

222. During the last twenty-eight years about thirty-five millions sterling have been expended by the General Government on public works, including railways, roads and bridges, Melbourne and country water supply, and other works and buildings. Of this amount, over a million and a third was spent in 1878. The whole is exclusive of the sums expended by local bodies on public works, roads, &c., by the Melbourne and Hobson's Bay United Railway Company and its predecessors on the construction and maintenance of their lines, and on the Port of Melbourne,\* since the 1st January 1877. The following table gives the amounts expended by the State prior to and during 1878 :—

GOVERNMENT EXPENDITURE ON PUBLIC WORKS. †

Public Works.	Amount Expended.		
	Prior to 1878.	During 1878.	Total.
	£	£	£
Victorian railways ... ..	15,741,657	935,666	16,677,323
Roads and bridges ... ..	6,857,267	11,888	6,869,155
Melbourne water supply (Yan Yean)	1,438,129	86,229	1,524,358
Other waterworks ... ..	1,740,232	34,512	1,774,744
Other public works ... ..	7,851,898	313,039	8,164,937
Total ... ..	33,629,183	1,381,334	35,010,517

PART IV.—VITAL STATISTICS.

223. The marriages celebrated in Victoria during 1878 numbered 5,092, as against 5,103 in the previous year. The excess in favor of 1877 was thus 11.

224. Marriages in 1877 and 1878 were more numerous than in any previous year since the first settlement of the colony. ‡ The next highest numbers were 4,985 in 1875, 4,974 in 1873, and 4,949 in 1876. Until 1877 the marriages in Victoria had never numbered 5,000 in any one year.

\* See paragraph 143 ante and table following paragraph 186 ante.

† The Victorian Railway returns are brought down to the 31st December; those of the other works to the 30th June of the year named.

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

Marriage  
rate.

225. Though the marriage rate in Victoria showed a slight improvement in 1877 as compared with 1876, it again decreased in 1878, when it was lower than in any previous year since the third from that in which the colony was founded. The following table gives the number of marriages and the number of persons married per 1,000 of the population during each of the eleven years ended with 1878 :—

## ANNUAL MARRIAGE RATE, 1868 TO 1878.

Year.	Per 1,000 of the Mean Population.	
	Number of Marriages.	Number of Persons Married.
1868 ... ..	6·99	13·98
1869 ... ..	6·79	13·58
1870 ... ..	6·67	13·34
1871 ... ..	6·35	12·70
1872 ... ..	6·30	12·60
1873 ... ..	6·37	12·74
1874 ... ..	6·17	12·34
1875 ... ..	6·12	12·24
1876 ... ..	5·96	11·92
1877 ... ..	6·00	12·00
1878 ... ..	5·86	11·72
Average of eleven years...	6·30	12·60

Marriage  
rates in  
Austral-  
asian  
colonies.

226. The marriage rate is lower in Victoria than in any of the other Australasian colonies. The following table gives the marriage rates of the various colonies for each year from 1867 to 1877, or for as many years between those periods as the information is available for :—

## MARRIAGE RATES IN AUSTRALASIAN COLONIES, 1867 TO 1877.\*

Year.	Number of Marriages † per 1,000 of Mean Populations.						
	Victoria.	New South Wales.	Queens- land.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1867 ...	6·91	7·79	9·54	8·20	...	6·10	9·69
1868 ...	6·99	8·17	8·33	7·37	...	6·57	9·35
1869 ...	6·79	7·98	8·31	6·78	...	6·44	8·32
1870 ...	6·67	7·79	7·80	6·90	...	6·62	7·62
1871 ...	6·35	7·73	8·06	6·77	...	5·90	7·15
1872 ...	6·30	7·42	8·70	7·20	5·56	6·17	6·85
1873 ...	6·37	7·97	9·66	8·00	6·25	6·36	7·91
1874 ...	6·17	7·59	8·62	8·00	6·96	6·83	8·87
1875 ...	6·12	7·73	8·63	8·01	7·26	6·63	8·94
1876 ...	5·96	7·49	7·57	8·49	7·07	7·13	8·25
1877 ...	6·00	7·73	7·57	8·66	6·38	7·79	7·63
Means ...	6·42	7·76	8·44	7·67	6·58	6·59	8·23

\* For the number of marriages in the various colonies during the six years ended with 1878, see General Summary of Australasian Statistics (third folding sheet) *ante*.

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

227. In 1877 the marriage rate in South Australia was considerably higher than that in any other colony of the group, and the marriage rate in Tasmania was next to that in South Australia. The rates in both these colonies have been increasing steadily for years past, and they alone in 1877 were above the average. The rate in New South Wales for the same year, though exceeded in 5 and equalled in 2 of the previous ten years, was only slightly below the average. On the other hand, the rate decreased in Victoria with great regularity during the whole period, in Queensland rapidly since 1873, and in Western Australia and New Zealand rapidly since 1875. The minimum, during the eleven years, occurred in South Australia, Tasmania, and New Zealand in 1871; in New South Wales and Western Australia (the latter given for six years only) in 1872; in Victoria in 1876, and in Queensland in 1876 and 1877.

Colonies in which marriage rate is increasing, and the contrary.

228. 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 eleven years. It will be noticed that Victoria stands absolutely last in both lists:—

Order of colonies in respect to marriage rates.

ORDER OF AUSTRALASIAN COLONIES IN REFERENCE TO MARRIAGE RATES.

Order in 1877.		Order in a Series of Years.
1. South Australia.		1. Queensland.
2. Tasmania.		2. New Zealand.
3. New South Wales.		3. New South Wales.
4. New Zealand.		4. South Australia.
5. Queensland.		5. Tasmania.
6. Western Australia.		6. Western Australia.
7. Victoria.		7. Victoria.

229. The marriage rate in 1877 of the colonies situated on the Australian continent, taken as a whole, as also of those colonies with the addition of Tasmania and New Zealand, shows a slight improvement on the numbers of the previous year. These rates are, however, below the average of five years, as will be seen by the following table:—

Marriage rate in Australia and Australasia.

MARRIAGE RATES IN AUSTRALIA AND AUSTRALASIA, 1873 TO 1877.

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
Means	7·10	7·28

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

Marriage  
rate in cer-  
tain British  
possessions.

230. It is to be regretted that the Imperial Board of Trade, which has peculiar facilities for obtaining statistical information, and which publishes the marriage, birth, and death rates in the Australasian colonies, does not also do so for Her Majesty's possessions in other parts of the world. The following are the marriage rates in certain British colonies outside Australasia—the only ones respecting which such particulars have come to hand or can be gathered from their official reports. The low rate in Barbadoes is explained by the fact that the negro population as a rule ignore the marriage ceremony. The same circumstance, although to a less extent, doubtless also affects the marriage rate in St. Vincent:—

#### MARRIAGE RATES IN CERTAIN BRITISH POSSESSIONS.

	Years.	Annual Rate per 1,000 of the Population.*
Ceylon ... ..	1867-76	7·30
Seychelles ... ..	1876	8·11
Bermudas ... ..	1874-75	8·02
St. Vincent ... ..	1872-76	6·32
Barbadoes ... ..	1876	3·01

Marriage  
rates in  
European  
countries.

231. The following table gives for each of the eleven years ended with 1876 a statement of the marriage rates in British and such Foreign countries as the information is available for. The calculations have been made chiefly from figures found in the reports of the Registrars-General of England, Scotland, and Ireland:—

#### MARRIAGE RATES IN EUROPEAN COUNTRIES, 1866 to 1876.

Year.	Number of Marriages * per 1,000 of the Mean Population.													
	England and Wales.	Scotland.	Ireland.†	Denmark.	Sweden.	Austria.	Hungary.	Prussia.	German Empire.	Belgium.	The Nether- lands.	France.	Spain.	Italy.‡
1866 ...	8·75	7·37	5·45	8·40	6·70	6·75	8·15	7·75	...	7·55	8·35	7·90	7·95	5·60
1867 ...	8·25	6·97	5·42	7·65	6·10	8·90	10·40	9·30	...	7·80	8·35	7·85	7·10	6·70
1868 ...	8·05	6·67	5·07	7·30	5·45	9·25	13·65	8·80	...	7·30	7·65	7·85	6·65	7·15
1869 ...	7·95	6·70	5·01	7·35	5·65	10·35	11·00	8·90	...	7·40	7·75	8·20	8·10	7·95
1870 ...	8·05	7·15	5·29	7·35	6·55	9·70	9·80	7·35	...	6·95	7·90	6·00	6·25	7·30
1871 ...	8·35	7·13	5·37	7·30	6·50	9·50	10·40	7·95	...	7·35	7·95	7·20	...	7·45
1872 ...	8·75	7·53	5·02	7·50	6·95	9·20	10·75	10·30	10·30	7·75	8·20	9·75	...	7·50
1873 ...	8·80	7·79	4·82	8·10	7·30	9·25	11·30	10·15	10·00	7·75	8·50	8·85	...	7·90
1874 ...	8·55	7·58	4·61	8·20	7·25	8·95	10·70	9·70	9·55	7·55	8·30	8·25	...	7·60
1875 ...	8·40	7·42	4·53	8·45	7·00	8·45	15·95	9·00	9·10	7·25	8·30	8·35	...	8·40
1876 ...	8·35	7·53	4·96	8·50	7·05	8·15	...	8·55	8·50	7·15	8·20	7·90	...	8·10
Means	8·39	7·26	5·05	7·83	6·59	8·95	11·21	8·89	9·49	7·44	8·13	8·01	7·21	7·42

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

† The low marriage rate in Ireland is partly attributed to defective registration.—See 11th Detailed Report of the Registrar-General of Ireland, page 15; also his 12th Report, pages 6 and 31.

‡ In Italy the civil became the only legal form of marriage in 1866, and the low rate in that year is attributed to the non-registration of marriages solemnized only in churches. The number of such marriages, which was very great in 1866 and 1867, has been, however, decreasing—hence the apparent increase during the 11 years.

232. It will be observed that the mean marriage rate in Central Europe, as shown by the figures for Hungary, Germany, Austria, and Prussia, is much the highest, that the rate in England and Wales comes next; and the rates in Holland and France follow. All these rates exceed 8 per 1,000. The lowest rates prevail in Ireland\* and Sweden. In only two of the Australian colonies did the mean marriage rate, during the eleven years ended with 1877, exceed 8 per 1,000, viz., in Queensland and New Zealand—the rate in the former being slightly greater, and in the latter slightly less, than in England. The average rate in New South Wales and South Australia is about the same as in Denmark, which is next to France in regard to the marriage rate, whilst the rate in Tasmania and Western Australia is about the same as in Sweden, and that in Victoria is lower than in any of the European countries named except Ireland.

Australasian and European marriage rates compared.

233. The following, according to the reports of the Registrar-General of England, is the marriage rate of the United Kingdom during the six years ended with 1876. If, however, the registrations in Ireland are defective as is alleged,\* some disturbance to the calculations must result therefrom :—

Marriage rate in United Kingdom.

MARRIAGE RATE IN THE UNITED KINGDOM, 1871 TO 1876.

						Marriages per 1,000 of the Population.
1871	...	...	...	...	...	8·21
1872	...	...	...	...	...	7·98
1873	...	...	...	...	...	8·03
1874	...	...	...	...	...	7·79
1875	...	...	...	...	...	7·67
1876	...	...	...	...	...	7·70
						—
		Mean	...	...	...	7·90
						—

234. As the marriage ceremony is generally performed in towns, whatever may be the ordinary residence of the persons marrying, it is not surprising that the marriage rate is much higher there than in the country. In 1878 it was higher in Melbourne and suburbs than in extra-metropolitan towns, which is contrary to the experience of the previous four years, in which the rate in the latter had been the greater. The marriages celebrated in 1878 in metropolitan and extra-metropolitan towns, and in country districts, together with the estimated mean populations of such divisions, were as follow.

Marriage rates in town and country.

\* See footnote (†) to table following paragraph 231 ante.

## MARRIAGES IN URBAN AND COUNTRY DISTRICTS, 1878.

Districts.	Estimated Mean Population.	Marriages, 1878.	
		Total Number.	Number per 1,000 of Mean Population.
Melbourne and suburbs ... ..	256,477	2,329	9.08
Towns outside Melbourne and suburbs ...	198,385	1,770	8.92
Country districts ... ..	414,178	993	2.40
<b>Total</b> ... ..	<b>869,040</b>	<b>5,092</b>	<b>5.86</b>

Marriages in each quarter.

235. Marriages in Victoria have almost invariably been most numerous in the autumn and spring quarters, and least numerous in the summer and winter quarters. In 1878, however, the number in the spring was slightly exceeded by that in the summer quarter. The following table shows the number and percentage of marriages in each quarter of that year and the mean percentage in each quarter of the previous ten years :—

## MARRIAGES IN EACH QUARTER.

Seasons.	Quarter ended on the last day of—	Year 1878.		Percentage in Ten Years : 1868 to 1877.
		Number of Marriages.	Percentage.	
Summer ...	March ... ..	1,264	24.82	24.36
Autumn ...	June ... ..	1,407	27.63	25.98
Winter ...	September ... ..	1,168	22.94	24.02
Spring ...	December ... ..	1,253	24.61	25.64
	<b>Year</b> ... ..	<b>5,092</b>	<b>100.00</b>	<b>100.00</b>

Former condition of persons married.

236. About four-fifths of the unions which take place are between bachelors and spinsters ; and the next most numerous are generally those between bachelors and widows, although in the last three years they have been exceeded by marriages between widowers and spinsters. Marriages between widowers and widows are generally somewhat less than a twentieth of the whole. The following are the number and percentage in each of these groups during 1878 and the percentage during the previous decennial period :—

## FORMER CONDITION OF PERSONS MARRIED.

Previous Condition.	Year 1878.		Percentage in Ten Years : 1868 to 1877.
	Number of Marriages.	Percentage.	
Bachelors and spinsters ... ..	4,112	80.76	80.09
Bachelors and widows ... ..	346	6.79	7.74
Widowers and spinsters ... ..	395	7.76	7.71
Widowers and widows ... ..	239	4.69	4.46
<b>Total</b> ... ..	<b>5,092</b>	<b>100.00</b>	<b>100.00</b>



237. 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. Three divorced males and seven divorced females were married in 1878. In one of these instances the divorced couple were reunited ; the other two divorced males married spinsters, and the other six divorced females married bachelors. Divorced persons.

238. 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. Notwithstanding this disability, however, the provision is frequently taken advantage of. Three males and as many as fourteen females availed themselves of it in 1878. Of the former, two married widows, and one married a spinster ; they had not heard of their former wives for 7, 14, and 20 years respectively. Of the latter, nine married bachelors, and five widowers ; two had not heard of their former husbands for 7 years, four for 9 years, two for 16 years, and the remainder had not heard of theirs for 8, 10, 13, 19, 21, and 28 years respectively ; three of these had, previous to desertion, been separated from their husbands. Deserted males and females remarrying are tabulated as widowers and widows, since it is only on the assumption that their former helpmate is dead that the law does not prohibit their contracting a fresh union. Deserted husbands and wives.

239. In 1878, 634 widowers and 585 widows re-entered the marriage state. During the last five years more widowers have remarried than widows. Formerly it was different. In the six years ended with 1873 the widowers re-entering the marriage state numbered 3,353 and the widows 3,529, and at earlier periods in the history of the colony the preponderance of remarriages of widows over those of widowers was even greater than this. Such a circumstance would be likely to happen only in a country in which females are much less numerous than males. In England and Wales, during the twenty years ended with 1874, 48 per cent. more widowers remarried than widows, the number of the former being 490,912, that of the latter 332,428. The following is a statement of the number of widowers and widows who remarried in Victoria during each of the eleven years ended with 1878. Remarriages.

## REMARRIAGES, 1868 TO 1878.

Year.	Number of Remarriages of—		Year.	Number of Remarriages of—	
	Widowers.	Widows.		Widowers.	Widows.
1868 ...	558	623	1875 ...	614	583
1869 ...	553	563	1876 ...	678	623
1870 ...	547	595	1877 ...	666	600
1871 ...	587	605	1878 ...	634	585
1872 ...	522	552			
1873 ...	586	591			
1874 ...	602	593			
			Total ...	6,547	6,513

Marriages of  
Aborigines.

240. The marriages of 4 Aboriginal males with Aboriginal females are included in the returns of 1878. The Aborigines who desire to enter the marriage state now generally do so according to some form recognized by law. Mr. R. Brough Smyth, in his work upon the Aborigines,\* says that before the advent of Europeans there was no such thing as marriage in the proper sense of the word amongst the Australians. The acts which preceded matrimony were certainly not entitled to be regarded as rites. Men obtained wives by a convenient system of exchange, by conquest sometimes, and sometimes a woman was stolen.

Marriages of  
Chinese.

241. Thirteen Chinese males were married in Victoria in the year 1878, as against 20 in 1877, 14 in 1876, and 20 in 1875. During the twelve years prior to the year under review, 217 Chinamen were married in Victoria, or an average of 18 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 :—

## NATIONALITY OF WOMEN MARRYING CHINESE MALES, 1867 TO 1878.

Birthplace of Wives.	Number of Marriages of Chinese Males.		
	Twelve Years : 1866 to 1877.	Year 1878.	Total : 1867 to 1878.
Victoria ... ..	80	11†	91
Other Australian colonies ...	42	...	42
England ... ..	47	1	48
Scotland ... ..	14	...	14
Ireland ... ..	22	...	22
Other British possessions ...	1	...	1
France ... ..	1	...	1
Germany ... ..	2	...	2
Spain ... ..	1	...	1
The United States ... ..	1	...	1
China ... ..	3	1	4
At sea ... ..	3	...	3
Total ... ..	217	13	230

\* *The Aborigines of Victoria*, vol. I., page 76, by R. Brough Smyth. Ferris : Melbourne, 1878.

† In one of these instances the wife was the daughter of a Chinaman.



242. The marriage ceremony in Victoria may be performed either by the registered clergy of any religious sect or by lay registrars.\* In 1878 rather more than 92 per cent. of the marriages were celebrated according to the former, and nearly 8 per cent. according to the latter system. The number of lay marriages has a tendency to increase, as will be seen by the following table, which gives a statement of the number and percentage of marriages celebrated by each religious sect and by lay registrars during 1878, and during the previous ten years:—

Marriages by different sects.

MARRIAGES BY DIFFERENT DENOMINATIONS.

