

A

STATISTICAL ACCOUNT

OF THE

SEVEN COLONIES OF AUSTRALASIA,

BY

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WITH MAP

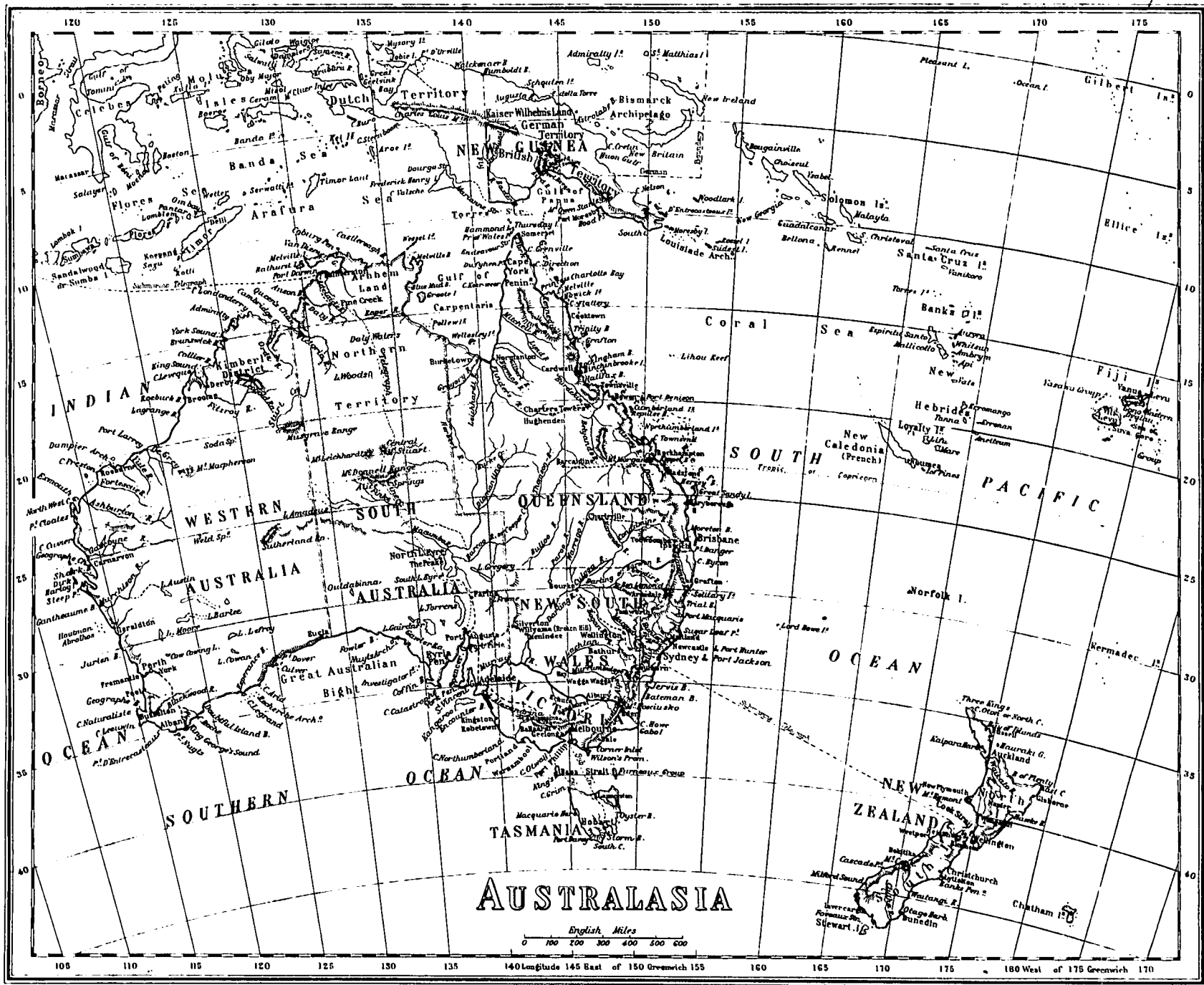
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## PREFACE.

