ...	70	64·55	14	34·63	101	53·14
1883 ...	49	43·86	19	44·61	95	49·47
1884 ...	49	41·36	12	26·21	137	69·03
1885 ...	53	44·00	16	34·50	144	73·12
Sums & } Means }	622	50·01	243	53·51	1,178	52·60

Low death rate from childbirth in colonies, 1885.

705. The above figures show that, in proportion to the children born alive, the number of deaths of child-bearing women in 1885 was much below the average in all the colonies except Queensland and New Zealand. In the latter colony the rate in 1885, as well as in 1884, was exceptionally high.

Increase of deaths in childbed during epidemics in all the colonies.

706. The connexion between the prevalence of measles and scarlatina and of those circumstances which cause the deaths of women in childbed is exemplified in the returns of some of the neighbouring colonies as well as in those of Victoria; these epidemics being at their height during the period 1874 to 1876, concurrently with the

* Information not furnished.

greatest mortality occurring to child-bearing women. In one year of that period the rate in Victoria rose to nearly 1 death of a mother to every 100 children born alive, and in Tasmania to over 1 to every 100. In reference to a statement respecting this apparent connexion in the last issue of the *Victorian Year-Book*, Mr. W. R. E. Brown, the Registrar-General of New Zealand, points out and gives figures to show that it does not extend to his colony, and that, judging from those figures, "there does not appear to be in New Zealand any relation between the rates of mortality from childbirth and the prevalence of measles and scarlatina, as the combined number of deaths from these two diseases was the same in 1880, when the mortality from childbirth was lowest, as in 1885, when that mortality was highest." *

707. 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, and 1.94 for the year 1886. These and the following figures show Victoria to stand rather high in regard to the mortality of women in childbed as compared with many other countries, and especially so as it would appear that deaths from pregnancy, as well as from childbearing, 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 from Pregnancy and Child-bearing per 10,000 persons living.
Spain (principal towns)	...	...	...	...	...	3.77
Spain	...	...	...	...	...	3.56
Belgium	...	...	...	...	...	2.32
Prussia	...	...	...	...	...	2.20
Italy	...	...	...	...	...	2.13
Scotland (eight towns)	...	...	...	...	...	2.10
Switzerland	...	...	...	...	...	2.06
Switzerland (principal towns)	...	...	...	...	...	2.02
Scotland	...	...	...	...	...	1.87
Massachusetts	...	...	...	...	...	1.80
Denmark (towns)	...	...	...	...	...	1.76
Belgium (principal towns)	...	...	...	...	...	1.72
Ireland	...	...	...	...	...	1.65
England and Wales	...	...	...	...	...	1.60
Holland	...	...	...	...	...	1.43
Sweden	...	...	...	...	...	1.29
Sweden (principal towns)	...	...	...	...	...	1.27
Germany (principal towns)	...	...	...	...	...	1.23

708. Deaths from external causes, Class VII., in proportion to population, were formerly twice as numerous in Victoria as in England and Violent deaths.

* See Report upon the Statistics of New Zealand 1885, page xxii.

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

Wales ; but in recent years, as the number of individuals engaged in mining operations has decreased, 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. The last-named rate, however, is still higher by nearly a third 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 suicide being, in proportion to population, about a third more numerous, homicides more numerous by two-thirds, and executions twice as numerous.

Violent
deaths, 1886
and pre-
vious years.

709. The number of violent deaths recorded in Victoria during 1886 was 942, of which 803, or 85 per cent., were ascribed to accident ; 37, or 4 per cent., to homicide ; 101, or 11 per cent., to suicide ; and 1 was due 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, diarrhœa, and pneumonia.* Forty-four per cent. of the deaths from accidents in 1886 were due to fractures, 24 per cent. to drowning, and 11 per cent. to burns and scalds. Homicides were considerably above, but suicides only slightly above, the average of the previous five years, the latter numbering 101, as against 89 in 1885, and 86 in 1884. 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 1886 and the five years ended with 1885, the sexes of those who died being distinguished :—

VIOLENT DEATHS.

Causes of Death.	Year 1886.			Five Years: 1881 to 1885.				
	Males.	Females.	Total.	Males.	Females.	Total.		
Accidents :—								
Fractures and contusions	312	40	352	1,464	168	1,632		
Gunshot wounds ...	13	1	14		107	17	124	
Cuts, stabs, &c. ...	13	4	17			179	255	434
Burns and scalds ...	39	48	87		44		26	70
Sunstroke ...	12	3	15		11		1	12
Lightning ...	2	...	2	63	30	93		
Poison ...	18	6	24	16	2	18		
Snake, insect—bite ...	3	1	4	754	179	933		
Drowning ...	165	33	198	169	114	283		
Suffocation ...	40	14	54	44	19	63		
Others ...	28	8	36					
Total ...	645	158	803	2,851	811	3,662		
Homicide ...	21	16	37	53	57	110		

* See table following paragraph 643 *ante*.

VIOLENT DEATHS—*continued.*

Causes of Death.	Year 1886.			Five Years : 1881 to 1885.		
	Males.	Females.	Total.	Males.	Females.	Total.
Suicide :—						
Gunshot wounds ...	24	...	24	67	2	69
Cuts, stabs, &c. ...	19	2	21	61	13	74
Poison ...	10	3	13	45	26	71
Drowning ...	10	2	12	68	27	95
Hanging ...	23	3	26	131	7	138
Otherwise ...	4	1	5	15	1	16
Total ...	90	11	101	387	76	463
Execution ...	1	...	1	8	...	8
Grand Total ...	757	185	942	3,299	944	4,243

710. 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 in proportion to total deaths.

711. Males are much more subject to violent deaths than females. Of those who so died in 1886, 757, or 80 per cent., belonged to the male, and 185, or 20 per cent., to the female, sex. In the previous five years these proportions were 78 and 22 per cent. respectively.

Violent deaths of males and females.

712. 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 35½ years since Victoria has been an independent colony as many as 128 males have been executed.

Violent deaths : proportion of males and females.

713. 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.

Burns and scalds.

Suicidal
deaths.

714. One hundred and one persons took their own lives in 1886, and 89 in the previous year. During the five years ended with 1885 the mean annual number of deaths by suicide was 93.

Modes of
suicide in
Victoria.

715. Hanging is the most common mode by which men commit suicide, drowning and shooting with almost equal frequency the next, 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 twice in the 87 cases named in the table 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.

Modes of
suicide in
England.

716. Dr. Ogle, in an able and interesting paper on suicide, read by him before the Statistical Society of London, in February 1886, gives the following table, showing the proportion during a series of years 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:—

MODES OF COMMITTING SUICIDE IN ENGLAND AND WALES.