Marriages performed according to the usages of the—	Marriages celebrated in—			
	Year 1878.		1868 to 1877.	
	Number.	Percentage.	Number.	Percentage.
Church of England ... ..	1,328	26·08	11,913	24·52
Presbyterians ... ..	1,082	21·25	9,910	20·40
Wesleyans ... ..	941	18·48	8,424	17·34
Independents ... ..	247	4·85	2,624	5·40
Baptists ... ..	247	4·85	1,653	3·40
Lutherans ... ..	48	·94	510	1·05
Unitarians ... ..	...	...	14	·03
Society of Friends ... ..	...	...	4	·01
Calvinistic Methodists ... ..	5	·10	99	·21
Roman Catholic Church ... ..	735	14·44	9,478	19·51
Jews ... ..	19	·37	210	·43
Other sects ... ..	56	1·10	482	·99
Lay registrars ... ..	384	7·54	3,258	6·71
Total ... ..	5,092	100·00	48,579	100·00

243. Of the 4 Aboriginal marriages which took place in 1878, 2 were solemnized according to the rites of the Moravian, 1 according to those of the Baptist, and 1 according to those of the Presbyterian Church.

Sects of Aboriginals married.

244. Of the marriages of Chinese in 1878, 2 were celebrated according to the rites of the Church of England, 4 according to those of the Presbyterian, and 3 according to those of the Wesleyan Church; 1 was celebrated according to the rites of the Baptist Church, 1 was performed by a clergyman of the Free Church of England "without any church rites," and 2 were performed by lay registrars.

Sects of Chinese married

\* The following remarks upon lay marriages are by the Registrar-General of England, Major George Graham:—"Marriage by civil contract has been in force in England and Wales during the last 40 years; and since 1841 nearly 800,000 persons have been married in register offices, out of which number more than 400,000 have been married during the last 11 years. Attempts are sometimes made to persuade persons who have been duly married in accordance with all the legal forms at the register office that such marriages are improper, and that the parties should not live together as man and wife until a religious ceremony according to the rites of the Established Church has been gone through. I consider this to be most mischievous, tending as it does to disturb and unsettle the minds of hundreds of thousands of persons, who, availing themselves of the privilege granted by the Legislature in 1837, have been validly married in the register offices. It is to be regretted that any clergyman of the Established Church should be found to tell his parishioners, married according to the law of the land, that they are not properly married, as that implies that they are living in a state of fornication, and that their children are illegitimate. And as the civil is the only legal form of marriage in several great Christian States, the assertion that it is 'only suited to infidels' is still more to be regretted."—See 38th Annual Report of the Registrar-General of Births, Deaths, and Marriages in England, page xv. London: Eyre and Spottiswoode, 1877.

Signing with marks.

245. 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 1878, the proportion of those who signed with marks to the total numbers married being also shown:—

SIGNING MARRIAGE REGISTER WITH MARKS, 1878.

Persons Married.	Numbers Married.	Signing with Marks.	
		Total Number.	Number in every 100 Married.
Bridegrooms ... ..	5,092	210	4·12
Brides ... ..	5,092	270	5·30
Mean ... ..	5,092	240	4·71

Increased numbers signing in writing.

246. In proportion to the total numbers married, an evident increase has taken place of late years in the number of both males and females signing the marriage register in writing. This improvement is apparent from year to year; each year, as compared with its predecessor, showing a smaller proportion of persons signing with marks. The following are the proportions in the last six years:—

NUMBERS SIGNING WITH MARKS PER 100 MARRIED, 1873 TO 1878.

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

Signing with marks, 1853 to 1872.

247. 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

Signing with marks in each sect.

248. The proportion of persons signing with marks is found to differ according to the religious denomination. Means are afforded by the following table of observing the position of the adherents of the different sects so far as the possession of a sufficient amount of rudimentary education to enable them to write their names is concerned. The figures are those of the year 1878 and the average of the previous

ten years. Considerable improvement will be noticed in respect to all the sects:—

SIGNING WITH MARKS IN EACH SECT.

Marriages performed according to the usages of the—	Number Signing with Marks in every 100 Married.					
	Year 1878.			1868 to 1877.		
	Men.	Women.	Mean.	Men.	Women.	Mean.
Church of England ...	4·14	3·92	4·03	5·04	8·29	6·66
Presbyterians ...	2·77	3·51	3·14	4·37	8·10	6·23
Wesleyans ...	2·76	3·40	3·08	4·80	7·21	6·00
Independents ...	2·83	4·05	3·44	4·23	8·23	6·23
Baptists ...	2·83	3·24	3·03	3·81	6·96	5·38
Lutherans ...	2·08	4·17	3·12	1·96	5·10	3·53
Calvinistic Methodists ...	...	...	...	...	9·09	4·54
Roman Catholics ...	7·07	10·07	8·57	12·82	20·83	16·82
Jews ...	...	...	...	1·90	2·86	2·38
Other sects ...	5·36	3·57	4·46	7·00	5·60	6·30
Lay registrars ...	7·55	13·54	10·54	6·81	15·07	10·94
Total ...	4·12	5·30	4·71	6·38	10·83	8·60

249. It will be observed that the proportion of those signing with marks is far higher amongst marriages according to the rites of the Roman Catholic Church than amongst those celebrated by any other religious sect, but that the numbers in 1878 show a very considerable improvement as compared with the previous ten years. The proportion amongst civil marriages in 1878, however, was even greater than amongst marriages by Roman Catholics, and only a slight improvement is noticed on comparing with former years.

Roman Catholic and civil marriages.

250. In the 14 marriages by Unitarians which took place in the eleven years named in the table, not one instance occurred of either of the parties signing with a mark. In the 104 marriages by Calvinistic Methodists all the males signed in writing, but 9 of the females signed with marks. In the 217 marriages of Jews only 10 persons signed with marks.

Marriages by Unitarians, Calvinists, and Jews,

251. The marriages in which marks instead of writing were made use of in 1878 numbered 414, but in only 66 of these, or not quite a sixth, did both parties so sign. In the 348 other instances either the husband or the wife signed in writing. Thus, whereas the marriages in which one or both could not write amounted to about a twelfth of the whole, in the case of only about 1 in every 77 marriages could neither party write.

Cases of both signing with marks.

252. 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

Signing with marks in Australasian colonies.

percentages have been deduced. It will be observed that the proportion of females signing with marks is smaller in Victoria than in any other colony, and although the proportion of males so signing is greater in Victoria than in New Zealand, the mean of the persons of both sexes unable to sign in writing is smaller in Victoria than in that or any other colony. 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, 1877.

Colony.	Number Signing with Marks to every 100 Married.		
	Men.	Women.	Mean.
1. Victoria ... ..	5·04	6·02	5·53
2. New Zealand ... ..	3·95	8·54	6·25
3. South Australia ... ..	6·14	7·89	7·01
4. New South Wales ... ..	8·45	11·07	9·76
5. Queensland ... ..	7·78	14·15	10·97

Signing with marks in the United Kingdom.

253. No returns are at hand showing the manner in which the marriage registers are signed in any countries except the colonies just named and the United Kingdom. The following are the proportions using marks in England, Scotland, and Ireland.\* From the figures it would seem that Scotland is before and Ireland is behind England in point of adult education, but that all are much behind even the most backward of the Australasian colonies. In England, in 1876, the greatest proficiency amongst men was attained in the London district, where the percentage signing with marks was only 8·1, but even this is a higher proportion than in any colony except New South Wales:—

## SIGNING WITH MARKS IN THE UNITED KINGDOM.

Country.	Year.	Number Signing with Marks to every 100 Married.		
		Men.	Women.	Mean.
England and Wales ...	1876	16·3	22·1	19·2
Scotland ... ..	1873	9·6	18·7	14·2
Ireland ... ..	1876	31·9	37·3	34·6

\* See 39th Annual Report of the Registrar-General of England, page xxi.

254. The age of both bride and bridegroom was specified in the case of all but 52 of the 5,092 marriages which took place in 1878. In 41 of the defective entries the age of neither party was given; in 2 cases the age of the husband was stated, not that of the wife; and in 9 instances the age of the wife was given, not that of the husband. The following table shows the ages of the husbands and of the wives in combination :—

AGES OF PERSONS MARRIED, 1878.

Ages of Husbands.	Ages of Wives.																Total Husbands.			
	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.	Unspecified.
17 to 18 years	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
18 to 19	...	...	...	...	3	2	1	1	...	...	...	...	...	...	...	...	...	...	...	7
19 to 20	...	...	1	7	5	7	3	9	3	...	...	...	...	...	...	...	...	...	35	
20 to 21	...	...	1	7	14	19	26	36	3	...	...	...	...	...	...	...	...	...	107	
21 to 25	...	1	4	25	72	146	208	226	803	101	16	3	1	...	...	...	...	...	1606	
25 to 30	...	...	5	11	37	83	132	158	625	268	50	13	...	...	...	...	...	...	1382	
30 to 35	...	...	...	5	10	40	43	61	263	187	79	25	10	...	...	...	...	2	725	
35 to 40	...	...	...	2	7	17	22	16	124	107	58	56	21	8	...	...	...	...	438	
40 to 45	...	...	...	1	4	7	6	10	70	59	56	39	31	11	4	...	...	...	298	
45 to 50	...	...	...	1	1	2	3	3	30	36	44	30	28	29	12	3	1	...	223	
50 to 55	...	...	...	...	...	2	2	8	7	13	18	19	18	11	5	2	...	...	105	
55 to 60	...	...	...	...	...	1	...	3	1	1	3	10	15	15	5	2	2	...	58	
60 to 65	...	...	...	1	...	...	...	2	...	1	5	6	9	4	4	4	1	...	37	
65 to 70	...	...	...	...	...	...	...	...	...	1	1	...	2	2	4	1	1	1	13	
70 to 75	...	...	...	...	...	...	...	1	...	...	...	...	...	4	2	...	...	...	7	
Unspecified	...	...	...	2	3	1	2	...	1	...	...	...	...	...	...	...	...	41	50	
Total wives	1	11	46	148	321	446	508	1975	773	319	193	126	92	48	25	12	4	1	43	5092

NOTE.—This table may be read thus :—Four men between 40 and 45 married girls between 17 and 18; three women between 55 and 60 married men between 45 and 50, &c.

255. An examination of the above table will show that in 1,323 instances, or 26 per cent. of the whole, both parties to the marriage were about the same age; in 351 instances, or 7 per cent. of the whole, the wife was older than the husband; and in 3,366 instances, or 67 per cent. of the whole, the husband was older than the wife. These proportions are about the same as in the previous year.

256. Boys not under 14 and girls not under 12 years of age may, with the consent of their parents or guardians, legally marry in Victoria; but, as a matter of fact, marriages are seldom contracted at such early ages. The youngest male who married in 1878 was aged 17, and the youngest female 14. As many, however, as 150 of the males, or 1 in every 34, and no fewer than 1,481 of the females, or 1 in about 3.5, had not attained the full age of 21 years. By comparing these proportions

with similar ones for the previous ten years, it would appear that the tendency to marry under age is increasing.

Marriages of  
minors in  
Victoria and  
England.

257. In proportion to the total numbers marrying, more females and fewer males marry under age in Victoria than in England and Wales.\* This is shown by the figures in the following table :—

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 1878.	Ten Years: 1868 to 1877.	Ten Years: 1868 to 1877.
Bridegrooms ...	2·97	2·08	7·90
Brides ...	29·37	28·29	21·91
Mean ...	16·16	14·39	14·90

Births, 1878.

258. The births registered in Victoria during 1878 numbered 26,581, as against 26,010 in 1877. The increase in the year under review, as compared with the previous one, was thus 571.

Births in  
1878 and  
former  
years.

259. The births, though more numerous in 1878 than in 1877, were fewer than in any other year to as far back as 1868. Prior to 1868, however, births were never so numerous in any year as those in 1878.†

Birth rate.

260. The birth rate has been decreasing steadily for years past, and in 1878 was lower than it was in any year of the previous decenniad. The following are the figures for the eleven years :—

Births per 1,000 of Mean Population.			Births per 1,000 of Mean Population.		
1868 ...	...	40·59	1874 ...	...	33·56
1869 ...	...	37·36	1875 ...	...	32·78
1870 ...	...	38·25	1876 ...	...	32·23
1871 ...	...	37·07	1877 ...	...	30·60
1872 ...	...	35·95	1878 ...	...	30·59
1873 ...	...	36·01	Mean of eleven years		34·75

Birth rates  
in Austral-  
asian  
colonies.

261. Complete returns of the births in the Australasian colonies are available to the end of 1877, 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 figures for 1877 show a lower rate for Victoria than for any other colony, except Tasmania; and those for a series of years show a lower

\* This is not an infallible test of the tendency to marry under age. To determine this accurately, the minors marrying should be compared with the total number at the same period of life.

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



rate for Victoria than for any other colony, except Tasmania and Western Australia. The following table gives the birth rates of the different colonies for each year from 1867 to 1877, or for as many years between those periods as the figures are available for:—

BIRTH RATES IN AUSTRALASIAN COLONIES, 1867 TO 1877.\*

Year.	Number of Births per 1,000 of Mean Populations.						
	Victoria.	New South Wales.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1867 ...	39·41	41·67	45·66	41·87	...	30·34	42·18
1868 ...	40·59	40·43	43·03	41·51	...	30·03	42·14
1869 ...	37·36	40·41	42·83	39·03	...	28·27	41·90
1870 ...	38·25	39·76	43·51	38·48	...	30·18	42·32
1871 ...	37·07	39·42	43·25	38·34	...	30·16	40·64
1872 ...	35·95	38·27	40·70	37·60	32·42	29·44	39·50
1873 ...	36·01	39·01	40·82	36·42	31·43	29·43	39·00
1874 ...	33·56	38·75	41·11	38·22	33·71	29·72	40·27
1875 ...	32·78	37·83	38·90	35·70	28·72	29·88	40·23
1876 ...	32·23	37·69	37·48	37·71	33·98	30·11	41·73
1877 ...	30·60	36·92	36·75	37·36	33·07	30·21	41·28
Means ...	35·80	39·11	41·28	38·39	32·22	29·80	41·02

262. The colonies in which the birth rate has shown signs of increase of late years are Tasmania, New Zealand, and Western Australia. In all these the rates in the last year were in excess of the average. The rate in the first-named colony has been increasing during the last five years named in the table; that in New Zealand not quite so steadily during the same period; and that in Western Australia in 1877, although exceeded in two out of the five previous years, was considerably above the average. The rates in Victoria and New South Wales have been declining with little intermission throughout the whole, and the rate in Queensland during the latter half of the period of eleven years—all falling to a minimum in 1877. The rate in South Australia fluctuates considerably, but in the last three years was much below the average. Excluding Western Australia (of which the particulars are incomplete), the maximum rate of every colony except New Zealand was attained in either the first or second year named in the table.

Colonies in which birth rate is increasing and the contrary.

263. 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 eleven years. In both columns the colonies occupy exactly the same positions as they did last year.

Order of colonies in respect to birth rates.

\* For the number of births in the various colonies during the six years ended with 1873, see General Summary of Australasian Statistics (third folding sheet) ante.

## ORDER OF AUSTRALASIAN COLONIES IN REFERENCE TO BIRTH RATES.

- Order in 1877.
1. New Zealand.
  2. South Australia.
  3. New South Wales.
  4. Queensland.
  5. Western Australia.
  6. Victoria.
  7. Tasmania.

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

Birth rate in  
Australia  
and Aus-  
tralasia.

264. In the Australasian colonies taken as a whole the birth rate has latterly shown a much more marked decline than the marriage rate.\* The gradual falling off from year to year will be readily observed by the following table, which gives the rates for Australia and Australasia in the five years ended with 1877 :—

## BIRTH RATE IN AUSTRALIA AND AUSTRALASIA, 1873 TO 1877.

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
Means ... ..	35·69	36·18

Birth rates in  
British  
possessions.

265. The birth rates in certain British possessions outside Australasia, including all those for which the information is available, are shown in the following table. In many cases the figures are only for a single year. It is to be regretted that the names of scarcely any of the larger colonies appear upon the list :—

## BIRTH RATES IN CERTAIN BRITISH POSSESSIONS.

Colonies.	Years.	Number of Births per 1,000 of the Population.
Ceylon ... ..	1867-76	27·67
Hong Kong ... ..	1875	13·80
Mauritius ... ..	1876	37·11
Seychelles ... ..	1876	38·35
Bermudas ... ..	1874-5	38·50
British Guiana ... ..	1875	35·43
West Indies—		
Bahamas ... ..	1874-5	39·01
St. Vincent ... ..	1872-6	46·00
Barbadoes ... ..	1876	35·45
Antigua ... ..	1875-6	40·42
Montserrat ... ..	1874-5	48·78
Dominica ... ..	1875-6	28·62
Trinidad ... ..	1876	35·43

\* See paragraph 229 ante.

266. A statement of the birth rates in British and certain Foreign countries for each of the eleven years ended with 1876 is given in the following table. The figures have been taken chiefly from the reports of the Registrars-General of England, Scotland, and Ireland :—

Birth rates in European countries.

BIRTH RATES IN EUROPEAN COUNTRIES, 1866 TO 1876.

Years.	Number of Births per 1,000 of Mean Populations.													
	England and Wales.	Scotland.	Ireland.*	D	Sweden.	Austria.	Hungary.	Prussia.	German Empire.	Belgium.	The Netherlands.	France.	Spain.	Italy.
1866 ...	35·2	35·4	26·5	32·2	33·1	44·2	42·1	39·2	...	31·7	35·3	26·1	37·3	38·7
1867 ...	35·4	35·1	26·3	30·5	30·8	34·7	38·8	36·9	...	32·1	35·2	26·2	37·3	36·5
1868 ...	35·8	35·3	26·7	31·2	27·5	39·3	42·4	36·8	...	31·5	34·7	25·7	34·4	35·3
1869 ...	34·8	34·3	26·7	29·5	28·2	40·2	42·6	37·7	...	31·6	34·5	25·7	35·7	37·0
1870 ...	35·2	34·6	27·7	30·5	28·3	40·5	41·7	38·1	...	32·3	35·9	25·5	35·4	36·7
1871 ...	35·0	34·5	28·1	30·2	30·4	39·9	43·0	33·8	...	31·0	35·3	22·6	...	37·0
1872 ...	35·8	35·0	27·8	30·3	30·0	39·9	41·0	39·7	39·4	32·3	35·8	26·8	...	37·8
1873 ...	35·5	34·9	27·1	30·7	30·8	40·3	42·2	39·7	39·7	32·5	36·0	26·1	...	36·3
1874 ...	36·2	35·7	26·6	30·8	30·9	40·1	42·7	40·1	40·1	32·6	36·1	26·2	...	34·9
1875 ...	35·5	35·4	26·1	31·8	31·0	40·4	45·2	40·3	40·6	32·5	36·3	26·0	...	37·7
1876 ...	36·6	35·9	26·4	32·5	30·7	40·6	...	40·5	40·8	33·2	36·8	26·3	...	39·0
Means ...	35·5	35·1	26·9	30·9	30·1	40·0	42·2	38·4	40·1	32·1	35·6	25·7	36·0	36·9

267. It is reasonable to suppose that the figures in this table will follow a similar order to those in the table of marriage rates,† and this is found to be the case, except in respect to three countries, viz., France, Spain, and Italy. The discrepancy may be only apparent in the case of Spain, as the average is for no more than five years, and in Italy it is satisfactorily explained by the circumstance that many marriages have not been registered;‡ but as regards France no such explanation can be given, and the strange fact remains that, whilst it has a comparatively high marriage rate, the birth rate is lower than that in any other European country, and is but little above its own death rate.§

Discrepancies between birth and marriage rates in European countries.