WHATEVER prevision of the future greatness of their undertaking may have been given to the pioneers of Australian settlement, it is doubtful whether even the most sanguine amongst them anticipated that from the humble and apparently unpromising beginnings under Captain Phillip there would arise the prosperous communities which now form the Australasian Group. To afford information by which the progress of these Colonies may be gauged is the object of the present work, which aims to exhibit at a glance the position held by each Colony individually, and by the country as a whole, with regard to all the more important elements of moral and material welfare. Such an account must be of more than passing interest—so much has been attempted in directions in which old-world experience has been of little avail, and so much has been accomplished in the development of the resources of a new land, and the social well-being of its people. In the following pages are given particulars of the area, population, commerce, and natural resources of the various Colonies, as well as information relating to the public and private wealth, and social condition of the people; their employment, educational status, form of government, cost of living, and other subjects of interest. Records of this nature



are prepared by every Colony, but this publication marks the first attempt to present such information in a collective form convenient for reference and comparison. Every care has been taken to ensure accuracy, the figures being extracted from the latest-published official records of the Colony dealt with ; and it is believed that a work of this kind will not be without a special value, now the question of Federation is so greatly exercising the public mind. Those who study the information here recorded, and note the steady and rapid progress of these vigorous communities, will hardly fail to see an augury of further prosperous development, and will fain admit the substantial basis upon which is founded Australasia's claim for recognition amongst the nations.

*Sydney, 12th February, 1891.*

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## POLITICAL DIVISIONS.

THE Seven Colonies of Australasia, which now possess a population of nearly four millions, and a degree and distribution of material wealth scarcely paralleled by any other community on the globe, were unknown and undreamt of a little more than a century ago. It is the object of these pages to present a short account of the magnificent development to which these infant States have already attained, and to show in regard to the various elements of prosperity which go to build up a nation, their importance, not only as compared with one another, but also as regards the world at large.

New South Wales is the oldest Colony of the group, the first settlement on its shores having been effected by an expedition under the command of Captain Arthur Phillip, who landed at Botany Bay on 19th January, 1788, and formally took possession of the whole continent. Botany Bay being found unsuitable for a settlement, the fleet was brought round to Port Jackson, and the city of Sydney founded on the 26th January of the same year. Though the Colony was originally a penal settlement, free immigration existed from the first, and, after the abolition of transportation in 1840, all traces of the penal element were rapidly lost. The Constitution of New South Wales was proclaimed on the 24th November, 1855.

## TASMANIA.

Tasmania, formerly known as Van Diemen's Land, was colonised from New South Wales, having been intended to serve the purpose of a subsidiary penal settlement. Lieutenant Bowen, in charge of an expedition despatched from Sydney, took possession of the island on the 10th August, 1803, and formed a settlement on the east bank of the Derwent River, at Risdon; but the actual commencement of colonisation dates from February, 1804, when Lieutenant-Colonel Collins established himself at Sullivan's Cove, at the site of the present city of Hobart. The government was administered from Sydney until the year 1825, when, in the month of December, Van Diemen's Land was duly constituted an independent province. The present Constitution of the Colony was framed in 1855, and proclaimed in the following year, the Act (18 Vic. No. 17) created a "Legislative Council and House of Assembly constituting the Parliament of Van Diemen's Land." The name of the Colony was formally changed to Tasmania on the 1st January, 1856.

## VICTORIA.

The first attempt to settle Victoria was made in 1803. On the 10th October of that year Lieutenant-Colonel Collins arrived from England with the intention of founding at Port Phillip a convict settlement similar to that which had been established at Sydney. The expedition landed on the shores of Port Phillip, near Sorrento, and several explorations of the country were made, but in the course of a few months the attempt at colonisation was abandoned, as the place was believed to be unsuitable for a settlement. For twenty years the District of Port Phillip, as it was called, continued to be neglected. In 1824 Hume and Hovell undertook an exploration of the territory, and in 1826 another expedition, under Captain Wright, was sent from Sydney to form a settlement, but returned by order of Governor Darling, after one year's trial, although the reports of Hume and Hovell, and the officers of the military, were favourable to its prospects. In 1835 Batman, with a party from Hobart, and J. P. Fawkner, at the head of another party from

Van Diemen's Land, obtained from the Aborigines extensive tracts of land on the shores of Port Phillip and the banks of the Yarra. In 1836, Sir Richard Bourke, then Governor of New South Wales, despatched Mr. Stewart from Sydney, with the title of "Superintendent of the District of Port Phillip," to establish a regular Government, and Captain Lonsdale arrived soon afterwards with a party of soldiers as well as the necessary civil officials. The district was then formally placed under British rule. Victoria was separated from the mother colony on the 1st July, 1851, and its present constitution came into force on the 23rd November, 1855.

Western Australia was the fourth Colony established in Australia. The first settlement took place in 1826, when Major Lockyer landed at Albany in charge of an expedition from Sydney, consisting of a detachment of the 39th Regiment, and a number of prisoners. In 1829 Captain Freemantle landed near the mouth of the Swan River, and in the same year the town of Perth was founded. The territory was made a separate Colony on the 1st June, 1829, and Captain Stirling was appointed the first Governor. Until the end of 1890, Western Australia remained a Crown Colony under the direct control of the British Government, when it was granted the privilege of responsible Government.