Methods.	Number by each Method per 1,000 by all Methods.		
	Males.	Females.	Both.
Hanging or strangulation ...	417	240	365
Drowning	152	264	185
Cut or stab	207	129	184
Poison	79	145	99
Shooting	67	2	48
Jump from height	21	36	25
Railway train	24	8	19
Otherwise	33	176	75
Total	1,000	1,000	1,000

Suicides of
Chinese.

717. Suicide frequently occurs amongst the Chinese. Eleven men of this race committed that act in 1886—all but one by hanging. The total number of Chinese males in the colony is about 12,000; so that those who committed suicide during the year were in the proportion of about 1 in 1,100. In the general population the proportion averages only 1 in about 10,000.

Suicides in
Austral-
asian
colonies.

718. According to the results in the following table, it would appear that, in proportion to population, suicide is more common in Victoria

* "Suicides in England and Wales," by William Ogle, M.A., M.D., F.R.C.P., *Journal of the Statistical Society*, March, 1886.

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 thirteen years ended with 1885 recorded in all the Australasian colonies except Western Australia :—

DEATHS FROM SUICIDE IN AUSTRALASIAN COLONIES,
1873 TO 1885.

Year.	Number of Deaths from Suicide.					
	Total.	Per 100,000 Persons Living.	Total.	Per 100,000 Persons Living.	Total.	Per 100,000 Persons Living.
	VICTORIA.		NEW SOUTH WALES.		QUEENSLAND.	
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	9·4	23	13·3
1876 ...	100	12·6	61	10·1	24	13·0
1877 ...	92	11·4	66	10·5	27	13·8
1878 ...	87	10·6	48	7·3	29	14·0
1879 ...	108	13·0	62	9·0	40	18·7
1880 ...	118	13·9	68	9·4	22	9·9
1881 ...	102	11·7	83	10·9	21	9·5
1882 ...	83	9·3	55	7·0	40	16·8
1883 ...	103	11·3*	54	6·5	37	13·8
1884 ...	86	9·2*	81	9·2	45	15·3*
1885 ...	89	9·3	†	...	36	11·7
Means...	96	11·5	62	8·9	29	13·2
	SOUTH AUSTRALIA.		TASMANIA.		NEW ZEALAND.	
1873 ...	10	5·1	6	5·8	20	7·0
1874 ...	22	10·9	6	5·8	20	6·3
1875 ...	24	11·5	6	5·8	29	8·1
1876 ...	15	6·9	6	5·7	42	10·8
1877 ...	17	7·3	10	9·4	32	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
1881 ...	34	11·8	6	5·1	42	8·5
1882 ...	18	6·3	3	2·5	53	10·4
1883 ...	31	10·4	5	4·0	55	10·4
1884 ...	31	10·0	7	5·5	57	10·4*
1885 ...	32	10·2	5	3·8	54	9·5
Means...	23	8·8	6	5·6	40	8·9

* Figures amended since last publication.

† Information not furnished.

Proportion
of suicides
in different
colonies.

719. 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, only four times in New South Wales and New Zealand, and six times in South Australia, during the thirteen years named in the table. The rate in Tasmania appears to be much lower than in any of the other colonies.

Suicides in
England
and Wales.

720. In England and Wales, according to figures given by Dr. Ogle,* the suicide rate is lower than in any of the Australasian colonies, except Tasmania. In England and Wales it increased considerably during the five years ended with 1880, since which period it appears to have remained uniform. The following are the figures referred to:—

DEATHS FROM SUICIDE IN ENGLAND AND WALES.

						Deaths from Suicide per 100,000 Persons Living.
1861 to 1865	...	...	...	...	...	6·52
1866 to 1870	...	...	...	...	...	6·64
1871 to 1875	...	...	...	...	...	6·62
1876 to 1880	...	...	...	...	...	7·38
1881 to 1885	...	...	...	...	...	7·38
				Mean	...	6·91

Suicides in
France.

721. Suicide in France appears to be much more rife than it is in England and Wales, or than in any of the Australasian colonies; it also seems to be largely increasing in that country. This is shown by the following calculations, which have been based upon figures given in a recent number of the *Journal Officiel*:—

DEATHS FROM SUICIDE IN FRANCE.

						Deaths from Suicide per 100,000 Persons Living.
1861 to 1865	...	...	...	...	...	12·4
1866 to 1870	...	...	...	...	...	13·5
1871 to 1875	...	...	...	...	...	16·9
1876 to 1880	...	...	...	...	...	16·9
1881 to 1884	...	...	...	...	...	18·9
				Mean	...	15·7

Suicides in
Foreign
countries.

722. Statistics of suicide in a number of countries have been collected with much care by Dr. Enrico Morselli, Professor of Psychological Medicine in the Royal University of Turin. Dr. Morselli arrives at the conclusion that suicide is increasing in almost every country; that “religion and morals have never reached the root of the calamity”; that

* See *Statistical Journal*, March, 1886, page 112.

the sole preventive, not only against suicide but against madness, would consist in "diminishing the struggle for life amongst men, and in developing in man the well-ordering sentiments and ideas by which to reach a certain aim in life; in short, to give force and energy to the moral character." From his work on the subject, the following proportions have been abstracted* :—

DEATHS FROM SUICIDE IN FOREIGN COUNTRIES.

	Deaths from Suicide in each year per 100,000 Persons Living.		Deaths from Suicide in each year per 100,000 Persons Living.
Saxony ...	31.1	Norway ...	7.5
Denmark ...	25.8	Belgium ...	6.9
Schleswig-Holstein ...	24.0	Hungary ...	5.2
Austria ...	21.2	Italy ...	3.7
France ...	15.0	Netherlands ...	3.6
Hanover ...	14.0	United States ...	3.5
Prussia ...	13.3	Russia ...	2.9
Bavaria ...	9.1	Spain ...	1.4
Sweden ...	8.1		

723. It will be observed that, in proportion to population, suicide is more rife in Saxony, Denmark, Schleswig-Holstein, Austria, France, Hanover, and Prussia than in Queensland or Victoria; and in those countries, with the addition of Bavaria, than in New South Wales, South Australia, or New Zealand; whilst Tasmania stands not only below these, but also below Sweden, Norway, and Belgium. The only countries quoted which stand below any of the Australasian colonies in point of frequency of suicide are Hungary, Italy, the Netherlands, the United States, Russia, and Spain. Suicides in Australasia and Foreign countries.

724. In addition to the above, figures for the following countries are given by Mr. Mulhall.† The observations extend over the years 1871 to 1877:— Suicides in certain countries.

DEATHS FROM SUICIDE IN CERTAIN COUNTRIES.

	Deaths from Suicide in each year per 100,000 Persons Living.		Deaths from Suicide in each year per 100,000 Persons Living.
Switzerland ...	20.2	Scotland ...	4.0
Germany ...	14.3	Ireland ...	1.7
Sweden and Norway ...	8.1		

725. Mr. Mulhall thinks that the most notable causes of the increase of suicide are "the increase of railways and commerce, the great consumption of spirits and flesh meat, the spread of secular education and infidelity, the rapid growth of urban and decline of rural life, the higher ratio of insanity, the increase of wealth, the new system of divorce, and Causes assigned for increase of suicide.