268. The birth rate of Victoria, taken over a series of years, is about equal to that of Spain and Holland, lower than that of Italy and the Central European States, but higher than that of any of the other countries named. In the last four years, however, the Victorian birth rate was lower than that not only of the countries named, but also of England and Wales and Scotland; and the only countries which had a smaller birth rate were Denmark, Sweden, Ireland, and France. In four of the

Australasia and European birth rates compared.

\* It is explained that the low birth rate in Ireland is partly attributable to the small proportion of females in the population at child-bearing ages. (See 12th Detailed Report of the Registrar-General of Ireland, pages 12 and 31.) There is no doubt, however, that the figures understate the truth, the registration being admittedly defective.

† See table following paragraph 231 ante.

‡ See footnote (†) to table following paragraph 231 ante.

§ See table following paragraph 298 post.

Australasian colonies, viz., Queensland, New Zealand, New South Wales, and South Australia, the rate is about equal to that in Central Europe—the rate in the two former approximating to that in Hungary, and in the two latter to that in Prussia. In Western Australia the rate is about the same as in Belgium, whilst in Tasmania it is lower than in any of the countries except Ireland and France.

Birth rate  
in United  
Kingdom.

269. According to the reports of the Registrar-General of England, the following is the birth rate of the United Kingdom during the six years ended with 1876. The calculations must, however, be affected if the registrations of Ireland are imperfect as is alleged\* :—

BIRTH RATE IN THE UNITED KINGDOM, 1871 TO 1876.

Births per 1,000 of the Population.			Births per 1,000 of the Population.		
1871	...	35·0	1875	...	34·0
1872	...	34·4	1876	...	34·9
1873	...	34·1			
1874	...	34·5	Mean	...	34·5

Birth rates  
in town and  
country,  
1878.

270. The following table shows the births and birth rates in the metropolis, the extra-metropolitan towns, and the country districts of Victoria during 1878; also the estimated population of such divisions about the middle of that year :—

BIRTHS IN URBAN AND COUNTRY DISTRICTS, 1878.

Districts.	Estimated Mean Population.	Births, 1878.	
		Total Number.	Number per 1,000 of the Population.
Melbourne and suburbs ...	256,477	8,636	33·67
Towns outside Melbourne and suburbs	198,385	6,779	34·17
Country districts ...	414,178	11,166	26·96
Total ...	869,040	26,581	30·59

Birth rates  
in town and  
country,  
1873 to 1878.

271. During the last six years the birth rate of Melbourne and suburbs has not altered much, but the birth rates of the extra-metropolitan towns and the country districts have considerably diminished, although in the former a slight improvement took place in 1878 as compared with 1877. In 1873 the birth rate of the country districts was equal to that of the metropolis, whilst the birth rate of the extra-metropolitan towns was very much higher than either. In the year under review the metropolitan rate was much above that of the country districts, and was within a fraction of that of the extra-metropolitan towns. The following table shows the birth rates in the three divisions during each of the last six years.

\* See footnote to table following paragraph 266 *ante*.

BIRTH RATES IN URBAN AND COUNTRY DISTRICTS, 1873 TO 1878.

Year.	Number of Births per 1,000 of the Population.			
	Melbourne and Suburbs.	Towns outside of Melbourne and Suburbs.	Country Districts.	Total of Victoria.
1873 ...	34·36	40·98	34·40	36·01
1874 ...	32·98	39·82	30·57	33·56
1875 ...	33·63	37·60	29·64	32·78
1876 ...	33·20	38·23	28·69	32·23
1877 ...	33·09	33·83	27·49	30·60
1878 ...	33·67	34·17	26·96	30·59

272. The following table shows the mean population, the number of births, and the birth rate during 1878 ; also the birth rate during the septennial period, 1871 to 1877, in the different municipalities, &c., forming the component parts of the district of Melbourne and suburbs :—

Birth rates in metropolitan sub-districts.

BIRTH RATES IN MELBOURNE AND SUBURBS, 1871 TO 1878.

Sub-districts.	Year 1878.			Seven Years: 1871 to 1877.
	Estimated Mean Population.	Births.		Annual Births per 1,000 of Mean Population.
		Total Number.	Number per 1,000 of the Population.	
Melbourne City * ...	62,500	2,173	34·77	35·06
Hotham Town ...	15,317	544	35·52	33·28
Fitzroy City ...	19,160	680	35·49	33·87
Collingwood City ...	22,000	773	35·14	37·05
Richmond Town ...	20,153	733	36·37	36·53
Brunswick Borough ...	5,571	235	42·18	38·88
Prahran Town † ...	19,200	624	32·50	32·89
Emerald Hill Town ...	25,000	767	30·68	32·67
Sandridge Borough ...	7,900	310	39·24	38·72
St. Kilda Borough ...	10,000	297	29·70	29·33
Brighton Borough ...	4,600	129	28·04	32·98
Essendon and Flemington Borough ...	3,919	141	35·98	40·01
Hawthorn Borough ...	4,868	166	34·10	36·40
Kew Borough ...	3,700	94	25·41	27·61
Footscray Borough ...	5,350	230	42·99	47·98
Williamstown Borough ...	8,200	321	39·15	39·77
Remainder of district ...	17,000	419	24·64	22·52
Shipping in bay and river ...	2,039 ‡	...	...	...
<b>Total ...</b>	<b>256,477</b>	<b>8,636</b>	<b>33·67</b>	<b>33·90</b>

273. It will be observed that in Brunswick and Footscray in 1878, and in Footscray and Essendon and Flemington, according to the average of the previous seven years, the birth rate was above 40 per 1,000 ; and that in St. Kilda, Kew, and the “remainder of district,” both in 1878

Sub-districts with highest and lowest birth rates.

\* The Lying-in Hospital is in Melbourne City ; 516 births took place in it in 1878, and 4,006 births in the previous seven years.

† Proclaimed a City on the 27th May 1879.

‡ Figures showing population of shipping at last census (2nd April 1871).

and the previous seven years, the rate was below 30 per 1,000. The rate in the last-named portion of Melbourne and suburbs was even lower than that in the rural districts of the colony.\*

Birth rate in  
London.

274. The birth rate in London, according to the average of the ten years 1866-75, was 35·7, which was only slightly higher than that of England and Wales during the same period. It was thus 1·8 per 1,000 above that in Melbourne and suburbs.

Births of  
males and  
females.

275. The births of males in Victoria during 1878 numbered 13,752, those of females 12,829. These numbers furnish a proportion of 107·2 boys to 100 girls. In the previous ten years 137,501 births of males and 132,075 births of females were registered, giving a proportion of 104·1 boys to 100 girls.

Births of  
males and  
females in  
United  
Kingdom.

276. In every country in which births are registered it is found that more males are born than females. In England and Wales, during the ten years ended with 1875, 104·5 boys were born to 100 girls; in Scotland, during 1876, 105 boys were born to 100 girls; and in Ireland, during 1875 and 1876, nearly 106 boys were born to 100 girls.

Twins and,  
triplets.

277. Cases in which twins were born numbered 252 in 1878, but only one case occurred of a triplet being born. In the thirteen years ended with 1878, 3,221 cases of twins and 24 cases of triplets were recorded, the total number of births in the same period having been 346,775. There were thus 343,506 confinements in the thirteen years, and it follows that 1 mother in every 107 gave birth to twins, and 1 mother in every 14,313 was delivered of three children at a birth.

Illegitimate  
births.

278. The illegitimate children born in 1878 numbered 1,103, or 1 in every 24 births registered. This proportion is greater than in any previous year. The illegitimate births in 1877 were 1 in 26; in 1876, 1 in 27; in 1875, 1 in 34; in 1874, 1 in 28; and in 1873, 1 in 31. In the last thirteen years, out of 346,775 infants born, 10,917 were set down as having been born out of wedlock, which numbers furnish a proportion of 1 illegitimate child to every 32 births.

Women  
living in  
concubi-  
nage.

279. According to a calculation, the basis of which I have more than once explained,† it follows, from the number of births of legitimate children, that, approximately, 84,645 married women at the fruitful or child-bearing age were living in the colony during 1878, and from the number of births of illegitimate children that, exclusive of public prostitutes, who, as they rarely have children, are omitted from the computation, at least 3,664 single women at a similar period of life were living in concubinage. The total number of single women between 15 and 45 years of age may be estimated to have been 87,236 during the year.

\* See table following paragraph 271 ante.

† See *Victorian Year-Book*, 1873, paragraph 286, and *Victorian Year-Book*, 1874, paragraph 490.



It therefore follows that 1 out of every 23 of these was living immorally.

280. In 1878, although illegitimate births were more numerous and bore a higher proportion to the total births, as also was the estimated number of women living in concubinage larger than in any one of the five previous years, yet the proportion of single women at reproductive ages living in that state to the total number of such women living in Victoria was not so large as in 1873 and 1874. This is shown in the following table, which gives the figures for the six years referred to :—

Illegitimacy and concubinage, 1873 to 1878.

ILLEGITIMACY AND CONCUBINAGE, 1873 TO 1878.

Year.	Illegitimate Births.		Women Living in Concubinage (exclusive of Public Prostitutes).	
	Total Number.	Percentage of Total Births.	Estimated Total Number.	Number per 100 of Single Women between 15 and 45 Years of Age Living in Victoria.
1873 ... ..	893	3·18	2,967	4·54
1874 ... ..	984	3·67	3,269	4·41
1875 ... ..	779	2·92	2,586	3·36
1876 ... ..	975	3·64	3,239	4·02
1877 ... ..	1,010	3·88	3,355	3·85
1878 ... ..	1,103	4·15	3,664	4·20
Means ... ..	957	3·57	3,180	4·06

281. Besides Victoria, the only Australasian colonies which publish statistics of illegitimacy are apparently New South Wales, Queensland, and New Zealand. According to these, illegitimacy is most rife in New South Wales, next so in Victoria, next in Queensland, and least so in New Zealand. The following table shows the percentage of illegitimate to the total births in the four colonies named during each of the six years ended with 1877 :—

Illegitimacy in Australasian colonies.

ILLEGITIMACY IN AUSTRALASIAN COLONIES, 1872 TO 1877.

Year.	Illegitimate Births to every 100 Children Born.			
	Victoria.	New South Wales.	Queensland.	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
Means ... ..	3·38	4·14	3·11	1·68

Illegitimacy  
in United  
Kingdom.

282. Illegitimacy in England and Wales appears to be commoner than, and in Scotland more than twice as common as, it is in any of the Australasian colonies named. In Ireland, on the other hand, if the figures are reliable, it is 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 1876.

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
Means ... ..	5·1	8·9	2·4

Illegitimacy  
in town and  
country.

283. 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 1878, in the metropolitan district 1 birth in 15, in extra-metropolitan towns 1 birth in 25, and in country districts 1 birth in 43, was registered as illegitimate. These proportions are higher than similar ones for 1877, when the numbers were 1 in 16, 1 in 26, and 1 in 47 respectively.

Births in  
each quar-  
ter.

284. As far as observations extend, births in Victoria are always most numerous in the winter quarter, and next to that in the autumn quarter. The proportion of births in the spring and summer quarters varies in different years, the advantage being generally in favor of the former. The following are the numbers and percentage for 1878 and the percentage for the previous decennial period :—

BIRTHS IN EACH QUARTER.

Seasons.	Quarter ended on the last day of—	Year 1878.		Percentage in Ten Years: 1868 to 1877.
		Number of Births.	Percentage.	
Summer ...	March ... ..	6,212	23·37	23·70
Autumn ...	June ... ..	6,619	24·90	25·01
Winter ...	September ...	7,398	27·83	27·17
Spring ...	December ...	6,352	23·90	24·12
	Year ... ..	26,581	100·00	100·00

285. The deaths in 1878 numbered 12,702, as against 12,776 in 1877. The decrease in the year under notice was thus 74.

286. The year in which more deaths occurred than in any other since the first settlement of the colony was 1875, in which the number registered was 15,287. The next year in point of total mortality was 1876, then 1877, and the next the year under notice.\*

287. The births in 1878 exceeded the deaths by 13,879, or 109 per cent., as against 104 per cent. in 1877. In the eleven years ended with 1878 the proportion was 126 per cent. The following were the births and deaths in each of those eleven years and the excess of the former over the latter. It will be noticed that the births more than doubled the deaths in all the years except 1875 and 1876, when the mortality was swelled by the presence of epidemics:—

EXCESS OF BIRTHS OVER DEATHS, 1868 TO 1878.

Year.	Births.	Deaths.	Excess of Births over Deaths.	
			Numerical.	Centesimal.
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
Mean	26,923	11,811	15,112	128

288. Of the Australasian colonies, New Zealand is the one in which over a series of years the births exceeded the deaths by the highest proportion. This is due to the high birth rate and low death rate prevailing in that colony, both of which are favored by the circumstance that an abnormally large proportion of the population, resulting from the large number of immigrants introduced at the expense of the State, consists of persons at the reproductive period of life, which, being also the strongest, is that at which fewest deaths occur. The low death rate is no doubt also 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 generally the case in the other colonies. The position of Victoria in regard to the proportionate increase of births over deaths is

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

identical with that of Queensland, is above that of Western Australia and Tasmania, but below that of the other three colonies. The following table shows the percentage of excess of births over deaths in each of the Australasian colonies during the respective years 1873 to 1877, 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,  
1873 TO 1877.**

Colony.	Excess of Births over Deaths.					
	1873.	1874.	1875.	1876.	1877.	Mean of Five Years.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
1. New Zealand ...	208	209	153	230	260	209
2. New South Wales...	182	156	109	108	142	136
3. South Australia ...	170	124	84	132	167	131
4. } Victoria ...	144	119	75	97	104	106
} Queensland ...	154	128	63	99	113	106
5. Western Australia	94	80	61	140	111	95
6. Tasmania ...	103	83	49	82	58	73

Excess of births over deaths in European countries.

289. The following table shows the mean annual percentage of excess of births over deaths during a series of years in certain European countries. It will be observed that deaths bear a much larger proportion to births in every one of those countries than they do in any of the Australasian colonies, the difference being probably due not only to the Australian climate being more healthy and the circumstances of the colonies more favorable to longevity, but to the fact that the countries named contain a larger proportion than the colonies of the young and the very old. The rate of excess of births over deaths is highest in Scotland, next highest in England, Ireland, and Denmark; and lowest in France, where the births annually exceed the deaths by only 8 per cent. :—

**EXCESS OF BIRTHS OVER DEATHS IN EUROPEAN COUNTRIES.**

Country.	Years over which the Average extends.		Mean Annual Excess of Births over Deaths.
	Number.	Period.	
			per cent.
England and Wales ...	23	1853 to 1875	57
Scotland... ..	22	1855 to 1876	59
Ireland ... ..	11	1865 to 1875	57
Denmark ... ..	26	1850 to 1875	57
Sweden ... ..	26	1850 to 1875	56
Austria ... ..	23	1853 to 1875	23
Prussia ... ..	23	1853 to 1875	40
The Netherlands ...	23	1853 to 1875	36
France ... ..	23	1853 to 1875	8
Spain ... ..	10	1861 to 1870	25
Italy ... ..	13	1863 to 1875	23

290. In Victoria, deaths of males in 1878 numbered 7,179, and deaths of females, 5,523. These numbers furnish a proportion of 77 females to every 100 males, as against 74 in the previous year. Females in the total population are in the proportion of 84 to every 100 males; therefore more males and fewer females died in both years than their relative numbers in the population might have given reason to expect. Deaths of males and females.

291. It will be observed by the following table, which shows the death rate of males and females, and of both sexes, during each of the past eleven years, that in 1878 the total death rate and the death rate of males was lower than in any year of the previous decenniad, except 1871 and 1872, and that the death rate of females was lower than in any year except 1870, 1871, 1872, and 1873. It will also be noticed that, in pursuance of what appears to be a natural law, the death rate in all the years bore more hardly upon males than upon females :— Annual death rate.

ANNUAL DEATH RATE,\* 1868 TO 1878.

Year.	Estimated Mean Population.		Number of Deaths.		Deaths per 1,000 of the Mean Population.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1868 ...	371,817	299,405	5,865	4,202	15·77	14·03	15·00
1869 ...	384,267	312,675	6,221	4,409	16·19	14·10	15·25
1870 ...	390,480	319,359	6,114	4,306	15·66	13·48	14·68
1871 ...	404,983	333,742	5,845	4,073	14·43	12·20	13·43
1872 ...	415,605	345,386	6,308	4,523	15·18	13·10	14·23
1873 ...	424,729	355,633	6,565	4,936	15·45	13·88	14·74
1874 ...	434,073	364,615	6,994	5,228	16·11	14·34	15·30
1875 ...	442,623	372,411	8,563	6,724	19·35	18·06	18·76
1876 ...	451,134	379,545	7,716	5,845	17·10	15·40	16·33
1877 ...	461,542	388,328	7,345	5,431	15·91	13·99	15·03
1878 ...	472,309	396,731	7,179	5,523	15·20	13·92	14·62
Mean of eleven years ...					16·06	14·27	15·25

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

292. I have remarked on former occasions † that, however favorable may be the circumstances for prolonging life, as all must die at some time or other, it is evident that every country must have a death rate; also that in countries in which the climate is healthy, hygiene properly attended to, and the population in a normal condition as regards age, Normal death rate.

\* For total of mean population in each year, see table "Breadstuffs available for consumption," in Part VI., Production, post; for total number of deaths, see Statistical Summary (first folding sheet) at commencement of this work; or the totals may be obtained by adding the males and females together.

† See *Victorian Year-Book*, 1875, paragraph 342, and *Victorian Year-Book*, 1876-7, paragraph 169, and *Victorian Year-Book*, 1877-8, paragraph, 271; also page ix. of 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.

the ordinary mortality incident to human nature would probably cause this death rate to be in the proportion of about 17 per 1,000 persons living. In Victoria the mortality reached as high as this rate only once in the eleven years named in the table. In 1878 it was  $2\frac{1}{2}$  deaths below it per 1,000 persons living, and, according to the average annual mortality of the eleven years, it was  $1\frac{3}{4}$  deaths below it per 1,000 persons living.

Death rates  
in Austral-  
asian colo-  
nies.