WESTERN  
AUSTRALIA.

South Australia was colonised in the year 1836, by immigrants sent from England, under the auspices of the South Australian Colonisation Company. Until a site for the capital was chosen the immigrants were landed at Kangaroo Island. Colonel Light, who was sent out to select the site for the settlement, arrived in August, 1836, and, after examining Nepean Bay, Port Lincoln, and Encounter Bay, decided upon establishing the capital where Adelaide now stands. Captain Hindmarsh, the first Governor, arrived at the close of the same year, and proclaimed the Colony on the 30th December. The new constitution of South Australia came into force on the 24th October, 1856.

SOUTH  
AUSTRALIA.

## NEW ZEALAND.

New Zealand became a British Colony in 1840, but a company organised in England, styled the "New Zealand Land Company," had, during the previous year, despatched a preliminary expedition for the purpose of treating with the natives for the purchase of land. Five immigrant ships arrived in 1840, and settlements were made at Wellington and Auckland. By the treaty of Waitangi, which was signed on February 5, 1840, the native chiefs ceded the sovereignty of the islands to the British Crown. Disturbances, however, soon occurred between the Maoris and the white settlers, and for about a quarter of a century matters were in a more or less unsettled state. The chief events may be thus summarised :—The Waira massacres occurred in June, 1843 ; insurrection headed by Honi Heki in July, 1844 ; rebellion of Wiremu Kingi in March, 1860 ; general war with the Maoris commenced in 1863 ; serious British reverses, including the Gate Pah disaster, in 1864 ; outbreak of the Hau-hau heresy in March, 1865 ; death of the chief William Thompson, which practically closed the war, in 1867 ; rebellion under Te Kooti in November, 1868, which was not finally quelled until July, 1870 ; submission of the Maori king to the British Government in February, 1875. Constitutional government was conferred on New Zealand in 1853, and a system by which the local governing power was vested in Provincial Councils, presided over by superintendents, continued till 1875, when it was abolished by an Act of the General Assembly, and a general Parliament for the whole Colony was instituted, consisting of two Houses of Legislature, as in the other Australasian colonies.

## QUEENSLAND.

Queensland, like Victoria, is an offshoot of New South Wales. In 1825 the first convict establishment was formed at Eagle Farm, in the Moreton Bay district. The penal settlement came to an end in the year 1842, and the district was proclaimed open to free settlement. Its separation from New South Wales took place in 1859, and the present constitution came into force on the 10th December of that year.

## AREAS AND BOUNDARIES.

THE Australasian Colonies comprise the continent of Australia, the adjacent island of Tasmania, and the islands of New Zealand. The group is politically subdivided into seven Colonies, which, with the area of each, are as follows :—

	Square Miles.
New South Wales .....	310,700
Victoria.....	87,884
Queensland .....	668,497
South Australia .....	903,690
Western Australia .....	1,060,000
Australia .....	3,030,771
Tasmania .....	26,229
New Zealand .....	104,470
Australasia .....	3,161,470

The British Empire extends over an area of 8,040,000 square miles, so that nearly two-fifths of its area is embraced within the limits of the seven colonies. Australasia is more than twenty-six times as large as the United Kingdom, more than fifteen times as large as France, more than half as large again as Russia in Europe, and almost equal in extent to the continent of Europe or to the United States of America. Comparative  
area of Australia.

The mainland of Australia lies between  $10^{\circ} 39'$  and  $39^{\circ} 11\frac{1}{2}'$  south latitude, and the meridians of  $113^{\circ} 5'$  and  $153^{\circ} 16'$  east longitude. Its greatest length is 2,400 miles from east to west, and its greatest breadth, 1,971 miles from north to south. Its area may be approximately stated at 3,030,771 square miles, and its coast line 8,850 miles. AUSTRALIA.

New South Wales lies principally between the 29th and 36th parallels of south latitude, and between the 141st and 153rd meridians of east longitude. The length of the Colony, from Point Danger on the north to Cape Howe on the South, is 680 miles. From east to west, along the 29th parallel, the breadth is 760 NEW SOUTH  
WALES.

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miles ; while diagonally, from the south-west corner—where the Murray passes into South Australia—to Point Danger, the length reaches 850 miles. The seaboard extends over 700 miles.

**VICTORIA.** Victoria is situated between the 34th and 39th parallels of south latitude, and the 141st and 150th meridians of east longitude. The extreme length from east to west is 480 miles, and the breadth 240 miles. The coast line is about 600 miles.