* See *Suicide*, by Henry Morselli, M.D. Table IV., page 30. London: Kegan Paul & Co., 1881.
 † *Dictionary of Statistics*, page 429.

the keener struggle for existence in Europe, owing to the greater density of population."

Suicide more
destructive
than war.

726. In another work* the same writer points out that suicide is a more terrible destroyer of human life than war, for whilst during the fifty years of the Queen's reign war has occasioned 52,000 deaths of subjects of the United Kingdom, and 316,000 deaths of subjects of France, Germany, and Austria, suicide has claimed 77,000 victims in the first-named country and 610,000 victims in the other three countries named.

Violent
deaths in
Austral-
asian
colonies.

727. According to the following figures, violent deaths during the four years ended with 1885 were less common in Victoria than in any other of the Australasian colonies, except South Australia and Tasmania :—

VIOLENT DEATHS IN AUSTRALASIAN COLONIES, 1882 TO 1885.

Colony.	Year.	Number of Violent Deaths.	
		Total.	Per 10,000 Persons Living.
Victoria ...	1882	841	9·44
	1883	908	9·97†
	1884	799	8·56†
	1885	846	8·83
	Mean of 4 years	848	9·20
New South Wales ...	1882	904	11·37
	1883	850	10·19
	1884	990	11·24
	1885	‡	...
	Mean of 3 years	915	10·93
Queensland ..	1882	439	18·48
	1883	396	14·78
	1884	509	17·27†
	1885	492	15·93
	Mean of 4 years	459	16·62
South Australia ...	1882	210	7·24
	1883	202	6·76
	1884	239	7·74
	1885	212	6·77
	Mean of 4 years	216	7·13
Western Australia ...	1882	53	17·44
	1883	59	18·89
	1884	51	15·78
	1885	45	13·21
	Mean of 4 years	52	16·33

* *Fifty Years of National Progress*, page 11.

† Figures amended since last publication.

‡ Information not furnished.

VIOLENT DEATHS IN AUSTRALASIAN COLONIES, 1882 TO 1885—
continued.

Colony.	Year.	Number of Violent Deaths.	
		Total.	Per 10,000 Persons Living.
Tasmania ...	1882	87	7·21
	1883	106	8·53
	1884	90	7·01
	1885	91	6·89
	Mean of 4 years	93	7·41
New Zealand ...	1882	505	9·92
	1883	494	9·33
	1884	548	9·98*
	1885	517	9·13
	Mean of 4 years	516	9·59

728. It will be readily believed that violent deaths are not so frequent in Victoria now as in the early days of the gold discoveries. By the following figures, however, which, with the exception of those in the first line, have been extracted from the appendix to the 40th Report of the Registrar-General of England, it appears that such deaths are still more common here than in any European country. Fatal accidents seem to occur with more frequency in Victoria than in any of the countries; and suicides than in any except Switzerland, Prussia, Austria, and Bavaria. Homicide, relatively to population, appears to be more prevalent than in the United Kingdom, Norway, Sweden, Prussia, Belgium, and Finland, but to be much less rife than in Switzerland, Bavaria, or Italy. It must be remembered, however, that the proportions in the table (except in the case of Victoria) have been calculated in relation to the events occurring in one year only, and might not hold good if those in a series of years were taken into account:—

Violent deaths in Victoria and European countries.

DEATH RATE FROM VIOLENCE IN VICTORIA AND IN CERTAIN EUROPEAN COUNTRIES.†

Countries.	Proportion to 100,000 Living of Deaths from—			
	Violence of all kinds.	Accident and Negligence.	Homicide.	Suicide.
Victoria ...	95·4	81·4	3·7	10·2
Switzerland ...	92·4	68·9	3·9	19·6
United Kingdom ‡	77·5	69·7	1·6	6·2
England and Wales ...	75·7	66·7	1·7	7·3
Scotland ...	72·0	68·2	·1	3·7
Ireland ...	39·1	35·3	1·7	2·1

* Figures amended since last publication.

† The proportions have been calculated upon the occurrences in Victoria during the five years, 1881 to 1885, in Norway during 1873, in Scotland during 1875, in Finland during 1874, in Prussia during 1875, and in other countries during 1876. The figures in the last column in a few instances differ from those of Dr. Morselli (*ante*), which have been calculated over a series of years.

‡ Including the shipping.

DEATH RATE FROM VIOLENCE IN VICTORIA AND IN CERTAIN
EUROPEAN COUNTRIES*—*continued.*

Countries.	Proportion to 100,000 Living of Deaths from—			
	Violence of all kinds.	Accident and Negligence.	Homicide.	Suicide.
Norway	72·4	64·1	1·3	7·0
Finland	62·6	55·7	3·5	3·4
Sweden	61·9	50·7	2·0	9·2
Prussia	61·6	46·1	2·1	13·4
Bavaria	51·9	37·7	3·9	10·3
Belgium	48·3	38·5	1·6	8·2
Austria	47·1	...	...	11·3
Italy	24·0	14·9	5·4	3·7

729. 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 twenty-eight and a half years ended with 30th June, 1887, embracing the whole period of the existence of railways in Victoria:—

DEATHS FROM RAILWAY ACCIDENTS, 1859 TO 1886-7.

Year.	Total Number.	Passengers.			Servants of the railway Department or of Contractors.			Others.		
		From causes beyond their own control.	From their own misconduct or want of caution.	Total.	From causes beyond their own control.	From their own misconduct or want of caution.	Total.	At crossings.	Trespassers.	Miscellaneous.
1859 to 1868	37	...	...	...	3	19	22	1	14	...
1869	4	...	...	...	...	2	2	...	1	1
1870	2	...	...	...	...	1	1	...	1	...
1871	6	...	...	...	...	2	2	...	2	2
1872	3	...	...	...	...	...	...	...	3	...
1873 ... ..	...	...	...	...	...	...	...	...	...	...
1874	10	...	...	...	4	...	4	1	4	1
1875	11	...	...	...	...	6	6	...	4	1
1876	23	...	...	...	3	10	13	2	6	2
1877	22	...	1	1	3	10	13	...	8	...
1878	16	...	...	...	...	7	7	2	6	1
1879	21	...	...	...	1	8	9	2	9	1
1880	18	...	...	...	...	7	7	3	6	2
1881	34	4	4	8	...	14	14	3	8	1
1882	38	1	1	2	...	22	22	3	9	2
1883	32	...	5	5	...	10	10	5	10	2
1884 (six months)...	10	1	...	1	4	2	6	...	3	...
1884-5	36	...	1	1	...	12	12	7	14	2
1885-6	38	...	1	1	1	15	16	5	14	2
1886-7†	50	4	...	4	2	14	16	5	25	...
Total killed ...	411	10	13	23	21	161	182	39	147	20

* See footnote (†) to preceding page.