293. The following table shows the death rates of the different Australasian colonies during the eleven years ended with 1877. It will be observed that over a series of years the annual death rates of Victoria, New South Wales, South Australia, and Tasmania were about equal; that the death rates of Queensland and Western Australia were above, and the death rate of New Zealand was below, the death rates of those four colonies. Also that over a series of years the death rate of all the colonies except Queensland was below 17 per 1,000:—

DEATH RATES IN AUSTRALASIAN COLONIES, 1867 TO 1877.\*

Year.	Number of Deaths per 1,000 of Mean Populations.						
	Victoria.	New South Wales.	Queensland	South Australia.	Western Australia.	Tasmania.	New Zealand.
1867 ...	18·06	19·64	17·80	17·48	...	14·48	12·78
1868 ...	15·00	15·83	17·36	14·41	...	14·70	11·94
1869 ...	15·25	14·05	16·20	12·37	...	13·20	11·73
1870 ...	14·68	13·27	14·59	13·94	...	13·88	11·13
1871 ...	13·43	12·54	14·83	12·87	...	13·38	10·13
1872 ...	14·23	14·11	14·97	15·33	14·02	13·79	11·68
1873 ...	14·74	13·84	16·06	13·48	16·24	14·52	12·67
1874 ...	15·30	15·12	17·98	17·05	18·74	16·21	13·05
1875 ...	18·76	18·09	23·80	19·45	17·88	20·00	15·92
1876 ...	16·33	18·11	18·82	16·28	14·18	16·54	12·66
1877 ...	15·03	15·28	17·29	13·99	15·70	19·17	11·47
Means ...	15·53	15·44	17·25	15·15	16·13	15·44	12·29

High and  
low death  
rates coinci-  
dent in Aus-  
tralasian  
colonies.

294. That like causes are at work in the various colonies to swell or diminish the rate of mortality appears evident from the fact that in nearly all the colonies the mortality was very high in 1867, that it gradually declined till 1871, when, in all cases, the rate was unusually low, and in many cases the minimum of the period, and that it again increased gradually to a high rate in 1875. It should also be mentioned that epidemics of measles and scarlatina prevailed in the two maximum years referred to. Moreover, in looking at the increased mortality at the last period, due principally to the presence of these epidemics, it would seem that the causes first appeared in Western Australia, and

\* For the number of deaths in the various colonies during the six years ended with 1878, see General Summary of Australasian Statistics (third folding sheet) *ante*.



swept easterly over the whole continent—thus a sudden increase of mortality occurred in Western Australia in 1874, in South Australia between 1874 and 1875, in Victoria and the other colonies, except New South Wales, in 1875, extending partly into 1876, and in New South Wales in 1875 and 1876, distributed equally over the two years.

295. The following is the order of the colonies in reference to their respective death rates in the last year shown in the table, and according to the average of the whole period of eleven years. The colony with the lowest rate is placed first, and that with the highest last. It will be noticed that Victoria occupies the third place in the list for 1877, and the fourth in that showing the average during eleven years:—

Order of colonies in respect to death rates.

**ORDER OF AUSTRALASIAN COLONIES IN REFERENCE TO DEATH RATES.**

Order in 1877.	Order over a Series of Years.
1. New Zealand.	1. New Zealand.
2. South Australia.	2. South Australia.
3. Victoria.	3. { Tasmania.
4. New South Wales.	{ New South Wales.
5. Western Australia.	4. Victoria.
6. Queensland.	5. Western Australia.
7. Tasmania.	6. Queensland.

296. 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. The increased mortality during the years when epidemics prevailed and its subsequent diminution in 1877 will be at once noticed:—

Death rate in Australia and Australasia.

**DEATH RATE IN AUSTRALIA AND AUSTRALASIA, 1873 TO 1877.**

Year.	Number of Deaths per 1,000 of Mean Population.	
	Continent of Australia.	Australia with Tasmania and New Zealand.
1873 ... ..	14·43	14·20
1874 ... ..	15·73	15·36
1875 ... ..	19·08	18·63
1876 ... ..	17·12	16·37
1877 ... ..	15·23	14·77
Means ... ..	16·32	15·87

297. The following table shows the death rate in as many British colonies outside Australasia as the particulars are available for. In many cases the figures are given for only a single year, 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 CERTAIN BRITISH POSSESSIONS.

Colonies.	Years.	Number of Deaths per 1,000 of the Population.	Colonies.	Years.	Number of Deaths per 1,000 of the Population.
Ceylon ...	1867-76	21·61	West Indies—		
Hong Kong ...	1875	25·87	Bahamas ...	1874-5	22·60
Mauritius ...	1876	27·50	St. Vincent	1872-6	28·00
Seychelles ...	1876	23·78	Barbadoes ...	1876	21·76
St. Helena ...	1871-5	13·21	Antigua ...	1875-6	32·87
Bermudas ...	1874-5	25·46	Montserrat	1874-5	20·44
British Guiana	1875	36·38	Dominica ...	1875-6	15·95
			Trinidad ...	1876	30·50

Death rates  
in European  
countries.

298. In all the European countries of which the information is at hand, except Ireland, the mean annual death rates are much higher than in any of the Australasian colonies. In Ireland the average rate is apparently lower than that in Queensland; but this may perhaps not really be the case, it being an admitted fact that the registrations of Ireland are defective.\* Omitting Ireland, it will be observed from the following table that in not one of the countries do the figures show an approach to so low a death rate as 17 per 1,000 in any year, except Sweden, during the three years 1871 to 1873, and only in one of these did the rate actually fall as low as 17 per 1,000; whilst in Hungary, on the other hand, the average death rate per 1,000, extending over a series of years, amounts to considerably more than twice that number:—

## DEATH RATES IN EUROPEAN COUNTRIES, 1866 to 1876.

Years.	Number of Deaths per 1,000 of Mean Population.													
	England and Wales.	Scotland.	Ireland.*	Denmark.	Sweden.	Austria.	Hungary.	Prussia.	German Empire.	Belgium.	The Netherlands.	France.	Spain.	Italy.
1866 ...	23·4	22·2	16·8	20·9	20·0	33·3	38·9	34·0	...	30·3	28·7	23·3	28·0	29·0
1867 ...	21·7	21·3	17·0	20·0	19·6	28·1	33·5	25·6	...	21·6	23·6	22·7	29·1	34·2
1868 ...	21·9	21·2	15·8	19·3	21·0	29·3	33·8	27·3	...	21·7	24·8	24·0	32·6	30·5
1869 ...	22·3	23·0	16·4	19·1	22·3	28·9	32·0	25·9	...	21·8	23·0	23·5	32·6	27·7
1870 ...	22·9	22·2	16·7	19·1	19·8	29·2	32·6	25·9	...	23·3	25·7	28·3	30·1	29·8
1871 ...	22·6	22·2	16·4	19·5	17·2	30·0	39·0	28·4	...	28·5	29·4	34·8	...	30·0
1872 ...	21·3	22·3	18·1	18·3	16·3	32·4	42·3	29·3	29·0	23·2	25·7	22·0	...	30·7
1873 ...	21·1	22·4	18·3	18·6	17·2	38·5	65·1	28·0	28·2	21·5	24·0	23·3	...	30·0
1874 ...	22·3	23·3	17·3	19·9	20·3	31·3	42·6	25·8	26·7	20·5	22·6	21·5	...	30·3
1875 ...	22·8	23·4	18·5	21·0	20·2	29·7	37·2	26·4	27·6	22·7	25·4	23·1	...	30·7
1876 ...	21·0	21·0	17·3	20·0	19·5	29·4	...	25·4	26·3	21·9	23·3	22·7	...	28·7
Means	22·1	22·1	17·1	19·6	19·4	30·9	39·7	27·4	27·6	23·4	25·1	24·5	30·5	30·2

NOTE.—The mortality of Sweden was increased by cholera in 1866; that of Austria by the same cause in 1866 and 1873, also by war in 1866; that of Hungary by cholera in 1866, 1873, and 1874; that of Prussia by cholera in 1866, and by war in 1866, 1870, and 1871; that of Belgium by cholera in 1866; that of the Netherlands by cholera in 1866, and by small-pox in 1871; that of France by cholera in 1866, and by war in 1870 and 1871.

\* The registrations in Ireland are admitted to be defective.—See 11th Detailed Report of the Registrar-General of Ireland, page 15; also his 12th Report, page 31.

299. The death rate of the United Kingdom, according to the Reports of the Registrar-General of England, was as follows during each of the six years ended with 1876. Some allowance should, however, be made for the defective registration in Ireland\* :—

Death rate in United Kingdom.

DEATH RATE IN THE UNITED KINGDOM, 1871 TO 1876.

						Deaths per 1,000 of the Population.
1871	...	...	...	...	...	22·6
1872	...	...	...	...	...	20·9
1873	...	...	...	...	...	20·8
1874	...	...	...	...	...	21·6
1875	...	...	...	...	...	22·2
1876	...	...	...	...	...	20·5
			Mean	...	...	21·4

300. In every country the death rate in towns is higher than it is in the country districts. This circumstance, though no doubt partly attributable to the superior healthfulness and immunity from contagion prevailing in the latter, is also to a great extent due to the fact that hospitals and charitable institutions, which are frequented by patients from the country as well as by town residents, are generally situated in the towns; and further that outside of charitable institutions many persons die who have come from the country on the approach of serious illness for the sake of the superior nursing and medical attendance to be obtained in town. In 1878, as also in the previous year, the death rate was somewhat higher in Melbourne and suburbs than in the country towns, but in both it was very much higher than in the country districts. The following are the figures for 1878 :—

Death rates in town and country.

DEATHS IN URBAN AND COUNTRY DISTRICTS, 1878.

Districts.	Estimated Mean Population.	Deaths, 1878.	
		Total Number.	Number per 1,000 of the Population.
Melbourne and suburbs ...	256,477	5,160	20·12
Towns outside Melbourne and suburbs	198,385	3,868	19·50
Country districts ...	414,178	3,674	8·87
Total ...	869,040	12,702	14·62

301. In Victorian town districts the annual mortality is always much above the normal 17 per 1,000 persons living, but in country districts it is always very considerably below this rate.

Normal death rate in town and country.

302. The following table shows the mean population, the number of deaths, and the death rate in 1878, also the death rate during the

Death rates in Melbourne and suburbs.

\* See footnote (\*) to paragraph 298 ante.

septennial period 1871 to 1877, in the different municipalities, &c., forming the component parts of the district of Melbourne and suburbs :—

DEATH RATES IN MELBOURNE AND SUBURBS, 1871 TO 1878.

Sub-districts.	Year 1878.			Seven Years: 1871 to 1877.
	Mean Population.	Deaths.		Annual Deaths per 1,000 of Mean Population.
		Total Number.	Number per 1,000 of the Population.	
Melbourne City* ... ..	62,500	1,822	29·15	28·54
Hotham Town † ... ..	15,317	363	23·70	23·04
Fitzroy City ... ..	19,160	318	16·60	19·24
Collingwood City ... ..	22,000	432	19·64	20·66
Richmond Town ... ..	20,153	329	16·33	18·19
Brunswick Borough ... ..	5,571	71	12·74	15·40
Prahran Town ‡ ... ..	19,200	314	16·35	17·63
Emerald Hill Town § ... ..	25,000	432	17·28	17·05
Sandridge Borough ... ..	7,900	129	16·33	18·01
St. Kilda Borough ... ..	10,000	142	14·20	14·42
Brighton Borough ... ..	4,600	61	13·26	14·32
Essendon and Flemington Borough	3,919	76	19·39	18·06
Hawthorn Borough ... ..	4,868	64	13·15	18·25
Kew Borough    ... ..	3,700	114	30·81	32·45
Footscray Borough ... ..	5,350	108	20·19	17·28
Williamstown Borough ... ..	8,200	144	17·56	18·67
Remainder of district ¶ ... ..	17,000	237	13·94	14·51
Shipping in bay and river ** ... ..	2,039	4	1·96	5·04
Total ... ..	256,477	5,160	20·12	20·90

Districts where death rate was above the average.

303. It will be observed that generally the death rates in 1878 were below the average of the previous seven years, the exceptions being in the case of Melbourne, Hotham, Emerald Hill, Essendon and Flemington, and Footscray, especially the last-named district, where, in 1878, the death rate was nearly 3 per 1,000 above the average.

Places in which death rate was highest and lowest.

304. In 1878, also during the seven years ended with 1877, the highest death rate was in Kew, which is to be accounted for by the fact that

\* The following institutions are, or were till closed, situated in Melbourne City :—The Melbourne, Alfred, Lying-in, and Children's Hospitals, the Immigrants' Home, the Nursery Industrial Schools (closed in 1873), the Melbourne Industrial Schools since 1876, the Melbourne Gaol, and the Carlton Lunatic Asylum (closed in 1873); 846 of the deaths in these institutions took place in Melbourne City in 1878, and 5,237 in the previous seven years.

† The Benevolent Asylum is in Hotham Town; 97 deaths took place in it in 1878, and 630 in the previous seven years.

‡ Proclaimed a City on the 27th May 1879.

§ The Melbourne Industrial Schools were prior to 1877, the Protestant Orphanage was prior to 1878, and the Roman Catholic Orphanage is still in Emerald Hill Town; 2 deaths in these institutions took place in Emerald Hill in 1878, and 179 in the previous seven years.

|| The Metropolitan Lunatic Asylum is situated in Kew Borough; 80 deaths took place in it in 1878, and 432 in the previous seven years.

¶ The Yarra Bend Lunatic Asylum and Pentridge Penal Establishment are in "Remainder of district;" 46 deaths took place in them in 1878, and 477 in the previous seven years.

\*\* In H.M.V.S. *Nelson* and the Penal Hulk *Success* no death occurred in 1878, but 8 deaths in the previous seven years. The population given is that of the shipping at last census (2nd April 1871).

the Metropolitan Lunatic Asylum is situated in that borough; the next highest death rate was in Melbourne City, where the mortality was augmented by that occurring in hospitals and some other charitable institutions; and the next in Hotham, where the mortality was swelled by that occurring in the Benevolent Asylum. The lowest death rate, both during 1878 and the sexennial period, was in the shipping; the next during 1878 in Brunswick; the next in Brighton; the next in Hawthorn, and the next in the portion of the district not included in any city, town, or borough. During the septennial period, after the shipping, the lowest death rate was in Brighton; the next in St. Kilda, and the next in the "remainder" of the district.

305. The death rate of the whole district was a fraction over 20 per 1,000 persons living in 1878, and a fraction under 21 per 1,000 in the sexennial period. During the last-named period the annual death rate was over 17 per 1,000 in all the sub-districts, except Brunswick, St. Kilda, Brighton, the "remainder" of the district, and the shipping; and during 1878 it was over 17 per 1,000 in all the sub-districts, except those just cited, with the addition of Fitzroy, Richmond, Prahran, Sandridge, and Hawthorn.

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

306. The mortality of Melbourne and suburbs, taken as a whole, is lower than that of most towns in the United Kingdom. In the following list, which shows the death rate of 23 such towns, the only towns with a lower death rate than Melbourne and suburbs are Portsmouth and Brighton. The death rate of Melbourne City is, however, higher than that of any of them, except Manchester, and the death rate of Kew is higher than that of any town in the list\*:

Death rates in towns of United Kingdom.

DEATH RATES IN TWENTY-THREE TOWNS OF THE UNITED KINGDOM, 1873 TO 1877.

	Annual Deaths per 1,000 of the Population.		Annual Deaths per 1,000 of the Population.
Portsmouth ...	... 19·56	Bradford ...	... 24·92
Brighton ...	... 19·82	Birmingham ...	... 25·02
Plymouth ...	... 21·26	Oldham ...	... 25·88
Edinburgh ...	... 22·18	Leeds ...	... 26·02
Sunderland ...	... 22·44	Newcastle-on-Tyne ...	26·12
Norwich ...	... 22·48	Dublin ...	... 26·50
London ...	... 22·58	Salford ...	... 27·52
Nottingham ...	... 23·22	Glasgow ...	... 27·78
Bristol ...	... 23·40	Liverpool ...	... 27·90
Leicester ...	... 23·94	Manchester ...	... 29·40
Hull ...	... 24·28		
Wolverhampton ...	... 24·34	Mean of towns named	24·40
Sheffield ...	... 24·74		

\* The death rate of both Melbourne and Kew is swelled by deaths in charitable institutions. This is especially the case in regard to Kew, which, were it not for the deaths occurring in the Lunatic Asylum, would show a low death rate. The death rate, however, of some of the towns in the United Kingdom is probably affected by a similar cause.

Deaths in  
each month.

307. The distribution of the mortality throughout the various months in 1878 corresponded approximately with the averages during the previous decenniad; thus the lowest mortality occurred in September, November, and October, and the highest during the first four months of the year. The number of deaths in each month of 1878, and their percentage to the total number in the year, also the percentage of the deaths in each month of the decenniad which preceded that year to the total number of deaths during the same period, will be found in the following table:—

## DEATHS IN EACH MONTH.

Months.	Year 1878.		Percentage in Ten Years: 1868 to 1877.
	Number of Deaths.	Percentage.	
January ... ..	1,323	10·42	10·23
February ... ..	1,231	9·69	9·10
March ... ..	1,330	10·47	10·40
April ... ..	1,361	10·71	9·71
May ... ..	1,106	8·71	8·58
June ... ..	905	7·12	7·53
July ... ..	974	7·67	7·86
August ... ..	917	7·22	7·26
September... ..	801	6·31	6·71
October ... ..	862	6·79	7·04
November ... ..	855	6·73	6·99
December ... ..	1,037	8·16	8·59
Year ... ..	12,702	100·00	100·00

Deaths at  
different  
seasons.

308. In Victoria the summer is, to invalids and young children, the most trying portion of the year. It is not astonishing therefore that most deaths occur during that period. Next to the summer the autumn quarter is the most fatal, probably in part owing to the circumstance that some who had become debilitated during the summer linger on for some months later. 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 the preceding ten years; in England and Wales, according to the experience of thirty-one years; in Scotland, according to the experience of ten years; and in Ireland, according to the experience of five years; together with the mean temperature in each quarter in Melbourne and Greenwich, will be found in the following table.



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

Seasons.*	Melbourne, Victoria.	Greenwich, England.	Deaths per 100 at all Seasons.				
			Victoria.		England and Wales.	Scotland.	Ireland.
	Mean temperature in shade.	Year 1878.	Average of Ten Years: 1868 to 1877.	Average of Thirty-one Years.	Average of Ten Years.	Average of Five Years.	
Summer ...	65.2	60.5	30.58	29.73	23.24	22.34	20.21
Autumn ...	53.8	44.3	26.54	25.82	24.65	24.71	23.45
Winter ...	50.2	40.0	21.20	21.83	27.49	27.95	30.19
Spring ...	60.3	52.8	21.68	22.62	24.62	25.00	26.15
Year ...	57.6	49.4	100.00	100.00	100.00	100.00	100.00

309. The following table shows the number and percentage at various ages of the deaths registered in Victoria during the year 1878. It will be noticed that nearly half the males who died were under 25 years and more than a third were over 45 years of age; also that of the females more than half were under 15 years, and nearly a fourth were between 15 and 45 years of age:—

DEATHS AT EACH AGE, 1878.