**QUEENSLAND.** Queensland lies between the 11th and 29th parallels of south latitude, and the 138th and 153rd meridians of east longitude. The greatest length from north to south is 1,300 miles, and the breadth, 800 miles. The coast line is about 2,550 miles.

**SOUTH AUSTRALIA.** South Australia extends from the 12th to the 38th parallels of south latitude, and from the 129th to the 141st meridians of east longitude. The greatest length from north to south is 1,850 miles, and the width, 650 miles, with a seaboard of 2,000 miles, of which about 900 miles are washed by the Indian Ocean, the Arafura Sea, and the Gulf of Carpentaria.

**WESTERN AUSTRALIA.** Western Australia consists of the country between the 14th and 35th parallels of south latitude, and the 113th and 129th meridian of east longitude. The greatest length north and south is 1,280 miles, and the width from east to west 800 miles. The coast line is about 3,000 miles.

**TASMANIA.** Tasmania is an island situated about 150 miles south of Victoria, from which it is separated by Bass' Strait. It lies between 40° 33' and 43° 39' south latitude, and the meridians of 144° 39' and 148° 23' east longitude. Its greatest length from north to south is 210 miles, and its greatest breadth from east to west is 200 miles. Including the adjacent islands its area is 26,229 square miles.

**NEW ZEALAND.** New Zealand is to the east of Australia ; its nearest point to the mainland being Cape Maria van Diemen, which is 1,175 miles from Sugar Loaf Point, in New South Wales. New Zealand and



its dependencies lie between the 33rd and 53rd parallels of south latitude, and between 166° 30' east longitude and 173° west longitude.

The North Island, or New Ulster, has a length of about 515 <sup>North Island.</sup> miles, by a breadth of about 250 miles ; its area is estimated at 44,467 square miles, and its coast line at 2,200 miles.

The South, or as it is officially called the Middle Island, or <sup>South Island.</sup> New Munster, has a length of about 525 miles by a breadth of about 180 miles. Its area is 58,525 square miles, and its coast-line measures 2,000 miles.

Stewart Island, or New Leinster, lies off the southern extremity <sup>Stewart Island.</sup> of South Island and has an area of 665 square miles ; its greatest length is 30 miles by a breadth of 25 miles.

Including the Chatham Islands, the Auckland Islands, the <sup>Area of New Zealand.</sup> Campbell Islands, the Bounty Islands, and many others which are dependent, the total area of the Colony of New Zealand is estimated at about 104,470 square miles.

## CLIMATE.

Tropical  
Australia.

THE tropic of Capricorn divides Australia into two parts ; of these the northern or inter-tropical portion contains 1,176,000 square miles, comprising half of Queensland, and the Kimberley and north-western divisions of Western Australia.

Extra-tropical  
Australia.

The whole of New South Wales, Victoria, New Zealand, and Tasmania, South Australia proper, half of Queensland, and more than half of Western Australia, comprising 1,985,500 square miles, are without the tropics. In a region so extensive very great varieties of climate are naturally to be expected, but it may be stated as a general maxim that the climate of Australasia is milder than that of corresponding lands in the northern hemisphere. During July, which is the coldest month in these lati-

Average winter  
temperature.

tudes, one half of Australasia has a mean temperature ranging from 40° to 64°, and the other half from 64° to 80°. The following are the areas subject to the various average temperatures during the month referred to :--

Temperature, Fahrenheit.	Area in square miles.
35° — 40°.....	300
40° — 45°.....	39,700
45° — 50°.....	88,000
50° — 55°.....	635,300
55° — 60°.....	701,300
60° — 65°.....	858,200
65° — 70°.....	529,700
70° — 75°.....	284,500
75° — 80°.....	24,500

Average summer  
temperature.

The temperature during December ranges from 50° to above 95° Fah. ; half Australia having a mean temperature below 83°.

Dividing the land into zones of average summer temperature, the following are the areas which would fall to each :—

Temperature, Fahrenheit.	Area in square miles.
50° — 55°.....	300
55° — 60°.....	66,300
60° — 65°.....	111,300
65° — 70°.....	74,300
70° — 75°.....	373,600
75° — 80°.....	453,000
80° — 85°.....	756,500
85° — 90°.....	588,400
90° — 95°.....	602,400
95° and over. ....	135,400

Judging from the figures just given it must be conceded that a considerable area of the continent is not adapted for colonisation by European races. The region with a mean summer temperature in excess of 95° Fahr. is the interior of the Northern Territory of South Australia north of 20th parallel; and the whole of the country, excepting the seaboard, lying between the meridians of 120° and 140° and north of the 25th parallel has a mean temperature in excess of 90° Fahr.