† 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.

Railway accidents.

PERSONS INJURED BY RAILWAY ACCIDENTS, 1859 TO 1886-7.

Year.	Total Number.	Passengers.			Servants of the Railway Department or of Contractors.			Others.		
		From causes beyond their own control.	From their own misconduct or want of caution.	Total.	From causes beyond their own control.	From their own misconduct 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 ...	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	...	2	1
1882 ...	261	210	5	215	13	25	38	1	2	5
1883 ...	101	67	8	75	7	12	19	2	1	4
1884 (six months) ...	90	44	9	53	10	21	31	2	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
Total injured ...	1495	770	116	886	115	360	475	26	43	65

730. It will be observed that, in the whole period of twenty-eight and a half years, 411 persons were killed and 1,495 were injured on the State lines of railway, and that, exclusive of trespassers, persons crossing the lines, &c., 174 of the former and 476 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, 23 were passengers, and as many as 182 railway or contractors' servants; 13 of the former, and 161 of the latter, having suffered in consequence of their own carelessness. The passengers injured numbered 886, and the railway servants 475; as many as 360 of the latter, but only 116 of the former, suffered from their own action. At crossings, 39 persons were killed, and 26 injured. As many as 147 trespassers were killed, no less than 53 being in the last 3 years; these no doubt included persons who committed suicide by placing themselves in the way of trains. During the same three years the trespassers injured have only numbered 16.

* See footnote (†) on last page.

Mining accidents.

731. In the thirteen years ended with 1886, embracing the whole period during which the Regulation and Inspection of Mines and Machinery Statutes* have been in operation, 757 persons lost their lives, and 1,700 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 1886.

Year.	Average Number of Miners at work.	Number of Persons—			Numbers per 1,000 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	217	300	1·97	5·16	7·13
1876	41,531	55	170	225	1·32	4·10	5·42
1877	38,860	64	154	218	1·65	3·96	5·61
1878	37,212	40	106	146	1·07	2·85	3·92
1879	37,195	48	112	160	1·29	3·01	4·30
1880	38,076	50	89	139	1·31	2·34	3·65
1881	38,436	72	108	180	1·87	2·81	4·68
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
Means	36,371	58	131	189	1·60	3·59	5·19

Mining accidents, 1886.

732. In 1886, fatal mining accidents numbered 4 more than in the previous year, and, in proportion to the number of miners at work, was somewhat above 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.

733. According to the average of the thirteen years to which reference is made, 1 miner in every 625 loses his life annually. In 1886 the proportion was 1 in 578. These proportions contrast favorably with the proportion of fatal accidents in the metalliferous mines of Great Britain and Ireland, where, according to the report of 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 1 in every 607 during the ten years 1874 to 1883. This is exclusive of accidents in 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 life annually by accident.

* 37 Vict. No. 480, 41 Vict. No. 583, 45 Vict. No. 719, and 47 Vict. No. 783.

734. It appears by the following table that, in the thirteen years named, 1,194, or 48 per cent., of the mining accidents in Victoria were caused by the fall of earth or materials; 484, or 20 per cent., by falling down shafts, cage accidents, &c.; and 299, or 12 per cent., by explosions, principally of blasting charges:—

CAUSES OF MINING ACCIDENTS, 1874 TO 1886.

Nature of Accident.	Number of Persons—		
	Killed.	Injured.	Total.
Fall of earth or rock underground	298	536	834
" " on surface	99	73	172
" materials down shafts, passes, &c.	40	146	186
" " winzes, &c.	2	...	2
Falling down shafts	109	148	257
" " winzes, shoots, &c.	15	68	83
Cage accidents	45	99	144
Timber accidents	14	20	34
Truck accidents	5	41	46
Machinery in motion	17	71	88
Explosion of charges of gunpowder	20	128	148
" " guncotton	1	10	11
" " nitro-glycerine compounds	23	53	76
" stored explosives	6	28	34
" boilers	2	5	7
" fire damp	1	22	23
Foul air	10	...	10
Flooding of mines	23	...	23
Undescribed	27	252	279
Total	757	1,700	2,457

735. One effect of the new classification is to remove from the list of diseases, and to place under the head of "Ill-defined and unspecified causes" instead, a number of indefinite causes of death, which, although constantly appearing in medical certificates, are almost worthless for purposes of statistical investigation. Prominent among these are atrophy and debility, dropsy, tumor, mortification, abscess, hemorrhage, &c. It is obviously desirable that as few entries as possible should be made under this head, and it may be hoped that medical men will, as far as possible, avoid such terms in future when certifying to the cause of death, and that, wherever practicable, the name of the primary complaint may be given, rather than that of some affection which is merely a result or symptom thereof. In the year under review there were no fewer than 1,197 deaths from ill-defined or unspecified causes, or nearly per cent. of the deaths from all causes, as compared with 7½ per cent.

Ill-defined and unspecified causes of death.

in the five years ended with 1885, and 7 per cent. in the ten years ended with 1880. The great majority of these—viz., 1,049 in 1886—were returned as from atrophy and debility; whilst 40 were set down to tumours, 25 to dropsy, 21 to abscess, 16 to other ill-defined causes, and 46 to unspecified causes.

Atrophy and debility in Victoria.

736. The mortality under the head of atrophy and debility is almost entirely confined to infants and young children—thus, of the 1,049 deaths set down thereto in 1886, 967 were under 5 years, 869 were under 1 year, 320 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 years ended with 1886 :—

DEATHS FROM ATROPHY AND DEBILITY, 1867 TO 1886.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1867	399	347	746	1877	344	304	648
1868	337	328	665	1878	389	311	700
1869	386	337	723	1879	407	304	711
1870	422	368	790	1880	369	324	693
1871	368	311	679	1881	392	345	737
1872	354	338	692	1882	493	442	935
1873	378	336	714	1883	412	387	799
1874	402	337	739	1884	488	365	853
1875	413	349	762	1885	541	414	955
1876	344	305	649	1886	577	472	1,049
Annual mean 1867 to 1876	380·3	335·6	715·9	Annual mean 1877 to 1886	441·2	366·8	808·0

Sex of those who died of atrophy, &c.

737. Notwithstanding the proportions of the sexes of persons at ages to be affected by atrophy and debility were about equal, it will 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 83 to every 100 males.

Atrophy and debility in Australasian colonies

738. The practice of returning atrophy and debility as causes of death appears to be no less common in the other Australasian colonies than in Victoria, the mortality (generally of infants or young children) 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 four years ended with 1885 :—

DEATHS FROM ATROPHY AND DEBILITY IN AUSTRALASIAN COLONIES,
1882 TO 1885.