Ages.	Number of Deaths at each Age, 1878.			Percentage of Deaths at each Age.		
	Males.	Females.	Total.	Males.	Females.	Total.
Under 5 years ...	2,631	2,387	5,018	36.65	43.22	39.51
5 years to 10 years ...	289	307	596	4.02	5.56	4.69
10 " 15 " ...	149	169	318	2.08	3.06	2.50
15 " 25 " ...	436	404	840	6.07	7.31	6.61
25 " 35 " ...	386	440	826	5.38	7.97	6.50
35 " 45 " ...	712	530	1,242	9.92	9.59	9.78
45 " 55 " ...	948	467	1,415	13.20	8.46	11.14
55 " 65 " ...	776	356	1,132	10.81	6.45	8.91
65 " 75 " ...	541	279	820	7.54	5.05	6.46
75 and upwards ...	311	184	495	4.33	3.33	3.90
Total ...	7,179	5,523	12,702	100.00	100.00	100.00

310. There is reason to believe that the proportions of the population living at various ages have undergone considerable change since the census was taken in 1871, and consequently no reliable data exist for calculating the death rate at each age at the present time. To give

Basis for obtaining an estimate of the ages of the people.

\* 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.

some idea of these changes, also to supply an approximate basis for calculating anew the ages of the people, the recorded numbers of males and females dying at various ages in 1878 are in the following table placed side by side with the mean of those at the same ages recorded as having died during the census year and that immediately preceding and following it, the numerical and centesimal increase or decrease being also shown. Leaving out of consideration the three age periods under 15 years, as, in consequence of the uncertainty of life at those ages, the results are not reliable, it appears from this table that the deaths of males, and consequently also probably the male population between the ages of 25 and 45, had actually decreased since the census, whilst those at ages between 15 and 25 had considerably increased; also that the deaths of females, and consequently also probably the female population between the ages of 30 and 40, had increased in a very small proportion, whilst at the ages between 20 and 45 they had increased in a much smaller ratio than at all other ages. Of course this method is liable to the objection that the death rate at various ages, especially in a community like ours, fluctuates, and is often considerably influenced by epidemics; but these causes do not, as far as can be ascertained, affect to any appreciable extent the years taken for comparison, and it is certainly more reasonable to suppose that the ages of the people will be nearer the correct figures if calculated from an ascertained death rate than by any other indirect estimate, such as by one based on the proportions obtaining at a census taken many years previously:—

INCREASE OF DEATHS AT EACH AGE, 1871 TO 1878.

Ages.	Number of Deaths at each Age.				Increase or Decrease.*			
	Average of 3 years, 1870 to 1872.		Year 1878.		Number.		Per cent.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 5 years ...	2,551	2,203	2,631	2,387	80	184	3·14	8·35
5 years to 10 years	251	215	289	307	38	92	15·14	42·79
10 „ 15 „ ...	134	115	149	169	15	54	11·19	46·96
15 „ 20 „ ...	105	116	215	209	110	93	104·76	80·17
20 „ 25 „ ...	149	140	221	195	72	55	48·32	39·29
25 „ 30 „ ...	209	173	176	231	—33	58	—15·79	33·53
30 „ 35 „ ...	278	198	210	209	—68	11	—24·46	5·56
35 „ 40 „ ...	381	243	286	264	—95	21	—24·93	8·64
40 „ 45 „ ...	439	204	426	266	—13	62	—2·96	30·39
45 „ 50 „ ...	341	146	459	258	118	112	34·60	76·71
50 „ 55 „ ...	340	118	489	209	149	91	43·82	77·12
55 „ 60 „ ...	242	88	426	183	184	95	76·03	107·95
60 „ 65 „ ...	224	108	350	173	126	65	56·25	60·18
65 „ 70 „ ...	165	80	326	137	161	57	97·58	71·25
70 „ 75 „ ...	140	69	215	142	75	73	53·57	105·79
75 and upwards ...	140	85	311	184	171	99	122·14	116·47

\* Where decrease has occurred the minus sign (—) is placed against the figures.

311. The death rate at every period of life in Victoria, according to the average of the ten years which intervened between the censuses of 1861 and 1871, is less than in England and Wales. In England and Wales the death rate of males exceeds that of females at all periods except those between 10 and 35, but in Victoria the only exception is between the ages of 25 and 35; in both countries, however, there is only a slight difference between the death rate of males and that of females at periods between 5 and 45.

Death rate at different ages in Victoria and England.

MORTALITY PER 1,000 LIVING AT DIFFERENT AGES IN VICTORIA AND ENGLAND.

Ages.	Number of Deaths to every 1,000 Living, at each Age.			
	Victoria.		England and Wales.	
	Average of 10 Years. 1861 to 1871.		Average of 30 Years.	
	Males.	Females.	Males.	Females.
All ages	16.68	16.13	23.33	21.51
Under 5 years	55.08	49.66	72.42	62.46
5 years to 10 years	7.52	6.95	8.79	8.67
10 " 15 "	3.27	3.25	4.95	5.10
15 " 25 "	4.95	4.81	7.90	8.22
25 " 35 "	7.85	8.28	9.93	10.15
35 " 45 "	12.09	11.12	13.03	12.30
45 " 55 "	17.52	13.20	18.16	15.67
55 " 65 "	29.71	21.98	31.53	28.56
65 " 75 "	53.79	43.10	68.54	57.52
75 and upwards*	111.71	93.02	147.74	135.36

312. The persons who died at the age of 80 or upwards numbered 217 in 1878, as against 216 in 1877 and 203 in 1876. Those in the year under review comprised 125 males and 92 females. Seventeen of each sex had passed the age of 90, and 1 male and 1 female had passed the age of 100. The following are the exact ages recorded:—

Deaths of octogenarians.

NUMBER DYING AGED 80 OR UPWARDS, 1878.

Years of Age.	Males.	Females.	Years of Age.	Males.	Females.	Years of Age.	Males.	Females.
80	28	16	88	7	2	97	...	1
81	7	6	89	3	6	99	1	...
82	18	13	90	3	6	101	1	...
83	12	6	91	3	1	102	...	...
84	13	4	92	2	5	104	...	1
85	9	8	94	3	...		—	—
86	5	8	95	2	1	Total	125	92
87	6	6	96	2	2		—	—

\* The figures in this line relating to England and Wales apply to males and females at from 75 to 80 only. The Victorian returns apply to all over 75.

Causes of  
death of oc-  
togenarians.

313. In respect to 126 of these persons—viz., 70 males and 56 females—no other cause of death was set down than old age. Of actual complaints, the most common were affections of the lungs and of the brain. The following were the numbers of deaths set down to each cause:—

CAUSES OF DEATH OF PERSONS AGED 80 OR UPWARDS, 1878.

	Males.	Females.		Males.	Females.
Influenza ... ..	...	1	Stomach diseases ...	3	1
Erysipelas ... ..	1	...	Kidney diseases ...	5	...
Dysentery and diarrhoea	6	8	Gennetic diseases ...	...	1
Cholera ... ..	1	...	Old age ... ..	70	56
Privation ... ..	1	...	Accidents ... ..	2	1
Cancer ... ..	4	1		—	—
Brain diseases ...	12	9	Total ... ..	125	92
Heart diseases ...	7	6		—	—
Lung diseases ...	13	8			

Infantile  
mortality,  
1878.

314. The death rate of infants in 1878 was less than in 1877, and was also slightly below the average. The total number who died under 1 year of age was 3,262, and as the births numbered 26,581, it follows that 1 infant died to every 8 births, or 12·27 infants to every 100 births. In the decennial period 1868 to 1877 the proportion of infants dying before completing their first year was 12·45 to every 100 births.

Infantile  
mortality in  
Australasian  
colonies.

315. Of all the Australasian colonies which publish returns from which the death rate of infants can be calculated, the one in which the largest number of infants die in proportion to the number born is South Australia.\* It is satisfactory to notice, however, that in 1877 the rate in that colony was much lower than in the previous four years. It was also less than in Queensland during the same year, in which colony, during the three years ended with 1877, infantile mortality was exceptionally high, and attained a rate which has never been approached in any Australasian colony except South Australia. In 1877, the infantile mortality in New Zealand, which is generally above that in Tasmania, was lower than that in any other of the colonies, whilst that in Tasmania was nearly equal to that prevailing in New South Wales. The rate in Victoria in 1877 was slightly above the average, and was higher than in the three last-named colonies. The following table 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 eleven years ended

\* 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 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.

with 1877. All the calculations were made in the office of the Government Statist, Melbourne:—

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.			
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
Sums and means	295,184	36,135	12·24	229,385	24,235	10·57	61,846	7,832	12·66
SOUTH AUSTRALIA.			TASMANIA.			NEW ZEALAND.			
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
Sums and means	81,547	12,478	15·30	33,547	3,418	10·19	131,219	13,264	10·11

316. The colonies named in the table stand in the following order in regard to the death rate of infants—the colony with the lowest average death rate being placed first, and the one with the highest last. The three first-named colonies have nearly the same average death rates, as also have the fourth and fifth, whilst the rate in South Australia is much the highest:—

Order of colonies in respect to infantile mortality.

ORDER OF COLONIES IN REFERENCE TO INFANTILE MORTALITY.

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

317. In England and Wales the infantile mortality is greater than in any of the colonies except South Australia, deaths at under 1 year of age having occurred during the ten years 1861 to 1870 in the proportion

Infantile mortality in United Kingdom.

of 15·4 to every 100 births. In Scotland, the infantile death rate during the four years, 1870 to 1873, was a fraction higher than that in Victoria, being in the proportion of 12·55 to every 100 births. In Ireland, during the years 1875 and 1876, the returns show only 9·5 deaths of infants to 100 births, but the registrations of Ireland are admittedly so defective that but little reliance can be placed on calculations based thereon.

Infantile mortality in Melbourne and country.

318. The infantile mortality of large towns is naturally always greater than that in country districts. Thus the deaths at under 1 year of age in Melbourne and suburbs during the six years ended with 1878 averaged nearly 17 per 100 births, whilst in the country districts of Victoria the mortality of infants at the same period of life averaged only  $10\frac{1}{3}$  per 100 births. The following table shows the death rate of infants in the metropolis and in the country districts during each of the six years named :—

INFANTILE MORTALITY IN AND OUTSIDE OF MELBOURNE AND SUBURBS, 1873 TO 1878.

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.
	Melbourne and Suburbs.			Victoria, outside Melbourne and Suburbs.		
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
Sums and means }	49,313	8,346	16·90	111,625	11,528	10·33

Infantile mortality in English towns.

319. As compared with the births, the infantile mortality of Melbourne and suburbs is, on the average, greater than that of Portsmouth, Brighton, Plymouth, London, or Bristol, but is less than that of fifteen 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 lowest death rate being placed first, and that with the highest 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 TWENTY TOWNS OF ENGLAND,  
1870 to 1876.

Deaths under 1 Year of Age to 100 Births.			Deaths under 1 Year of Age to 100 Births.		
Portsmouth	...	14·5	Nottingham	...	18·8
Brighton	...	16·0	Salford	...	18·9
Plymouth	...	16·0	Newcastle-on-Tyne	...	18·9
London	...	16·1	Norwich	...	19·3
Bristol	...	16·3	Manchester	...	19·6
Sunderland	...	17·1	Bradford	...	19·8
Wolverhampton	...	17·2	Leeds	...	20·0
Birmingham	...	17·9	Leicester	...	22·5
Hull	...	17·9	Liverpool	...	23·1
Oldham	...	18·2			
Sheffield	...	18·4	Mean of towns named		18·3

320. In the Lying-in Hospital, Melbourne, 516 children were born alive during 1878, and of these, 33, or nearly 6½ per cent., died before leaving the institution. In 1877, 7 per cent., and in 1876 and 1875, 9 per cent., of the infants born in the Lying-in Hospital died therein.

Deaths of infants in Lying-in Hospital.

321. The average age at death in 1878 was 26·80 years, or 26 years and 10 months. For males the average age was 29·54 years, or 29 years and 6 months, and for females, 23·24 years, or 23 years and 3 months. The average age at which both males and females die in Victoria is becoming more advanced from year to year. This will be seen by the following figures :—

Average age at death.

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

322. The causes of death in Victoria, as in the United Kingdom, are arranged in classes and orders, according to the system proposed by Dr. William Farr, F.R.S., 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.

Classification of causes of death.

323. A Nosological Index was compiled by the present writer some years since, under the sanction of the then Registrar-General, Mr. W. H. Archer, to be used in connection with this classification in order to facilitate the bringing of all the circumstances resulting in death under one or other of the heads in the list, also for the guidance of

Nosological Index.

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.

324. Since the introduction of this system into Victoria in 1861, it has been adopted in all the Australasian colonies, and, as a consequence, the Nosological Index referred to has also come into use throughout the group.\*

325. The following table shows, in classified arrangement, the causes of death and the numbers who died from each cause during 1878 and during the twenty-four years and a half ended with 1877 :—

### CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT.

(24½ Years : 1853 to 1877 ; and Year 1878.)

Class.	Order.	Causes of Death.	Number of Deaths.	
			24½ Years : 1853-1877.	Year 1878.
		All causes ... ..	249,428	12,702
		Specified causes ... ..	247,858	12,671
		CLASSES.		
I.	...	<b>ZYMOTIC DISEASES</b> :—Zymotici (ζύμη, leaven). Diseases that are either epidemic, endemic, or contagious, induced by some specific body, or by the want of, or by the bad quality of food	77,368	3,391
II.	...	<b>CONSTITUTIONAL DISEASES</b> :—Cachectici (καχεξία, bad habit of body). Sporadic diseases ; affecting several organs in which new morbid products are often deposited ; sometimes hereditary	32,473	1,828
III.	...	<b>LOCAL DISEASES</b> :—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	81,919	4,939
IV.	...	<b>DEVELOPMENTAL DISEASES</b> :—Metamorphici (μεταμόρφωσις, change of form). Special diseases, the incidental result of the formative, reproductive, and nutritive processes	35,327	1,650
V.	...	<b>VIOLENT DISEASES OR DEATHS</b> :—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	20,771	863

\* A copy of this Nosological Index was appended to the *Victorian Year-Book* 1877-8, pp. 303 to 335.

Victorian  
index used  
throughout  
Australasia

Causes of  
death classi-  
fied.

CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT—continued.  
(24½ Years: 1853 to 1877; and Year 1878.)

Class.	Order.	Causes of Death.	Number of Deaths.	
			24½ Years: 1853-1877.	Year 1878.
<b>ORDERS.</b>				
I.	1	<i>Miasmatic diseases</i> :—Miasmatici (μίασμα, stain; defilement)	71,320	3,058
	2	<i>Enthetic diseases</i> :—Enthetici (ἐνθετος, put in; implanted)	630	34
	3	<i>Dietic diseases</i> :—Dietici (δίαιτα, way of life; diet)	4,039	226
	4	<i>Parasitic diseases</i> :—Parasitici (παράσιτος, parasite)	1,379	73
II.	1	<i>Diathetic diseases</i> :—Diathetici (διάθεσις, condition; diathesis)	6,504	423
	2	<i>Tubercular diseases</i> :—Phthisisici (φθίσις, wasting away)	25,969	1,405
III.	1	<i>Brain diseases</i> :—Cephalici (κεφαλή, head) ...	26,590	1,467
	2	<i>Heart diseases</i> :—Cardiaci (καρδία, heart)... ..	10,948	724
	3	<i>Lung diseases</i> :—Pneumonici (πνεύμων, lung) ...	22,992	1,398
	4	<i>Bowel diseases</i> :—Enterici (έντερον, intestine) ...	17,402	1,005
	5	<i>Kidney diseases</i> :—Nephritici (νεφρός, kidney) ...	2,451	266
	6	<i>Gennetic diseases</i> :—Aidoici (αἰδοῖα, pudenda) ...	427	23
	7	<i>Bone and muscle diseases</i> :—Myostici (μῦς, muscle; ὀστέον, bone)	595	28
IV.	8	<i>Skin diseases</i> :—Chrotici (χρῶς, skin) ... ..	514	28
	1	<i>Developmental diseases of children</i> :—Paidiaci (παιδιά, youth)	12,098	459
	2	<i>Developmental diseases of women</i> :—Gyniaci (γυνή, woman)	2,428	154
	3	<i>Developmental diseases of old people</i> :—Geratici (γῆρας, old age)	3,253	337
V.	4	<i>Diseases of nutrition</i> :—Atrophici (ἀτροφία, atrophy)	17,548	700
	1	<i>Accident</i> :—Tychici (τύχη, chance) ... ..	18,790	757
	2	<i>Battle</i> :—Polemici (πόλεμος, battle; fight) ...	...	...
	3	<i>Homicide</i> :—Androphonici (άνήρ, man; φονεύω, I kill)	440	19
	4	<i>Suicide</i> :—Autophonici (αὐτός, self; φονεύω, I kill)	1,470	87
	5	<i>Execution</i> :—Demiotici (δημιώτης, executioner)...	71	...
<b>DISEASES, ETC.</b>				
I.	1	Small-pox ... ..	21	...
		Chicken-pox ... ..	40	...
		Measles ... ..	3,839	5
		Scarlatina ... ..	8,487	136
		Diphtheria ... ..	7,161	336
		Quinsy ... ..	567	26
		Croup ... ..	3,373	331
		Whooping-cough ... ..	3,814	291
		Typhoid fever, &c. ... ..	10,076	532
		Erysipelas ... ..	931	41
		Metria ... ..	604	49
		Carbuncle, boil, &c. ... ..	54	5
		Influenza, coryza, catarrh ... ..	821	18
		Dysentery ... ..	12,049	197
		Diarrhœa ... ..	16,139	877
	Cholera ... ..	1,121	72	
	Ague ... ..	83	5	

CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT—*continued.*  
(24½ Years: 1853 to 1877; and Year 1878.)