Colony.	Year.	Number of Deaths from Atrophy and Debility.	
		Total.	Per 10,000 Persons Living.
Victoria ...	1882	935	10·49
	1883	799	8·77*
	1884	853	9·13*
	1885	955	9·96
	Mean of 4 years	885	9·59
New South Wales ...	1882	776	9·76
	1883	832	9·97
	1884	975	11·07
	1885	1,059	11·38
	Mean of 4 years	910	10·54
Queensland ...	1882	299	12·58
	1883	344	12·84
	1884	438	14·86*
	1885	402	13·02
	Mean of 4 years	371	13·32
South Australia ...	1882	337	11·62
	1883	353	11·81
	1884	380	12·31
	1885	307	9·81
	Mean of 4 years	344	11·39
Western Australia ...	1882	30	9·87
	1883	19	6·08
	1884	35	10·83
	1885	48	14·09
	Mean of 4 years	33	10·22
Tasmania ...	1882	112	9·28
	1883	124	9·98
	1884	126	9·81
	1885	124	9·38
	Mean of 4 years	122	9·61
New Zealand ...	1882	334	6·56
	1883	269	5·08
	1884	304	5·54*
	1885	294	5·19
	Mean of 4 years	300	5·59

* Figures amended since last publication.

Causes of death of octogenarians.

739. The number of deaths of persons over 80 years of age, and their exact ages at death, have been already quoted for the year 1886 and the two preceding periods of five and eleven years respectively.* The following table shows the causes of death of these persons:—

CAUSES OF DEATH OF OCTOGENARIANS, 1871 TO 1886.

Causes of Death.	Year 1886.		Five Years, 1882-86.		Eleven Years ended with 1881.	
	Males.	Females.	Males.	Females.	Males.	Females.
Quinsy ... ..	...	...	...	...	...	1
Diphtheria ... ..	...	...	1	...	...	...
Typhoid Fever, &c. ... ..	...	1	4	2	3	2
Erysipelas	1	1	6	2	3	7
Carbuncle, Boil ... ..	...	...	...	1	3	2
Influenza, Coryza, Catarrh ... ..	...	...	5	2	5	11
Dysentery and Diarrhœa	12	7	43	37	51	36
Cholera ... ..	...	...	...	...	6	1
Rheumatism ... ..	...	1	4	3	7	4
Venereal Diseases	2	...	2	...	4	...
Privation	1	...	2	...	3	...
Scurvy ... ..	...	...	...	...	1	...
Intemperance ... ..	...	...	...	...	2	1
Hydatid ... ..	...	...	...	...	1	...
Gout	1	...	3	1	2	...
Dropsy ... ..	...	...	6	9	20	18
Cancer	7	4	32	14	35	13
Tabes Mesenterica	1	...	1	...	...	...
Tumour ... ..	...	...	2	1	...	3
Mortification ... ..	...	...	4	2	9	3
Phthisis ... ..	...	1	2	3	3	3
Abscess, &c. ... ..	...	...	...	...	1	...
Brain Diseases, &c.	26	21	110	79	136	103
Heart Diseases, &c.	24	10	81	48	66	46
Lung Diseases, &c.	47	29	187	133	183	116
Stomach Diseases, &c.	11	7	43	27	37	21
Kidney Diseases, &c.	10	3	44	8	47	1
Genetic Diseases ... ..	...	...	1	1	...	1
Skin Diseases, &c. ... ..	...	...	...	...	4	2
Old Age	155	117	628	483	631	538
Accidents	7	3	22	19	22	18
Suicide ... ..	...	...	...	2	4	...
Unspecified causes	4	3	4	3	2	...
Total	309	208	1,237	880	1,291	951

Complaints most fatal to octogenarians—1871-86.

740. It will be noticed that during the seventeen 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,

* See table following paragraph 631 *ante*.

over 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.

741. Elaborate tables showing the occupations at death of males 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 the last three 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* :—

Occupations
at death.

OCCUPATIONS OF ADULT MALES AT DEATH IN ORDER OF FATALITY.

			Annual Deaths of Males over 20 per 1,000 Living.
1.	Engaged in industrial pursuits	...	21·89
2.	„ entertaining and serving	...	20·42
3.	„ commercial pursuits	...	17·62
4.	„ professional pursuits	...	16·51
5.	„ food and drinks	...	15·53
6.	„ books and literature	...	12·48
7.	„ on land and with animals	...	9·96

742. As bearing upon the mortality, it is important to consider whether the number of medical men is sufficient to minister to the 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 favorably 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 various
countries.

* For more complete information on the fatality of different occupations 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.*

MEDICAL MEN IN PROPORTION TO POPULATION AND AREA IN
VARIOUS COUNTRIES.

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 ...	4·7
England and Wales ...	1881	58	Italy ...	6·2
Victoria ...	1881	53	Holland ...	6·9
Scotland ...	1881	50	Switzerland ...	7·3
Ireland ...	1881	48	Ireland ...	13·2
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 ...	33·6
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 ...	1882	16	Norway ...	205·0
Sweden ...	1883	13	Sweden ...	294·9

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 kilometres, which have been converted into square miles on the assumption that one of the former is equal to '386 of one of the latter.

Sickness and
deaths in
general
hospitals.

743. There are 38 general hospitals in Victoria, 9 of which are also benevolent asylums. The total number of cases of sickness treated in these institutions during the year ended 30th June, 1886, was 15,987, and the number of deaths was 1,719. In the previous twelve months the cases of sickness treated numbered 14,870, and the deaths 1,653. There was thus 1 death to every 9·3 cases of sickness treated in hospitals during the year 1886, as against 1 death to every 9·0 cases of sickness treated therein during the previous year. The following table gives a list of the various hospitals throughout the colony, also a statement of the number of cases treated, the number of deaths which occurred, in the year ended 30th June, 1886, and the proportion of deaths to cases in each hospital during that and the previous year :—

SICKNESS AND MORTALITY IN GENERAL HOSPITALS.

Name of Hospital.	Year ended 30th June, 1886.			Percentage of Mortality to Cases treated, Year ended 30th June, 1885.
	Number of Cases treated.	Number of Deaths.	Percentage of Mortality to Cases treated.	
Alexandra ...	24	3	12·50	6·67
Amherst ...	366	23	6·28	7·49
Ararat* ...	330	20	6·06	8·24
Ballarat ...	1,157	102	8·82	10·98
Beechworth ...	483	33	6·83	9·58

* This institution is also a Benevolent Asylum.

SICKNESS AND MORTALITY IN GENERAL HOSPITALS—*continued.*

Name of Hospital.	Year ended 30th June, 1886.			Percentage of Mortality to Cases treated, Year ended 30th June, 1885.
	Number of Cases treated.	Number of Deaths.	Percentage of Mortality to Cases treated.	
Belfast*	58	3	5·17	5·36
Bendigo	1,192	126	10·57	10·11
Castlemaine	556	52	9·35	9·05
Clunes	132	14	10·61	8·28
Colac... ..	74	6	8·11	5·26
Creswick	269	12	4·46	6·09
Daylesford*	200	20	10·00	13·41
Dunolly	333	36	10·81	7·99
Echuca	210	13	6·19	12·02
Geelong*	851	74	8·70	9·58
Hamilton*	262	27	10·31	8·15
Heathcote	61	11	18·03	14·29
Horsham	250	22	8·80	11·67
Inglewood	378	27	7·14	6·69
Kilmore	179	18	10·06	10·08
Kyneton	386	14	3·63	5·81
Maldon*	58	9	15·52	17·31
Mansfield	95	8	8·42	8·49
Maryborough	360	27	7·50	7·73
Melbourne	4,066	630	15·50	16·99
Melbourne (Alfred)	1,340	185	13·81	10·96
Melbourne (Austin)†	118	33	28·00	20·41
Melbourne (Homœopathic)	276	14	5·07	5·26
Mooroopna	348	27	7·76	7·56
Nhill	82	9	10·98	7·02
Pleasant Creek (Stawell)*	281	28	9·96	11·16
Portland*	26	1	3·85	8·51
Sale	301	29	9·63	12·50
St. Arnaud	303	17	5·61	6·85
Swan Hill	122	8	6·56	5·83
Wangaratta	266	26	9·77	9·31
Warrnambool*... ..	96	8	8·33	9·73
Wood's Point	98	4	4·08	3·92
Total	15,987	1,719	10·75	11·12

744. In proportion to the cases treated in 1885-6, the greatest mortality occurred in the Austin (Melbourne),† Heathcote, Maldon, and Melbourne Hospitals; and the lowest in the Kyneton, Portland, Wood's Point, Creswick, Homœopathic (Melbourne), and Belfast Hospitals. In the previous year the rate of mortality was highest in the Austin (Melbourne),† Maldon, Melbourne, and Heathcote Hospitals; and the least in the Wood's Point, Homœopathic (Melbourne), Colac, Belfast and Swan Hill Hospitals.

745. The following figures, calculated from numbers given in Dr. Raseri's paper‡ show the proportions of deaths to inmates of hospitals

Highest and lowest death rates.

Proportion of deaths in Hospitals in various countries.

* These institutions are also Benevolent Asylums.

† For incurables.

‡ Page 195.

in various countries; those for Victoria during the six years 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	...	...	...	1883	...	10·43
Italy	...	...	...	1885	...	10·22
Saxony	...	...	...	1882	...	9·40
Norway	...	...	...	1883	...	9·36
France	...	...	...	1883	...	9·14
Portugal	...	...	...	1884	...	9·02
Hungary	...	...	...	1882	...	8·68
Prussia	...	...	...	1882	...	8·24
German Empire	...	...	...	1882	...	7·18
Sweden	...	...	...	1883	...	6·23
Baden	...	...	...	1882	...	4·86
Bavaria	...	...	...	1882	...	3·86
Württemberg	...	...	...	1882	...	3·49

Deaths in
Victorian
and other
Hospitals.

746. The mortality in hospitals would appear by the figures to be greater in Victoria than in any of the other countries named. 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, &c., 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
Infirmery
Department

747. The patients treated in the Infirmery Department* of the Women's Hospital numbered 253 during the year 1884-5, and 466 in 1885-6. The deaths in the same institution numbered 11 in the former, and 21 in the latter year. Therefore, 1 patient in 23 died in 1884-5, and 1 in 22 in 1885-6.

Deaths of
mothers in
Women's
Midwifery
Department

748. In the Midwifery Department* of the Women's Hospital, Melbourne, 564 women were confined in 1884-5, and 550 in 1885-6.† Thirty-three died in the former period, and 16 in the latter. Thus, 1 woman in 17 died in 1884-5, and 1 woman in 34 in 1885-6. From the founding of the institution to the end of June, 1886, 12,435 women were accouched therein,† of whom 221 died, which is equivalent to 1 death to every 56 confinements.‡

Deaths of
infants in
Women's
Hospital.

749. The infants born alive in the Women's Hospital numbered 533 in the year 1884-5, and 514 during the year 1885-6, and of these, 50

* The Midwifery and the Infirmery Departments of the "Women's Hospital" were formerly known under the names of the "Lying-in Hospital" and the "Hospital for Diseases of Women and Children" respectively.

† Including a few women who were accouched outside the hospital by midwives connected with the institution.

‡ See paragraph 703 *ante*.

in the former and 24 in the latter year died before being taken from the institution; thus 1 infant in 11 died in the former, and 1 in every 21 in the latter year.*

750. In the Melbourne Hospital for Sick Children 407 cases were treated, and 35 deaths occurred, in the year 1884-5; 593 cases were treated, and 35 deaths occurred, during the year 1885-6. These numbers furnish proportions of 1 death to every 12 patients in the former, and 1 death to every 17 patients in the latter, period. Sickness and deaths in Children's Hospital.

751. Cases of sickness in benevolent asylums (exclusive of Melbourne Immigrants' Home) numbered 1,959 in 1884-5, and 1,817 in the year 1885-6; deaths numbered 217 and 198. The deaths were thus to the cases treated in the proportion of 1 to every 9 in both years. Sickness and deaths in benevolent asylums.

752. In the Melbourne Immigrants' Home the cases of sickness in the year 1884-5 amounted to 460, and the deaths to 89, or 1 death to every 5 cases of sickness. In the year 1885-6 the cases of sickness in this institution numbered 520, and the deaths 99, or 1 death to every 5 cases of sickness. Sickness and deaths in Immigrants' Home.

753. In 1884-5 the cases of sickness in orphan asylums numbered 164, and the deaths 4. In the year ended 30th June, 1885-6, these numbers were 143 and 3 respectively. Thus, in 1884-5, 1 death occurred to every 40 cases of sickness, and, in 1885-6, 1 death to every 48 cases of sickness. Sickness and deaths in orphan asylums.

754. In hospitals for the insane during 1885, the cases of sickness numbered 1,071, and during 1886 they numbered 906. The deaths amounted to 223 at the former period, and 256 at the latter, or an average of 1 death to every 5 cases of sickness in the former, and 1 to every 4 cases of sickness in the latter year. Sickness and deaths in lunatic asylums.

755. In gaols and penal establishments 990 cases of sickness occurred in 1885, and 801 in 1886. The deaths in these two periods respectively were 71 and 59 (exclusive of one death by execution). Thus, 1 death occurred to every 14 cases in both years. Sickness and deaths in gaols.

756. Altogether the number of deaths in penal or charitable institutions during 1885-6 † was 2,494, being in the proportion of 1 to every 6 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 1885-6:— Deaths in public institutions.

* See paragraph 621 *ante*.

† 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, 1886.

DEATHS IN PUBLIC INSTITUTIONS, 1885-6.