Class.	Order.	Causes of Death.	Number of Deaths.	
			24½ Years: 1853-1877.	Year 1878.
<i>DISEASES, ETC.—continued.</i>				
I.	1	Remittent fever ... ..	653	22
		Rheumatism ... ..	1,117	79
		Miasmatic diseases not classed ... ..	370	36
I.	2	Syphilis ... ..	490	24
		Gonorrhœa, stricture of the urethra ... ..	138	10
		Glanders ... ..	2	...
I.	3	Privation ... ..	377	31
		Want of breast-milk ... ..	1,755	122
		Purpura and scurvy ... ..	255	7
		Alcoholism ... ..	1,627	64
		Other dietic diseases... ..	25	2
I.	4	Thrush ... ..	907	32
		Worms, &c. ... ..	56	2
		Hydatids ... ..	399	37
		Other parasitic diseases ... ..	17	2
II.	1	Gout ... ..	138	13
		Dropsy ... ..	1,904	53
		Cancer ... ..	3,536	314
		Tumor ... ..	336	28
		Polypus ... ..	8	1
		Noma ... ..	58	4
		Mortification ... ..	357	8
		Other diathetic diseases ... ..	167	2
II.	2	Scrofula ... ..	941	26
		Tabes mesenterica ... ..	2,028	87
		Phthisis ... ..	18,511	1,124
		Hydrocephalus ... ..	3,813	134
		Other tubercular diseases ... ..	676	34
III.	1	Cephalitis ... ..	3,907	273
		Apoplexy ... ..	4,266	358
		Paralysis ... ..	2,061	180
		Insanity ... ..	254	1
		Chorea ... ..	34	3
		Epilepsy ... ..	950	67
		Convulsions ... ..	9,032	318
		Other diseases of the nervous system ... ..	6,086	267
III.	2	Pericarditis ... ..	633	34
		Aneurism ... ..	1,308	68
		Other diseases of the circulatory system ... ..	9,007	622
III.	3	Laryngitis ... ..	742	56
		Bronchitis ... ..	7,198	413
		Pleurisy ... ..	1,317	93
		Pneumonia ... ..	9,790	545
		Congestion of the lungs, pulmonary apoplexy ... ..	2,000	186
		Asthma ... ..	605	31
		Other diseases of the respiratory system ... ..	1,340	74
III.	4	Gastritis ... ..	2,230	180
		Enteritis ... ..	4,555	185
		Peritonitis ... ..	1,383	67
		Ascites ... ..	397	15
		Ulceration of intestines ... ..	354	14
		Hernia ... ..	349	21
		Ileus ... ..	671	48

CAUSES OF DEATH IN CLASSIFIED ARRANGEMENT—*continued.*

(24½ Years: 1853 to 1877; and Year 1878.)

Class.	Order.	Causes of Death.	Number of Deaths.	
			24½ Years: 1853-1877.	Year 1878.
<b>DISEASES, ETC.—<i>continued.</i></b>				
III.	4	Intussusception ... ..	152	6
		Stricture of intestines ... ..	61	6
		Fistula ... ..	36	3
		Stomach diseases undefined ... ..	1,131	81
		Pancreas disease ... ..	12	1
		Hepatitis ... ..	2,002	73
		Jaundice, gallstone ... ..	754	47
		Liver disease undefined ... ..	3,238	251
		Spleen disease ... ..	77	7
III.	5	Nephritis ... ..	306	20
		Ischuria ... ..	54	4
		Nephria ... ..	687	115
		Diabetes ... ..	186	13
		Stone, gravel ... ..	81	7
		Cystitis ... ..	230	26
		Other diseases of the urinary organs ... ..	907	81
III.	6	Ovarian dropsy ... ..	89	5
		Other diseases of the generative organs ... ..	338	18
III.	7	Arthritis ... ..	120	5
		Ostitis, periostitis ... ..	30	4
		Other diseases of the locomotive system ... ..	445	19
III.	8	Phlegmon, whitlow ... ..	47	2
		Ulcer ... ..	153	11
		Other diseases of the skin ... ..	314	15
IV.	1	Premature birth ... ..	4,440	277
		Cyanosis ... ..	286	21
		Spina bifida ... ..	204	8
		Other malformations ... ..	597	34
		Teething ... ..	6,560	119
		Other developmental diseases of children ... ..	11	...
IV.	2	Paramenia ... ..	78	5
		Childbirth ... ..	2,349	149
		Other developmental diseases of adults ... ..	1	...
IV.	3	Old age ... ..	3,253	337
IV.	4	Atrophy and debility ... ..	17,548	700
V.	1	Fractures, contusions, &c. ... ..	6,346	303
		Wounds ... ..	446	23
		Burns and scalds ... ..	1,930	83
		Sunstroke ... ..	354	25
		Struck by lightning ... ..	31	2
		Poison ... ..	330	14
		Snake or insect bite ... ..	63	6
		Drowning ... ..	4,157	227
		Suffocation ... ..	1,389	62
		Other or unspecified accidents ... ..	3,744	12
V.	3	Murder and manslaughter ... ..	440	19
V.	4	Wounds ... ..	453	6
		Poison ... ..	280	10
		Drowning ... ..	284	15
		Hanging ... ..	398	20
		Suicide by other means ... ..	55	30
V.	5	Judicial hanging ... ..	71	6
		Causes not specified ... ..	1,570	31

326. The next table shows the same causes of death, arranged in the order of their fatality, during 1878, with the numbers who died from each cause in that year, and during the twenty-four years and a half ended with 1877, also the order of fatality of the different causes during that period :—

## CAUSES OF DEATH IN ORDER OF FATALITY.

(24½ Years : 1853 to 1877 ; and Year 1878.)

Order of Fatality.		Causes of Death in Order of Fatality, 1878.	Number of Deaths.	
24½ Years : 1853-1877.	Year 1878.		24½ Years : 1853-1877.	Year 1878.
2	1	Phthisis ... ..	18,511	1,124
4	2	Diarrhœa ... ..	16,139	877
1	3	Accidents ... ..	18,790	757
3	4	Atrophy and debility ... ..	17,548	700
9	5	Diseases of the organs of circulation not classed	9,007	622
7	6	Pneumonia ... ..	9,790	545
6	7	Typhoid fever, &c. ... ..	10,076	532
11	8	Bronchitis ... ..	7,198	413
17	9	Apoplexy ... ..	4,266	358
24	10	Old age ... ..	3,253	337
12	11	Diphtheria ... ..	7,161	336
23	12	Croup ... ..	3,373	331
8	13	Convulsions ... ..	9,032	318
22	14	Cancer ... ..	3,536	314
21	15	Whooping-cough ... ..	3,814	291
16	16	Premature birth ... ..	4,440	277
19	17	Cephalitis ... ..	3,907	273
14	18	Diseases of the nervous system not classed	6,086	267
25	19	Diseases of the liver not classed	3,238	251
26	20	Childbirth and metria ... ..	2,953	198
5	21	Dysentery ... ..	12,049	197
31	22	Congestion of lungs, pulmonary apoplexy	2,000	186
15	23	Enteritis ... ..	4,555	185
27	24	Gastritis ... ..	2,230	180
28		Paralysis ... ..	2,061	180
10	25	Scarlatina ... ..	8,487	136
18	26	Hydrocephalus ... ..	3,813	134
33	27	Want of breast-milk ... ..	1,755	122
12	28	Teething ... ..	6,560	119
51	29	Nephria ... ..	687	115
38	30	Pleurisy ... ..	1,317	93
29	31	Tabes mesenterica ... ..	2,028	87
35		Suicide ... ..	1,470	87
40	32	Diseases of the stomach not classed	1,131	81
47		Diseases of the urinary organs not classed	907	81
42	33	Rheumatism ... ..	1,117	79
37	34	Diseases of the respiratory system not classed	1,340	74
30	35	Hepatitis ... ..	2,002	73
41	36	Cholera ... ..	1,121	72
39	37	Aneurism ... ..	1,308	68
36	38	Peritonitis ... ..	1,383	67
44		Epilepsy ... ..	950	67
34	39	Alcoholism ... ..	1,627	64
43	40	Malformations ... ..	1,087	63
50	41	Laryngitis ... ..	742	56
32	42	Dropsy ... ..	1,904	53



CAUSES OF DEATH IN ORDER OF FATALITY—*continued.*  
(24½ Years : 1853 to 1877 ; and Year 1878.)

Order of Fatality.		Causes of Death in Order of Fatality, 1878.	Number of Deaths.	
24½ Years : 1853-1877.	Year 1878.		24½ Years : 1853-1877.	Year 1878.
53	43	Pleuris ... ..	671	48
49	44	Jaundice, gall-stone ... ..	754	47
46	45	Erysipelas ... ..	931	41
61	46	Hydatids ... ..	399	37
64	47	Miasmatic diseases not classed ... ..	370	36
52	48	Tubercular diseases not classed ... ..	676	34
55		Pericarditis ... ..	633	34
56	49	Venereal diseases ... ..	628	34
47		Thrush ... ..	907	32
57	50	Asthma ... ..	605	31
63		Privation ... ..	377	31
69	51	Tumor ... ..	336	28
45	52	Scrofula ... ..	941	26
58		Quinsy ... ..	567	26
74	53	Cystitis ... ..	230	26
54		Remittent fever ... ..	653	22
67	54	Hernia ... ..	349	21
71	55	Nephritis ... ..	306	20
59	56	Diseases of locomotive system not classed ... ..	445	19
60		Murder and manslaughter ... ..	440	19
48	57	Influenza, coryza, catarrh ... ..	821	18
68		Diseases of the organs of generation not classed ... ..	338	18
62	58	Ascites ... ..	397	15
70		Skin diseases ... ..	314	15
66	59	Ulceration of intestines ... ..	354	14
75	60	Diabetes ... ..	186	13
79		Gout ... ..	138	13
77	61	Ulcer ... ..	153	11
65	62	Mortification ... ..	357	8
72	63	Purpura and scurvy ... ..	255	7
83		Stone, gravel ... ..	81	7
85	64	Spleen disease ... ..	77	7
78		Intussusception ... ..	152	6
87	65	Stricture of the intestines ... ..	61	6
19		Measles ... ..	3,839	5
80	66	Arthritis ... ..	120	5
81		Ovarian dropsy ... ..	89	5
82	67	Ague ... ..	83	5
84		Paramenia ... ..	78	5
90	68	Carbuncle, boil ... ..	54	5
88		Noma ... ..	58	4
90	69	Ischuria ... ..	54	4
95		Ostitis, periostitis ... ..	30	4
93	70	Fistula ... ..	36	3
94		Chorea ... ..	34	3
76	71	Diathetic diseases not classed ... ..	167	2
89		Worms, &c. ... ..	56	2
91	72	Phlegmon, whitlow ... ..	47	2
96		Dietic diseases not classed ... ..	25	2
98	73	Parasitic diseases not classed ... ..	17	2
73		Insanity ... ..	254	1
99	74	Pancreas disease ... ..	12	1
101		Polypus ... ..	8	1
86	...	Execution ... ..	71	...

**CAUSES OF DEATH IN ORDER OF FATALITY—continued.**  
(24½ Years: 1853 to 1877; and Year 1878.)

Order of Fatality.		Causes of Death in Order of Fatality, 1878.	Number of Deaths.	
24½ Years: 1853-1877.	Year 1878.		24½ Years: 1853-1877.	Year 1878.
92	...	Chicken-pox, &c. ... ..	40	...
97	...	Small-pox ... ..	21	...
100	...	Developmental diseases of children not classed	11	...
102	...	Glanders ... ..	2	...
103	...	Developmental diseases of adults not classed ...	1	...
Deaths from specified causes ... ..			247,858	12,671
Deaths from unspecified causes ... ..			1,570	31
Deaths from all causes ... ..			249,428	12,702

Death rate from various causes in Victoria and England.

327. 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 totals of each class and order are given, as also are some of the principal diseases. The Victorian results relate to the year 1878 and to the twenty-four years and a half ended with 1877, and the results for England and Wales to the twenty-five years ended with 1874:—

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

Class.	Order.	Causes of Death.	Number of Annual Deaths per 100,000 of Mean Population.		
			Victoria.		England and Wales.
			Year 1878.	Average of 24½ Years: 1853 to 1877.	Average of 25 Years: 1850 to 1874.
		All causes ... ..	1,461·61	1,679·92	2,228·28
		Specified causes ... ..	1,458·05	1,669·34	2,205·66
		<b>CLASSES.</b>			
I.	...	Zymotic diseases ... ..	390·20	521·08	503·87
II.	...	Constitutional diseases ... ..	210·35	218·71	420·54
III.	...	Local diseases ... ..	568·33	551·73	849·97
IV.	...	Developmental diseases ... ..	189·87	237·93	355·15
V.	...	Violent deaths ... ..	99·30	139·89	76·13
		<b>ORDERS AND DISEASES.*</b>			
I.	1	Miasmatic diseases ... ..	351·88	480·35	478·94
		Measles ... ..	·58	25·86	42·82
		Scarlatina ... ..	15·65	57·16	103·80
		Diphtheria ... ..	38·66	48·23	
		Croup ... ..	38·09	23·39	24·06

\* Only some of the principal diseases are given in this table.

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

Class.	Order.	Causes of Death.	Number of Annual Deaths per 100,000 of Mean Population.		
			Victoria.		England and Wales.
			Year 1878.	Average of 24½ Years: 1853 to 1877.	Average of 25 Years: 1850 to 1874.
		<b>ORDERS AND DISEASES*—<i>continued.</i></b>			
I.	1	Miasmatic diseases—			
		Whooping-cough ... ..	33·49	25·69	51·46
		Typhoid fever, &c. ... ..	61·22	67·86	50·39†
		Dysentery ... ..	22·67	81·15	6·72
	Diarrhœa ... ..	100·92	108·70	89·06	
	Metria ( <i>see</i> Childbirth and metria <i>infra</i> )	5·64	4·07	5·99	
	2	Enthetic diseases (venereal diseases, &c.)	3·91	4·23	7·47
	3	Dietic diseases (privation, want of breast-milk, alcoholism, &c.)	26·01	27·20	11·36
	4	Parasitic diseases (thrush, hydatids, &c.)	8·40	9·29	6·10
II.	1	Diathetic diseases ... ..	48·68	43·80	84·25
		Dropsy ... ..	6·10	12·82	38·51
		Cancer, &c. ... ..	39·47	26·13	36·92
	2	Tubercular diseases ... ..	161·67	174·90	336·29
		Phthisis ... ..	129·34	124·67	256·72
		Hydrocephalus ... ..	15·42	25·68	37·07
III.	...	Diseases of the systems—			
	1	Nervous (brain diseases, &c.) ...	168·81	179·09	280·79
	2	Circulatory (heart diseases, &c.)	83·31	73·74	94·97
	3	Respiratory (lung diseases, &c.)...	160·87	154·65	327·31
	4	Digestive (stomach, bowels—dis- eases, &c.)	115·64	117·20	100·53
	5	Urinary (kidney, bladder—dis- eases, &c.)	30·61	16·51	27·23
	6	Generative (ovarian dropsy, &c.)	2·65	2·88	5·70
	7	Locomotive (arthritis, otitis, &c.)	3·22	4·01	7·74
	8	Integumentary (phlegmon, ulcer, &c.)	3·22	3·46	5·70
IV.	...	Developmental diseases—			
	1	Of children (malformation, teeth- ing, &c.)	52·82	81·48	87·01
	2	Of adults ... ..	17·72	16·35	11·63
		Childbirth ( <i>see</i> Childbirth and metria <i>infra</i> )	17·15	15·82	11·20
	3	Of old people (old age) ...	38·78	21·91	137·37
	4	Diseases of nutrition (atrophy and debility)	80·55	118·19	119·14
V.	1	Accident or negligence ... ..	87·11	126·55	} 76·13
	3	Homicide ... ..	2·19	2·96	
	4	Suicide ... ..	10·01	9·90	
	5	Execution ... ..	...	·46	
I. IV.	1 )	Childbirth and metria ... ..	22·78	19·89	17·19
	2 )				

\* See footnote, preceding page.

† Typhoid fever is given for the eight years ended with 1877. Prior to 1870, it was not separated from typhus in the English returns.

Results compared.

328. 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:—Dysentery, diarrhœa, and typhoid fever; diseases of the dietic and parasitic orders; diseases of the digestive system; violence; and the consequences of childbirth. From every other cause shown, also from all causes combined, the death rate is higher in England and Wales than in Victoria.

Principal causes of death at various ages.

329. The following table shows in order of fatality the four principal causes of death during 1878 of males and females at various ages. Amongst other items of interest, it will be noticed that the complaint most fatal to young children was diarrhœa, and to old people, heart disease; that typhoid fever was particularly fatal to young adults; that phthisis stood first in the case of males between 20 and 60, and also in the case of females between 20 and 50; that accidents appear in the list of males at all the ages, except two, and are generally more fatal than any disease save phthisis, which is also the only cause of death which ranks before child-bearing in the case of females between 20 and 40. Such a table is now published in this work for the first time:—

PRINCIPAL CAUSES OF DEATH OF MALES AND FEMALES AT VARIOUS AGES IN ORDER OF FATALITY, 1878.

Ages.	Order of Fatality.			
	1	2	3	4
MALES.				
Under 5 years	Diarrhœa	Atrophy	Convulsions	Premature birth
5 to 10 "	Croup	Diphtheria	Accidents	Typhoid fever
10 to 20 "	Accidents	Typhoid fever	Phthisis	Diphtheria
20 to 30 "	Phthisis	Accidents	Typhoid fever	Pneumonia
30 to 40 "	Phthisis	Accidents	Pneumonia	Heart disease
40 to 50 "	Phthisis	Accidents	Pneumonia	Heart disease
50 to 60 "	Phthisis	Heart disease	Accidents	Cancer
60 to 70 "	Heart disease	Apoplexy	Cancer	Accidents
70 & upwards	Old age	Heart disease	Bronchitis	Paralysis
FEMALES.				
Under 5 years	Diarrhœa	Atrophy	Whooping-cough	Convulsions
5 to 10 "	Diphtheria	Croup	Typhoid fever	Accidents
10 to 20 "	Typhoid fever	Phthisis	Diphtheria	Accidents
20 to 30 "	Phthisis	Childbearing*	Typhoid fever	Heart disease
30 to 40 "	Phthisis	Childbearing*	Liver disease	Heart disease
40 to 50 "	Phthisis	Heart disease	Cancer	Childbearing*
50 to 60 "	Heart disease	Phthisis	Apoplexy	Cancer
60 to 70 "	Heart disease	Apoplexy	Bronchitis	Cancer
70 & upwards	Old age	Heart disease	Apoplexy	Bronchitis

Zymotic diseases.

330. Zymotic diseases, to which nearly a third of the total mortality during a series of years has been ascribed, were in 1878 much below the average in point of fatality. The principal complaint under this

\* Including Childbirth and Metria

head, both in 1878 and according to the average, is diarrhoea, which in the year under review caused more deaths than any other single disease except phthisis.\* Dysentery is usually the next most fatal zymotic disease, but the mortality from it in 1878 was much below the average. Typhoid fever, although slightly below the average, caused a far higher mortality in 1878 than any other zymotic disease except diarrhoea. Diphtheria, also, although below the average in 1878, always maintains a high position as a cause of death, being usually twelfth on the list;\* a great number of persons fall a prey to this disease every year with little fluctuation. Of other miasmatic diseases, croup, whooping-cough, and metria were unusually fatal in the year under review, being much above the average; although the rate of mortality from these three diseases is usually lower than in England, in 1878 the rate from the first named disease far exceeded, and that from the last nearly attained, the rate prevailing in England. The death rate from complaints classed under the three other orders of zymotic diseases was below the average; to two of them, however—dietic and parasitic diseases—a far higher rate of mortality is always ascribed in Victoria than in England, the most fatal complaints under the former being want of breast-milk and alcoholism, and under the latter, thrush and hydatids.