	Number of Deaths.
General hospitals	1,719
Women's Hospital—	
Infirmiry Department*	21
Midwifery Department†	40
Hospital for Sick Children	35
Benevolent asylums	198
Melbourne Immigrants' Home	99
Orphan asylums	3
Eye and Ear Hospital	2
Victorian Asylum and School for the Blind	2
Hospitals for the insane	256
Female refuges	9‡
Victorian Infant Asylum	14
Industrial and reformatory schools	37§
Gaols (exclusive of Police gaols)	58
Penal establishments	1
Total	2,494

NOTE.—In 1885-6 no death occurred in the Deaf and Dumb Institution.

757. In England and Wales during 1882, 1 out of every 10 deaths 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.

758. 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:—

SICKNESS AND INFIRMITY, 1881.

	Males.	Females.	Total.
Suffering from sickness	7,381	5,822	13,203
" " accident	1,162	202	1,364
" " deafmuteism	168	119	287
" " blindness	502	240	742
" " lunacy	1,590	1,243	2,833
" " idiocy	108	53	161
" " epilepsy	176	114	290
" " lameness, mutilation, deformity, &c. ¶	83	49	132
Total	11,170	7,842	19,012

* Formerly known as the Hospital for Diseases of Women and Children.

† Formerly known as the Lying-in Hospital. The deaths include those of 24 infants born in the institution.

‡ This includes the deaths of 6 infants in the Female Refuge, Madeline-street.

§ Including deaths of boarded-out and licensed children.

|| 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.

Deaths in
public
institutions
In England.

Sick and
infirm.

759. The total numbers furnish a proportion of 221 persons suffering from infirmity in every 10,000 of the population, of 247 infirm males in every 10,000 males, of 191 infirm females in every 10,000 females. Proportion of infirm to population.

760. 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. Sickness and accidents.

761. The deafmutes, the blind, the lunatics, the idiots, and the crippled, maimed, and deformed persons represent those having some 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. Permanent infirmities.

762. The deaf and dumb were in the proportion of 3·33 per 10,000 persons 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. Deafmutesism.

763. The following are the proportions per 10,000 of the population of deaf and dumb persons in as many Australasian Colonies and other countries as the information is available for:— Deaf-muteism in various countries.

DEAFMUTEISM IN VARIOUS COUNTRIES.

	Deafmutes per 10,000 living.		Deafmutes per 10,000 living.
Switzerland	24·52	France	6·26
Austria	13·07	Denmark	6·20
Hungary	12·63	Great Britain and Ireland	5·74
Sweden	10·23	Tasmania	5·44
Prussia	10·19	Italy	5·37
Finland	10·18	Spain	4·59
Germany (exclusive of Prussia)	9·31	Belgium	4·45
Norway	8·64	Holland	3·35
Canada	8·05	Victoria	3·33
Portugal	7·47	South Australia	2·90
United States	6·75	Western Australia	2·36
Greece	6·46	New Zealand	2·33

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.

Deaf-
muteism in
Australasia
and else-
where.

764. It will be observed that the proportions of deaf and dumb persons to the population are smaller in New Zealand, Western Australia, South Australia, and Victoria, than in any other countries; 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.

Blindness.

765. Blind persons in Victoria were found in 1881 to be in the 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 various
countries.

766. Subjoined are the proportions of blind persons to the populations of the respective countries named:—

BLINDNESS IN VARIOUS COUNTRIES.

	Blind persons per 10,000 living.
Portugal	21·90
Finland ...	21·15
Tasmania	16·00
Spain ...	14·79
Western Australia	13·79
Norway ...	13·57
Hungary	13·24
Great Britain and Ireland ..	9·85
United States	9·75
Austria ...	9·07
Greece ...	8·96
Victoria ...	8·60
France ...	8·37
Prussia ...	8·31
Belgium ...	8·11
Sweden ...	8·06
Germany (exclusive of Prussia)	7·93
Denmark	7·86
Italy ...	7·63
Switzerland	7·61
South Australia ...	7·06
Canada ...	6·19
Holland ...	4·45
New Zealand	2·82

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.

Blindness in
Australasian
colonies and
elsewhere.

767. 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 12, but a smaller one than 11 of the other countries named; whilst Western Australia has a larger proportion than

all but 4, and Tasmania than all but 2 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.

768. Lunatics in Victoria were in the proportion of 32·85 per 10,000 Lunacy. 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.

769. From whatever cause, lunacy appears to be much more rife in Lunacy in Victoria than in England and Wales. When the census of 1881 was England and Wales. 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.*

770. The only Australasian colonies besides Victoria which collected Lunacy in complete returns of lunacy apart from idiocy were New Zealand, South Austral-
asian Australia, and Tasmania, in all of which the proportion was lower colonies. 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 persons.
2. Tasmania	"	"	334 "
3. South Australia	"	"	436 "
4. New Zealand	"	"	437 "

771. 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 Queensland. houses, gaols, &c. 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.

772. Persons returned as idiots in this colony were in the proportion Idiocy. 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.

773. The following are the proportions of idiots to the populations of Idiocy in three of the Australasian colonies and various countries. It is probable various that imbeciles are included with idiots in most if not all the countries countries. out of Australasia, as the proportions relating to such countries are in every case higher than those relating to New Zealand and Victoria,

* See General Report on the Census of England and Wales, 1881, page 67.

and in all cases but four they are also higher than those relating to Tasmania :—

IDIOCY IN VARIOUS COUNTRIES.

						Idiots per 10,000 living.
United States	...	...	...	...	...	15·33
Portugal	...	...	...	...	...	15·09
Austria	...	...	...	...	...	14·64
Germany (exclusive of Prussia)	...	...	...	...	...	13·65
Great Britain and Ireland	...	...	...	...	...	12·92
Hungary	...	...	...	...	...	11·86
France	...	...	...	...	...	11·40
Denmark	...	...	...	...	...	8·31
Italy	...	...	...	...	...	6·91
Tasmania	...	...	...	...	...	6·57
Greece	...	...	...	...	...	6·53
Spain	...	...	...	...	...	5·47
Belgium	...	...	...	...	...	5·02
Sweden	...	...	...	...	...	3·92
Victoria	...	...	...	...	...	1·87
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.

774. 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.

775. 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.

Central
Board of
Health.

776. The Victorian Central Board of Health, which consists of a President and nine members, renders important service in devising and carrying into effect measures for the preservation of the public health, and especially in preventing the spread of contagious diseases. The Board meets fortnightly, but the President, who is a salaried officer, and gives his whole time and attention to the duties of his position, is empowered to take all necessary action during the intervals, reporting fully to the Board at its next meeting. The number of Local Boards is 184, and these are in constant communication with, and take instructions from the Central Board. A short account of its work and objects, written by Mr. A. P. Akehurst, the President of the Central Board, specially for the *Victorian Year-Book*, together with several important circulars issued by the Board, was published in an Appendix near the

end of the *Victorian Year-Book* 1885-6. The Board in their report for 1886-7,* lays down the following as the position which a Central Board of Health ought to occupy :—

“To keep all local authorities and their officers in the active exercise of their own legally-imposed and responsible functions; to make itself acquainted with any default, and to remedy it; to direct inquiries, medical and otherwise; to give advice and plans when required; to sanction some of the larger proceedings of the local authorities; to issue provisional orders, subject to Parliamentary confirmation; to receive complaints and appeals; to issue medical regulations on emergencies, and to collect medical reports.”

777. The following are the results of meteorological observations taken at different stations throughout the colony during 1886. These 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 :—

Meteorological observations, 1886.

METEOROLOGICAL OBSERVATIONS AT VARIOUS STATIONS, 1886.

Stations.	Height above Sea-level.	Temperature in the Shade.		
		Max.	Min.	Mean.
	feet.	°	°	°
Portland	37·0	101·0	29·0	56·6
Gabo Island	50·0	94·0	32·0	57·0
Melbourne	91·3	104·1	28·1	57·1
Cape Otway	270·0	100·0	39·0	55·0
Wilson's Promontory	300·0	104·0	40·0	56·4
Echuca	314·0	99·0	27·0	59·6
Sandhurst	701·0	107·0	29·0	58·3
Ballarat	1,438·0	103·2	28·0	53·4

Stations.	Mean Atmospheric Pressure.	Days on which Rain fell.	Amount of Rainfall.	Mean Relative Humidity.	Amount of Cloud.
	inches.	No.	inches.	0-1.	0-10.
Portland	29·993	188	33·49	·74	4·5
Gabo Island	29·939	134	39·69	·84	5·6
Melbourne	29·959	128	24·00	·71	6·0
Cape Otway	29·762	166	36·53	·80	6·4
Wilson's Promontory	29·643	172	47·17	·75	6·3
Echuca	29·655	59	17·52	...	...
Sandhurst	29·291	106	21·42	·67	4·3
Ballarat	28·532	148	27·17	·73	5·2

Meteorology 778. The following are the results for Melbourne in each of the in Mel-
bourne, 1864 to 1886. twenty-three years ended with 1886 :—

METEOROLOGICAL OBSERVATIONS AT MELBOURNE.—RETURN FOR
TWENTY-THREE YEARS.

(Observatory 91·3 feet above the Sea-level.)

Year.	Temperature in the Shade.			Mean Atmospheric Pressure.	Days on which Rain fell.	Amount of Rainfall.	Mean Relative Humidity.	Mean Amount of Cloud.
	Max.	Min.	Mean.					
	°	°	°	inches.	No.	inches.	0-1.	0-10.
1864	96·6	30·5	57·1	29·94	144	27·40	·72	6·1
1865	103·4	30·9	56·5	29·94	119	15·94	·68	5·6
1866	108·2	28·0	57·8	29·95	107	22·41	·70	5·5
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	5·8
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	58·0	29·94	134	25·61	·72	6·0
1874	102·7	29·3	56·6	29·93	134	28·10	·72	6·1
1875	110·4	31·1	56·6	29·89	158	32·87	·72	6·2
1876	110·7	29·0	57·0	29·93	134	24·04	·70	5·8
1877	100·7	31·0	56·7	29·99	124	24·10	·70	5·8
1878	103·4	31·1	57·4	29·90	116	25·36	·71	6·0
1879	106·0	30·5	56·8	29·92	127	19·28	·71	5·8
1880	106·5	29·0	57·8	29·92	147	28·48	·72	6·0
1881	99·9	31·9	57·1	29·97	134	24·08	·68	5·9
1882	110·5	31·5	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	29·94	128	25·85	·71	6·2
1885	101·6	29·9	57·1	30·00	123	26·94	·71	6·3
1886	104·1	28·1	57·1	29·96	128	24·00	·71	6·0
Means	105·1	30·1	57·2	29·94	130	25·46	·71	5·9

Observations in 1886 compared with means.

779. It will be noticed that in 1886, according to observations taken at the Melbourne Observatory, the maximum temperature was 1 degree, and the minimum temperature 2 degrees, below the mean of the maxima and minima in twenty-three years; that the mean temperature was very slightly below, and the mean relative humidity about the average, but the mean atmospheric pressure was slightly above the average of the same period; also that, although the amount of cloud which prevailed was above, rain fell on two days less than usual, and the rainfall was nearly $1\frac{1}{2}$ inches below, the average.

Observations in 1886 and former years compared.

780. During the period of twenty-three years a higher temperature than the maximum of 1886 was experienced in twelve, and a lower one than the minimum in three, of the previous years; the mean temperature was equalled in four years, and was exceeded in all the other

years except seven; the mean atmospheric pressure of 1886 was the highest with three exceptions; the number of days on which rain fell was exceeded in all the other years except nine; the amount of rainfall, which had been steadily increasing since 1882, and was in 1885, with one exception, higher than in any year since 1875, showed a marked falling-off in 1886.

781. The mean temperature of Melbourne over a series of years (57·2°) corresponds with that of Bathurst, a town in the interior of New South Wales, situated 2,150 feet above the sea-level, and is about equal to that of Washington (56·9°), Bordeaux (57·0°), Madrid (57·2°), and Marseilles (58·3°). It is 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°).*

Mean temperature in Melbourne and elsewhere.

782. The mean rainfall in Melbourne (25·46in.) corresponds approximately with that of Ventnor in England (25·5in.), Bathurst in New South Wales (25·0in.), and Toulouse in France (24·9in.). It is above that in London (24·0in.), Nottingham (23·7in.), or Paris (22·9in.), is 5 inches above that in Adelaide (20·5in.), but is only about half as much as that in Sydney (50·1in.).*

Mean rainfall in Melbourne and elsewhere.

783. It may be remarked that a fall of snow took place in Melbourne on the 26th July, 1882, on which day the lowest temperature in the shade was 37° and the highest 44°. This is a most unusual occurrence, no other such instance being remembered since the 29th and 30th August, 1849, when snow fell heavily.

Fall of snow in Melbourne, 1882.

784. An extended account of the meteorology and climate of Victoria will be found in the *Victorian Year-Book*, 1874, paragraphs 54 to 95.

Meteorology elsewhere treated on.

PART IV.—PRODUCTION.

785. The mode of disposing of Crown lands in Victoria has undergone numerous changes.† At first it was necessary that all lands should be offered at auction before passing into the hands of private individuals, an upset price, according to its value, being placed upon it by the Government. Until 1840 the minimum upset price was 12s. per acre, it was then raised to 20s. Land which had passed the auctioneer's

Alienation of Crown lands.

Special surveys.

* The observations, except those for Melbourne and Adelaide, 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.

† Mr. N. Wimble, of the Department of Lands and Survey, has been kind enough to verify the facts in the first sixteen paragraphs of this part.