331. The following table shows the number of deaths from zymotic Children's  
zymotic  
diseases. diseases which particularly affect children during the fifteen years ended with 1878 :—

**DEATHS FROM ZYMOTIC DISEASES CHIEFLY AFFECTING CHILDREN,  
1864 TO 1878.**

Year.	Number of Deaths from—							Total.
	Measles.	Scarlatina.	Diphtheria.	Croup.	Whooping-cough.	Dysentery.	Diarrhoea.	
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
1874 ...	256	120	375	159	151	325	846	2,232
1875 ...	1,541	985	239	135	158	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
Total in } 15 years }	2,951	6,298	5,374	2,499	2,894	4,954	11,974	36,944

\* See table following paragraph 326 ante.

Typhoid  
fever.

332. As typhoid fever alone causes about 400 deaths annually in Victoria, and affects principally the young adults of the population, attacking both strong and weak alike, it above all other diseases should be carefully watched, especially if it be true, as asserted, that its ravages are to a great extent under control.\* Exactly the same number of deaths resulted from this complaint in 1878 as in 1877. The actual mortality from it was greater in these two years than in any year of the previous decenniad, but, as compared with population, the mortality from it in these years was exceeded in the first but in no other year of that period. The following table shows the number of deaths from typhoid fever, and their proportion to the population, during each of the past twelve years :—

## DEATHS FROM TYPHOID FEVER, 1867 TO 1878.

Year.	Deaths from Typhoid Fever.	
	Total Number.	Number per 10,000 Persons Living.
1867	455	7·00
1868	295	4·39
1869	360	5·17
1870	416	5·86
1871	269	3·64
1872	323	4·24
1873	282	3·61
1874	470	5·88
1875	455	5·58
1876	375	4·51
1877	532	6·26
1878	532	6·12
Mean	397	5·19

Typhoid  
fever in  
England  
and Wales.

333. In England and Wales the mortality from typhoid fever has been considerably reduced of late years. During the five years ended with 1874 the death rate therefrom was 5·58 per 10,000 persons living, which is slightly higher than in Victoria, whereas in 1875, 1876, and 1877, respectively, it fell to 4·85, 3·96, and 3·61 per ten thousand.† A similar improvement is not noticeable in the figures relating to Victoria of late years, but, on the contrary, the mortality from this complaint has increased.

\* Dr. Farr states that "by stricter attention to the water supply, the milk supply, washing, and other ways through which the specific germs (Enterads) of enteric fever are conveyed, the ravages of this disease may be mitigated if not suppressed."—See his letter printed in the Thirty-ninth Annual Report of the Registrar-General of England; page 227. London: Eyre and Spottiswoode, 1878.

† The English figures quoted are those of enteric, or typhoid, and simple continued fever, which probably correspond with fevers tabulated as typhoid in Victoria. These fevers in England were not separated from typhus until 1870, the latter being a disease which, it is said, does not exist in Victoria.



334. As compared with population, zymotic diseases apparently cause greater mortality in Victoria than in any other Australian colony except Queensland. The following are the figures derived from observations extending over a series of years, the colonies being placed in order according to the rate prevailing in each. No information is at hand respecting Western Australia:—

Zymotic diseases in Australasian colonies.

ORDER OF COLONIES IN REFERENCE TO MORTALITY FROM ZYMOTIC DISEASES.

Colony.	Years over which the observations extend.	Deaths from Zymotic Diseases per 10,000 Persons Living.
1. Queensland ... ..	1868 to 1877	52·5
2. Victoria ... ..	1868 to 1877	44·5
3. South Australia ... ..	1869 to 1878	39·1
4. New South Wales ... ..	1868 to 1877	38·4
5. New Zealand ... ..	1872 to 1877	35·1
6. Tasmania ... ..	1868 to 1877	29·4

335. Under Class II., constitutional diseases, those under Order 1, diathetic diseases, were above, and those under Order 2, tubercular diseases, were below the average. The increase under the former head was due to cancer, the rate from which has of late years been much above the average, and in the last two years even exceeded the rate in England, where it is also increasing. This painful, and at present almost incurable, disease stood fourteenth in the list\* in 1878 and eleventh in 1877, the twenty-second being its usual position. Under the latter head, hydrocephalus was much below and phthisis was above the average.

Constitutional diseases.

336. Deaths from phthisis in 1878 numbered 1,124, which is a larger number than was ever previously recorded in any year. Phthisis in Victoria is, upon the average, the most destructive of all diseases. A greater mortality in 1875 resulted from measles, and in 1876 from scarlatina, than from phthisis, but these epidemics having subsided, phthisis again resumed its place at the head of the list of causes of death.\*

Deaths from phthisis.

337. The annual death rate from phthisis, as I have often pointed out,† has for years past never been so low as 11, nor so high as 13, per 10,000 persons living. In 1878 the rate reached to 12·93 per 10,000, which was nearer the higher of those numbers than in any former year. The following figures express the number of deaths from phthisis and their proportion to the population during each of the last eleven years.

Death rate from phthisis.

\* See table following paragraph 326 ante.

† See my remarks upon the subject of phthisis in this colony in the *Victorian Year-Book*, 1873, paragraphs 320 to 322; in the *Victorian Year-Book*, 1874, paragraphs 512 and 513; in the *Victorian Year-Book*, 1875, paragraphs 362 and 363; and in the *Victorian Year-Book*, 1876, paragraphs 197 to 203.

## DEATHS FROM PHTHISIS, 1868 TO 1878.

Year.	Deaths from Phthisis.		Year.	Deaths from Phthisis.	
	Total Number.	Number per 10,000 Persons Living.*		Total Number.	Number per 10,000 Persons Living.*
1868 ...	746	11·11	1875 ...	1,027	12·60
1869 ...	893	12·81	1876 ...	1,010	12·16
1870 ...	888	12·51	1877 ...	1,088	12·80
1871 ...	841	11·38	1878 ...	1,124	12·93
1872 ...	876	11·51	Total in } 11 years }	10,449	12·26
1873 ...	945	12·11			
1874 ...	1,011	12·66			

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

338. In the *Victorian Year-Book* 1874 † the evenness of the death rate from phthisis from year to year was adduced as a proof of its increasing prevalence. It was known that the population at ages subject to phthisis had decreased between the censuses of 1861 and 1871, and it was supposed that it had increased since, if at all, at a much slower rate than the remainder of the population, whence it might have been expected that the death rate from phthisis would diminish, which was not found to be the case. The estimate of the ages of the people, given on a previous page, ‡ corroborates the fact not only of the slow increase but in some instances of the positive decrease of the population at certain periods between 15 and 45 years of age, and hence the increase of phthisis. Thus, according to the estimate, in the eight years since the census was taken the males between 25 and 40 decreased by 19,870, the females between 30 and 40 decreased by 2,944 ; or, taking the two sexes together, the diminution between 30 and 40 was 18,978. Between 15 and 45 years of age the whole increase since the census was, according to the estimate, only 45,577, whilst the increase of persons under 15 and over 45 was 91,935, or twice that number. The enumerated population between 15 and 45 amounted to 330,456 at the first period, and the estimated population to 376,033 at the second period ; and the deaths from phthisis at the same ages numbered 604, or a proportion of 18·28 per 10,000 living at the first period, and 739, or as high a proportion as 19·65 per 10,000, at the second period.

339. As the Victorian-born section of the population comprises much younger persons § than the section composed of other nationalities, the death rate from phthisis is naturally much lower in the former than in the latter. The following table shows the number of deaths and the

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

† Paragraph 512.

‡ See table following paragraph 47, also paragraph 310, *ante*.

§ Of the 258 Victorians who died of phthisis during 1878, 37 were under 5 years of age, 10 were between 5 and 10, 17 were between 10 and 15, 64 were between 15 and 20, 90 were between 20 and 25, 29 were between 25 and 30, 7 were between 30 and 35, and 4 (1 being an Aboriginal) were over 35.

Increasing death rate at phthisical ages.

Deaths of Victorians from phthisis.

death rate from phthisis of Victorians and others during the last eight years. It will be observed that the death rate of the former is steadily increasing from year to year, whilst that of the latter generally averages from 20 to 22 per 10,000, although it was lower in 1871 than 19 per 10,000 :—

DEATHS FROM PHTHISIS, 1871 TO 1878.—VICTORIANS AND OTHER NATIONALITIES.

Year.	Deaths from Phthisis of Persons Born in Victoria.		Deaths from Phthisis of Persons Born elsewhere.	
	Number.	Number per 10,000 Victorians Living.*	Number.	Number per 10,000 Persons of other Nationalities Living.
1871 ... ..	81	2·42	760	18·82
1872 ... ..	97	2·72	779	19·25
1873 ... ..	129	3·42	816	20·22
1874 ... ..	137	3·45	874	21·74
1875 ... ..	209	5·04	818	20·42
1876 ... ..	150	3·47	860	21·61
1877 ... ..	197	4·37	891	22·32
1878 ... ..	258	5·50	866	21·63

340. Phthisis not only causes the greatest total number of deaths, but removes its victims at the best, the strongest, and the most promising period of life, no less than 66 per cent. of those who died of it in 1878 being between the ages of 15 and 45. The distress occasioned by this disease, pre-eminently above all others, to upwards of a thousand families annually, is readily realized when it is contemplated that nearly 30 deaths out of every 100 between the ages of 15 and 35, during 1878, were due to its insidious effects, and that more than a fifth of the total deaths between the ages of 35 and 45 were attributable to the same cause. The following table gives the number of deaths from phthisis at each age and their proportion to the deaths from all causes :—

Deaths from phthisis at various ages.

DEATHS FROM PHTHISIS, 1878.—AGE AT DEATH.

Ages.	Number who Died of Phthisis.			Percentage of Deaths from Phthisis to those from all Causes.†
	Males.	Females.	Total.	
Under 5 years ...	22	16	38	·76
5 to 10 „ ...	7	4	11	1·85
10 „ 15 „ ...	3	17	20	6·29
15 „ 25 „ ...	107	121	228	27·14
25 „ 35 „ ...	123	131	254	30·75
35 „ 45 „ ...	148	109	257	20·69
45 „ 55 „ ...	122	65	187	13·22
55 „ 65 „ ...	81	23	104	9·19
65 „ 75 „ ...	13	5	18	2·20
75 years and upwards...	5	2	7	1·41
Total ...	631	493	1,124	8·85

\* For populations on which these calculations are based see paragraph 49 ante. The number of persons of other nationalities for each year has been obtained by deducting the Victorians.  
 † See table following paragraph 309 ante.

Period of illness and residence.

341. The following table shows the numbers who died of phthisis in Victoria during 1878, also the duration of their illness contrasted with the length of time they had lived in the Australasian colonies:—

DEATHS FROM PHTHISIS, 1878.—DURATION OF ILLNESS AND PERIOD OF RESIDENCE IN AUSTRALASIA.

Period of Residence in Australasian Colonies.	Duration of Illness.											Total.	
	Under 1 month.	1 to 3 months.	3 to 6 months.	6 to 12 months.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 years and over.	Some years, long standing, &c.		Unknown.
<b>VICTORIA.</b>													
Under 1 month ...	1	1	...	...	2	...	...	...	...	...	...	4	8
1 month to 6 months ...	...	...	2	...	1	5	...	...	1	...	1	3	13
6 months to 12 " ...	...	1	1	...	3	...	...	...	...	...	...	5	10
1 year to 2 years ...	1	...	...	2	2	4	1	...	...	...	...	1	11
2 years to 3 " ...	...	1	1	3	2	...	1	...	1	...	...	2	11
3 " 4 " ...	...	1	1	3	2	2	1	1	...	...	...	6	17
4 " 5 " ...	...	1	1	5	3	...	...	1	...	...	...	1	12
5 " 10 " ...	6	2	8	10	8	10	3	3	...	...	...	12	62
10 " 15 " ...	5	7	6	18	10	16	3	2	2	1	2	14	86
15 " 20 " ...	3	2	10	15	21	16	6	3	1	1	3	15	96
20 " 25 " ...	7	8	23	39	42	35	11	9	10	2	4	42	232
25 " and upwards ...	4	13	23	15	25	28	15	9	6	5	6	25	174
Not known (not Australians)	4	1	1	2	10	1	2	...	1	...	...	19	41
Born there *... ...	17	21	54	66	61	31	21	6	3	2	4	30	316
Not known (no information respecting birthplace)	3	2	2	4	1	3	...	...	...	1	...	19	35
<b>Total ...</b>	<b>51</b>	<b>61</b>	<b>133</b>	<b>182</b>	<b>193</b>	<b>151</b>	<b>64</b>	<b>34</b>	<b>25</b>	<b>12</b>	<b>20</b>	<b>198</b>	<b>1,124</b>

Period of residence greater than time of illness.

342. Examining this table, it is found, in regard to the persons of whom full particulars are given, that in all but 29 instances the period of residence in the Australasian colonies was greater than the duration of illness, and therefore that the complaint must have been contracted there; also, that in no less than 316 cases, or 29 per cent. of the whole, the person dying was a native of the colonies. These facts unhappily completely destroy the theory that phthisis is a disease which cannot be generated in Australasia.

Average time of residence and of illness.

343. This point is more completely brought out by a simple calculation whereby it is found that, whereas the average duration of illness of those who died of phthisis was only about  $1\frac{3}{4}$  years, their average

\* Including 258 natives (1 being an Aboriginal) of Victoria, 15 of New South Wales, 17 of South Australia, 1 of Western Australia, 23 of Tasmania, and 2 of New Zealand.

period of residence in the Australasian colonies was no less than 18 $\frac{1}{7}$  years.

344. In 1878 the victims to phthisis respecting whom information was given in the registers as to whether the disease was contracted in the colonies happened to be exactly equal in Melbourne and suburbs and in the extra-metropolitan districts of Victoria, the numbers being 451 in each. Of those who died in Melbourne and suburbs, 433, or 96 per cent., and of those who died in other places, 440, or 98 per cent., are said to have been first attacked by the disease in Australasia. These facts are shown by the following table:—

Phthisis contracted in Australia and elsewhere.

DEATHS FROM PHTHISIS, 1878.—DISEASE CONTRACTED IN AUSTRALASIA AND ELSEWHERE.

Place where Disease was Contracted.	Persons who Died of Phthisis.*					
	In Melbourne and Suburbs.		In Extra-Metropolitan Districts.		Total in Victoria.	
	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
Australasian colonies	433	96·0	440	97·6	873	96·8
Elsewhere ...	18	4·0	11	2·4	29	3·2
Total ...	451	100·0	451	100·0	902	100·0

345. The period of residence in the Australasian colonies of those who died of phthisis in Victoria is available for three years. The following are the collected results of this period, omitting those of whom the term of residence was not stated:—

Time of residence in Australasia.

DEATHS FROM PHTHISIS,† 1876 TO 1878.—PERIOD OF RESIDENCE IN AUSTRALASIA.

Period of Residence in Australasian Colonies.	Numbers who Died of Phthisis.				
	1876.	1877.	1878.	Total in three Years.	Proportion per cent.
Under 1 month ...	6	4	8	18	·60
1 month to 1 year ...	25	20	23	68	2·26
1 year to 2 years ...	18	11	11	40	1·33
2 years to 5 years ...	33	39	40	112	3·73
5 years and upwards ...	672	682	650	2,004	66·74
Born there ...	193	252	316 ‡	761	25·34
Total ...	947	1,008	1,048	3,003	100·00

\* Only the numbers respecting whom full particulars are stated in the death registers.

† Exclusive of 63 in 1876, 80 in 1877, and 76 in 1878, of which the necessary particulars were not given in the registers.

‡ Including an Aboriginal native of Victoria, aged 50.

Natives and others who died from phthisis.

346. It will be seen that out of 3,003 who died of phthisis in Victoria during the three years ended with 1878, 761, or 25 per cent., were born in Australasia; that 2,004, or 67 per cent., more had resided there for upwards of five years; that 112, or a further 4 per cent., had lived there for upwards of two years; and that only 126, or about 4 per cent., had lived there for less than two years.

Phthisis in Melbourne and country.

347. In proportion to population, the deaths from phthisis are much more numerous in Melbourne and suburbs than in the remainder of the colony, as will be seen by the following table:—

DEATHS FROM PHTHISIS, 1878, IN MELBOURNE AND COUNTRY DISTRICTS.

Divisions of Victoria.	Mean Population.	Deaths from Phthisis.	
		Total Number.	Number per 10,000 Persons Living.
Melbourne and suburbs ...	256,477	580	22·62
Extra-Metropolitan districts ...	612,563	544	8·88
Total ... ..	869,040	1,124	12·93

Death rate from phthisis in Melbourne.

348. The following figures show the death rate from phthisis in Melbourne and suburbs during each of the last six years:—

DEATHS FROM PHTHISIS PER 10,000 PERSONS LIVING IN MELBOURNE AND SUBURBS.

1873 ...	20·51	1877 ...	22·74
1874 ...	22·04	1878 ...	22·62
1875 ...	21·46	Mean	21·97
1876 ...	22·46		

Phthisis in Melbourne and United Kingdom.

349. The death rate from phthisis in Melbourne and suburbs is not so high as that in London, but approximates closely to that in the United Kingdom, which, in 1875, was 22·24, and in 1876 21·45, per 10,000 persons living; but the death rate from phthisis in Ireland, which in 1876 was 18·96, and in the previous ten years averaged 18·64, per 10,000 persons living, is lower than that of Melbourne. The latter, however, is not so high as that in Scotland, which, in 1873 was 24·6 per 10,000 persons living.

Sex of those who died from phthisis.

350. Phthisis in Victoria, during the last three years, proved more fatal to males than to females; females in that period having died of it in the proportion of about 74 to 100 males, whereas in the population females existed in the proportion of 84 to 100 males. It is probable, however, that males of the phthisical ages bore a higher proportion to the total number of males living in the colony than females at those ages bore to the total number of females.



351. Under Class III., local diseases, the death rates from brain Local dis- diseases, Order 1, diseases of the stomach and bowels, Order 4, genetic eases. diseases, Order 6, diseases of the bone and muscle, Order 7, and of the skin, Order 8, were, in 1878, below the average. The death rate from diseases of the circulatory system, Order 2, however, was considerably above the average. This is due to the increase in heart disease, which rose from the 9th—its usual position—to the 5th place in the list\* of causes of death. The death rate from diseases of the respiratory system, Order 3, was also above the average. Two very fatal diseases are comprised under this head—pneumonia and bronchitis, which together caused nearly 1,000 deaths during the past year. The death rate from urinary diseases, Order 5, was, in 1878, nearly twice as high as the average, and even exceeded in that year the rate prevailing in England and Wales.

352. Under Class IV., developmental diseases, the death rate from Develop- those peculiar to children, Order 1, and from diseases of nutrition, mental Order 4, was much below the average, whilst the death rate from diseases. those peculiar to adults, Order 2, was slightly above, and that from old age, Order 3, was much above, the average. Premature birth—the principal cause of death in 1878 under Order 1—caused 277 deaths, which number gives a proportion of 8 per cent. of the total deaths under 1 year, and amounts to 1 per cent. of the total births recorded. The principal diseases under Orders 2 and 4—atrophy and childbirth—will be referred to shortly.†

353. Deaths under the head of atrophy and debility, although always Atrophy and numerous, were in 1878, as in the two previous years, below the average. debility. In the past year these circumstances ranked fourth, but they usually rank third amongst the causes of death.\* The mortality under this head is almost entirely confined to young children and infants—thus of the 700 set down to atrophy and debility in 1878, 635 were under 5 years, 575 were under 1 year, and 293 were under 1 month of age. It is probable, however, that the causes of death amongst children are sometimes loosely given, and that sufficient pains are not taken to ascertain the primary disease. As a knowledge of the causes of death in childhood is a matter of extreme importance, it is to be desired that medical men would, where possible, define these deaths more accurately. The following are the numbers of both sexes recorded as having died from atrophy and debility in each of the eleven years ended with 1878.

\* See table following paragraph 326 *ante*.

† See next paragraph, and paragraph 363 *post*.

## DEATHS FROM ATROPHY AND DEBILITY, 1868 TO 1878.

Year.				Males.	Females.	Total.
1868	...	...	...	337	328	665
1869	...	...	...	386	337	723
1870	...	...	...	422	368	790
1871	...	...	...	368	311	679
1872	...	...	...	354	338	692
1873	...	...	...	378	336	714
1874	...	...	...	402	337	739
1875	...	...	...	413	349	762
1876	...	...	...	344	305	649
1877	...	...	...	344	304	648
1878	...	...	...	389	311	700
Total in eleven years...				4,137	3,624	7,761

Sex of those  
who died,  
of atrophy,  
&c.

354. Notwithstanding the proportions of the sexes of the 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 of eleven years, 88 females died of these complaints to every 100 males.

Violent  
deaths.

355. Deaths from external causes, Class V., were much below the average. It will be readily believed that violent deaths are not so frequent now as in the early days of the gold discoveries; but the fact will scarcely be credited that, in proportion to population, not only are they still much more numerous than in England, with its network of railways, its extensive and varied manufactories, and its coal mines, but that in the year under review they even exceeded the proportionate number in the worst district in England for violent deaths during 1877. Of the 863 violent deaths recorded in Victoria during 1878, 757, or 88 per cent., were ascribed to accident, 19, or 2 per cent., to homicide, and 87, or 10 per cent., to suicide. Deaths from accidents were formerly more numerous than those from any single disease, but in 1878 they were less than the deaths caused by either phthisis or diarrhoea; 40 per cent. of these deaths were due to fractures, and 30 per cent. to drowning. Homicides were below the average, but suicides, though fewer in proportion to population in the last two than in the three years immediately preceding them, were above the average of a series of

years; the death rates under both these heads is much higher than in England. No death from execution took place during the year.

356. 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 1878 and the previous decenniad, the sexes of those who died being distinguished:—

VIOLENT DEATHS, 1868 TO 1878.

Causes of Death.	Year 1878.			Ten Years: 1868 to 1877.		
	Males.	Females.	Total.	Males.	Females.	Total.
Accidents:—						
Fractures, contusions	279	24	303	3,086	248	3,334
Gunshot wounds ...	8	2	10	} 216	34	250
Cuts, stabs, &c. ...	13	...	13			
Burns and scalds ...	35	48	83	386	492	878
Sunstroke ...	19	6	25	135	57	192
Lightning ...	2	...	2	19	5	24
Poison ...	9	5	14	128	56	184
Snake, insect—bite ...	3	3	6	29	11	40
Drowning ...	172	55	227	1,628	383	2,011
Suffocation ...	37	25	62	468	218	686
Others ...	8	4	12	82	19	101
Total ...	585	172	757	6,177	1,523	7,700
Homicide ...	12	7	19	133	75	208
Suicide:—						
Gunshot wounds ...	6	...	6	63	1	64
Cuts, stabs, &c. ...	10	...	10	159	21	180
Poison ...	13	2	15	132	47	179
Drowning ...	10	10	20	132	66	198
Hanging ...	25	5	30	186	15	201
Otherwise ...	6	...	6	21	4	25
Total ...	70	17	87	693	154	847
Execution ...	...	...	...	28	...	28
Grand Total ...	667	196	863	7,031	1,752	8,783

357. During the eleven years ended with 1878, 74,455 males and 55,083 females died of specified causes; and it results from these figures, and those in the above table, that, of the males, 1 in every 10 died a violent death; 1 in every 11 died of an accident; 1 in every 513 was a victim to homicide; 1 in every 98 committed suicide; and 1 in every 2,659 was executed. Of the females, 1 in every 28 died a violent death; 1 in every 33 died of an accident; 1 in every 672 died by the

hand of another ; 1 in every 322 committed suicide ; but, happily, not one was executed.

Violent  
deaths of  
males and  
females.

358. Males are much more subject to deaths from external causes than females. Of those who died from such causes in 1878, 667, or 77 per cent., belonged to the male, and 196, or 23 per cent., to the female sex.

Violent  
deaths :  
proportion  
of males and  
females.

359. 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 is murdered, about 2 males are murdered ; where 1 female commits suicide, 4 males do so. Only 1 woman has been executed in the colony since its first settlement ; but in the eleven years to which reference is made in the table 28 males were executed.

Burns and  
scalds.

360. The only violent deaths which habitually affect females more than males are those resulting from burns and scalds. All other circumstances which occasion sudden deaths bear more hardly upon males than upon females.

Suicidal  
deaths.

361. Eighty-seven persons took their own lives in 1878, and 92 in the previous year. During the ten years ended with 1877 the mean annual number of deaths by suicide was 84.

Modes of  
committing  
suicide.

362. Hanging is the most common mode by which men commit suicide, cutting or stabbing the next, drowning and taking poison with almost equal frequency the next, shooting the next. Females most frequently take their lives by drowning, next so by taking poison, next by cutting or stabbing, next by hanging, and only once in the 171 cases named in the table by shooting.

Deaths in  
childbed.

363. 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 IV., Order 2 ; but, if it should arise from puerperal fever, it is placed under the head of Metria, Class I., Order 1. The deaths from child-bearing have been more numerous in proportion to the births during the last five years than they were previously ; but, except in 1874 and 1875, the rate has never been so high as in the year under review. The following are the deaths and death rate from these complaints during the last eleven years.

## DEATHS OF WOMEN IN CHILDBIRTH, 1868 TO 1878.

Year:	Number of Mothers who died of—			Deaths of Mothers to every 10,000 Children Born Alive.
	Childbirth.	Metria.	Total.	
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
<b>Total in eleven years</b>	<b>1,363</b>	<b>453</b>	<b>1,816</b>	<b>61·32</b>

364. The death rate from the consequences of childbirth in Victoria is high and demands enquiry. In England and Wales the death rate of mothers ranged, during a period of 30 years, from 42 to 69 per 10,000 births of living children, which were the extreme limits, the average rate during the whole period having been 50. Even this, which is far lower than that in Victoria, is referred to by Dr. Farr as a "deep, dark, and continuous stream of mortality," and is attributed to a want of skill on the part of midwives and physicians.\* To show to what extent this great mortality might be reduced, the returns for the whole of England are contrasted by Dr. Farr with those of two large institutions, viz., the Royal Maternity Charity (London), and the Birmingham Lying-in Charity, which experience an average of only 21 to 23 deaths to every 10,000 deliveries! As in these charities some of the women were stated to have been in a most "lamentable and destitute condition," it would naturally be supposed that the rate in the general community would at least not be greater than in them, but the fact is just the opposite. There is no doubt that by the exercise of care and skill on the part of medical men and midwives many valuable lives might be saved both in England and here.

Deaths in  
childbed in  
England.

365. In the Melbourne Lying-in Hospital, during 1878, 555 women were confined, and 516 infants were born alive. Six deaths of mothers occurred during or shortly after parturition. Thus 1 death of a mother occurred to every 92 deliveries, or to every 86 births.

Deaths of  
women in  
Lying-in  
Hospital.

366. There are 33 general hospitals in Victoria, 8 of which are also benevolent asylums. The total number of cases of sickness treated in

Sickness and  
deaths in  
general  
hospitals.

\* For an exhaustive enquiry into the causes of death in childbirth, see Dr. Farr's letter published as an appendix to the 39th Annual Report of the Registrar-General, England, pages 241 to 251.

these institutions during 1878 was 15,122, and the number of deaths was 1,544. In 1877, the cases of sickness treated numbered 14,810, and the deaths 1,550. There was thus 1 death to every 9·8 cases of sickness treated in hospitals during 1878 as against 1 death to every 9·5 cases of sickness treated therein during the previous year.

Death rate  
in each  
hospital.

367. 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 1878, 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 1878.			Percentage of Mortality to Cases treated, 1877.
	Number of Cases treated.	Number of Deaths.	Percentage of Mortality to Cases treated.	
Alexandra ... ..	27	4	14·81	10·00
Amherst ... ..	210	32	15·24	8·71
Ararat* ... ..	318	20	6·29	6·29
Ballarat ... ..	934	97	10·39	10·37
Beechworth ... ..	544	41	7·54	6·07
Belfast* ... ..	51	8	15·69	15·09
Bendigo ... ..	1,326	122	9·20	11·40
Castlemaine ... ..	801	60	7·49	7·51
Clunes ... ..	208	12	5·77	3·50
Creswick ... ..	245	17	6·94	8·80
Daylesford* ... ..	217	22	10·14	9·94
Dunolly ... ..	397	25	6·30	10·00
Geelong* ... ..	1,031	79	7·66	7·06
Hamilton* ... ..	389	16	4·11	5·99
Heathcote ... ..	87	8	9·20	14·81
Horsham ... ..	202	26	12·87	6·40
Inglewood ... ..	363	17	4·68	6·54
Kilmore ... ..	124	13	10·48	10·22
Kyneton ... ..	363	34	9·37	10·12
Maldon* ... ..	46	5	10·87	5·26
Mansfield ... ..	107	12	11·21	9·52
Maryborough ... ..	355	31	8·73	8·96
Melbourne ... ..	4,191	583	13·91	14·83
Melbourne (Alfred) ... ..	1,002	110	10·98	11·99
Mooroopna ... ..	125	10	8·00	...
Pleasant Creek ... ..	363	32	8·82	10·08
Portland* ... ..	49	2	4·08	4·69
Sale ... ..	222	31	13·96	8·30
St. Arnaud ... ..	205	21	10·24	8·16
Swan Hill ... ..	189	13	6·88	7·18
Wangaratta ... ..	227	18	7·93	11·86
Warrnambool*... ..	101	16	15·84	16·00
Wood's Point ... ..	103	7	6·80	4·95
Total ... ..	15,122	1,544	10·21	10·47

Highest and  
lowest  
death rates.

368. In proportion to the cases treated, the greatest mortality occurred in the Warrnambool, Belfast, and Amherst Hospitals, and the least in

\* These institutions are also Benevolent Asylums.



the Portland, Hamilton, and Inglewood Hospitals. In 1877 the rate of mortality was highest in the Warrnambool Hospital, and lowest in the Clunes Hospital.

369. The patients treated in the Hospital for Diseases of Women and Children attached to the Lying-in Hospital numbered 251 in 1877, and 237 in 1878. The deaths in the same institution numbered 14 in both years. Therefore, 1 patient in 18 died in 1877, and 1 in 17 in 1878. Sickness and deaths in hospital for women.

370. In the Melbourne Lying-in Hospital 520 women were confined in 1877, and 555 in 1878. Eight died in the former year, and 6 in the latter. Thus, 1 woman in 65 died in 1877, and 1 woman in 93 in 1878.\* Deaths in Lying-in Hospital.

371. In the Melbourne Hospital for Sick Children 273 cases were treated, and 17 deaths occurred, in 1877; 356 cases were treated, and 19 deaths occurred, in 1878. These numbers furnish proportions of 1 death to every 16 patients in the former, and 1 death to every 19 patients in the latter year. Sickness and deaths in children's hospital.

372. Cases of sickness in benevolent asylums numbered 2,514 in 1877, and 2,554 in 1878; deaths numbered 157 and 175. The deaths were thus to the cases treated in the proportion of 1 to 16 in 1877, and 1 to 15 in 1878. Sickness and deaths in benevolent asylums.

373. In the Melbourne Immigrants' Home the cases of sickness in 1877 amounted to 636, and the deaths to 70, or 1 death to every 9 cases of sickness. In 1878 the cases of sickness in this institution numbered 937, and the deaths 74, or 1 death to every 12 cases of sickness. Sickness and deaths in Immigrants' Home.

374. In 1877 the cases of sickness in orphan asylums numbered 372, and the deaths 6. In 1878 these numbers were 389 and 5 respectively. Thus, in 1877, 1 death occurred to every 62 cases of sickness, and, in 1878, 1 death to every 78 cases of sickness. Sickness and deaths in orphan asylums.

375. In hospitals for the insane during 1877 the cases of sickness numbered 1,951, and during 1878 they numbered 1,696. The deaths amounted to 197 at the former period, and 177 at the latter, or an average of 1 death to about every 10 cases of sickness at both periods. Sickness and deaths in lunatic asylums.

376. The cases of sickness treated in the Industrial and Reformatory Schools numbered 832 in 1877, and 15 deaths occurred. In 1878, 981 cases were treated, and 12 deaths took place. The deaths were, therefore, to the cases of disease in the proportion of 1 to every 55 in the former, and of 1 to every 82 in the latter year. Sickness and deaths in industrial schools.

377. In gaols and penal establishments 5,078 cases of sickness occurred in 1877, and 5,270 in 1878. The deaths in these two years Sickness and deaths in gaols.

\* Besides these deaths, which are of women only, 33 infants died in the institution in each year.

respectively were 37 and 29. Thus, 1 death occurred to every 137 cases in 1877, and 1 death to every 182 cases in 1878. The proportions of deaths to cases of sickness are smaller in these than in any other public institutions; but it is also probable that the cases of sickness dealt with are, on the average, of a lighter character than those treated in the other institutions.

Deaths in  
public  
institutions.

378. Altogether the number of deaths in penal or charitable institutions in 1878 was 2,109, or 1 to every 6 deaths which took place in Victoria during the year. The deaths in such institutions were in 1877 in the proportion of 1 to 6, in 1876 in that of 1 to every  $6\frac{1}{2}$ , in 1875 in that of 1 to every  $7\frac{1}{3}$ , and in 1874 and 1873 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 1878 :—

#### DEATHS IN PUBLIC INSTITUTIONS, 1878.

Number of Deaths.		Number of Deaths.	
General hospitals ...	1,554	Hospitals for the insane ...	177
Hospital for Diseases of Women and Children ...	14	Female refuges ...	10†
Lying-in Hospital ...	39*	Industrial and reformatory schools ...	12
Hospital for Sick Children ...	19	Gaols ...	25
Benevolent asylums ...	175	Penal establishments ...	4
Melbourne Immigrants' Home	74		
Orphan asylums ...	5	Total ...	2,109
Blind asylum ...	1		

NOTE.—In 1878 no death occurred in the Deaf and Dumb Asylum or the Eye and Ear Hospital.

Vaccina-  
tions.

379. The number of cases of successful vaccination in 1878 was 21,778; and, as the number of births was 26,581, it appears that 82 per cent. of the children born were vaccinated. Part of the remainder are accounted for by death—1,593, or 6 per cent. of those born, having died before they were 3 months old, and 2,275, or  $8\frac{1}{2}$  per cent., before they were 6 months old. The vaccinations amounted in 1877 to 87 per cent. of the births, in 1876 to 80 per cent., in 1875 to 82 per cent., in 1874 to 83 per cent., and in 1873 to something less than 80 per cent.

Meteorologi-  
cal observa-  
tions, 1878.

380. The following are the results of meteorological observations taken at different stations throughout the colony during 1878. 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.

\* This includes the deaths of 33 children born in the institution.

† This includes the deaths of 7 children of inmates of the Female Refuge, Madeline street.

METEOROLOGICAL OBSERVATIONS AT VARIOUS STATIONS, 1878.

Stations.	Height above Sea-level.	Temperature in the Shade.		
		Max.	Min.	Mean.
	feet.	°	°	°
Portland ... ..	37·0	97	33	56½
Melbourne ... ..	91·3	103	31	57
Cape Otway ... ..	270·0	101	40	55
Sandhurst ... ..	758·0	111½	31½	59
Wilson's Promontory	300·0	99	40	56
Ballarat ... ..	1,438·0	114	28	56

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 ... ..	29·97	179	33·81	·74	4·2
Melbourne ... ..	29·90	116	25·36	·71	6·0
Cape Otway ... ..	29·72	163	38·65	·89	7·7
Sandhurst ... ..	29·19	68	20·44	·73	4·9
Wilson's Promontory	29·54	165	44·60	·73	6·7
Ballarat ... ..	28·50	122	25·63	·66	5·9

381. The following are the results for Melbourne in each of the eleven years ended with 1878 :—

Meteorology in Melbourne, 1868 to 1878.

METEOROLOGICAL OBSERVATIONS AT MELBOURNE.—RETURN FOR ELEVEN 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.	Amount of Cloud.
	Max.	Min.	Mean.					
	°	°	°	inches.	No.	inches.	0-1.	0-10.
1868	110	27	57	29·98	120	18·27	·70	5·7
1869	108	27	57	29·94	129	24·59	·71	6·0
1870	109	30	57	29·93	129	33·76	·74	5·8
1871	106	32	58	29·93	125	30·17	·74	5·9
1872	103	32½	58	29·92	136	32·52	·74	6·4
1873	102	30	58	29·94	134	25·61	·72	6·0
1874	103	29	57	29·93	134	28·10	·72	6·1
1875	110	31	57	29·89	158	32·87	·72	6·2
1876	111	29	57	29·93	134	24·04	·70	5·8
1877	101	31	57	29·99	124	24·10	·70	5·8
1878	103	31	57	29·90	116	25·36	·71	6·0

382. It will be observed that the mean temperature in Melbourne is remarkably even from year to year. The diminished rainfall, and consequent drought, which occurred in 1878 and the two previous years, will be at once recognised; the number of days on which rain fell, moreover, was less in 1878 than in any of the previous ten years.

Temperature and rainfall.

383. 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.