Extreme heat of  
Northern  
Australia.

Climatically as well as geographically New South Wales is divided into three marked divisions. The coastal region, which is between the parallels of 28° and 37°, south latitude, has an average summer temperature ranging from 76° in the north to 67° in the south, with a winter temperature of from 51° to 56°. Taking the district generally the difference between the mean summer and mean winter temperature may be set down as averaging not more than 24°, a range smaller is found in most other parts of the world. The famed resorts on the Mediterranean seaboard bear no comparison with the Pacific slopes of New South Wales, either for natural salubrity or for the comparative mildness of the summer and winter.

Climate of the  
coast of New  
South Wales.

Sydney, situated as it is midway between the extreme points of the Colony, in latitude 33° 51' S., has a mean temperature of 63°,

Climate of  
Sydney.

corresponding with that of Barcelona, the great maritime city of Spain, and of Toulon, in France; the former being in latitude  $44^{\circ} 22' N.$ , and the latter in  $43^{\circ} 7' N.$  At Sydney the mean summer temperature is slightly under  $71^{\circ}$ , and that of winter  $54^{\circ} 5'$ . The range is thus  $16.5^{\circ}$  Fahr. At Naples, where the mean temperature for the year is about the same as at Sydney, the summer temperature reaches a mean of  $74.5^{\circ}$ , and the mean of winter is  $47.5^{\circ}$ , with a range of  $27^{\circ}$ . Thus the summer is warmer, and the winter much colder, than at Sydney. The highest temperature in the shade ever experienced in Sydney was  $106.9^{\circ}$ , and the lowest winter temperature was  $36.8^{\circ}$ , giving a range of  $70^{\circ}$ . At Naples the range has been as great as  $81^{\circ}$ , the winter minimum falling sometimes below the freezing point.

Climate of the  
Table-land.

Passing from the coast to the table-land, a distinct climatic region is entered. Cooma may be taken as illustrative of the climate of the south table-land, and Armidale of the northern. The first-named town stands in the centre of the Monaro plains, at an elevation of 2,640 feet above sea-level, and enjoys a summer as mild as either London and Paris, while its winters are far less severe. On the New England table-land, the climate of Armidale and other towns may be considered as nearly perfect as can be found. The yearly average temperature is scarcely  $57^{\circ}$ , while the summer only reaches  $69^{\circ}$ , and the winter falls to  $46^{\circ}$ , a range of temperature approximating closely to that of the famous health resorts in the south of France.

Climate of the  
Western Division.

The climatic conditions of the western districts of the Colony are entirely different from those of the other two regions, and have often been cited as disagreeable. Compared with the equable temperature of the coastal district, or of the table-land, there may appear some justification for such a reputation, but only by comparison. The climate of the great plains, in spite of the heat of part of the summer, is very healthy. The town of Bourke may be taken as an example. Seated in the midst of the great plain of the interior, it illustrates peculiarly well the defects, as well as ex-

cellencies, of the climate of the whole region. Bourke has exactly the same latitude as Cairo, yet its mean summer temperature is  $5^{\circ}$  less, and its mean annual temperature  $6\cdot5^{\circ}$  less than is the case in the Egyptian city. New Orleans also lies on the same parallel, but the American city is  $4^{\circ}$  hotter in summer. As regards winter temperature, Bourke leaves little to be desired. The mean winter reading of the thermometer is  $52\cdot3^{\circ}$ , and accompanied as this is by clear skies and an absence of snow, the season is both refreshing and enjoyable.

The climate of Victoria does not differ greatly from that of New South Wales; the heat, however, is generally less intense in summer and the cold greater in winter. Melbourne, which stands in latitude  $37^{\circ} 50'$  S., has a mean temperature of  $57\cdot3^{\circ}$ , and therefore corresponds with Bathurst in New South Wales, Washington, in the United States, Bordeaux, Marseilles, Nice, Verona, and Madrid. The difference between summer and winter is, however, less at Melbourne than at any of the places mentioned. The mean temperature is  $6^{\circ}$  less than that of Sydney and  $7^{\circ}$  less than that of Adelaide,—the result of a long series of observations being:—spring,  $57^{\circ}$ ; autumn,  $58\cdot7^{\circ}$ ; summer,  $65\cdot3^{\circ}$ ; winter,  $49\cdot2^{\circ}$ . The highest recorded temperature in the shade at Melbourne was  $110\cdot7^{\circ}$  and the lowest  $27^{\circ}$ , while at Sydney, the extremes have been  $106^{\circ} 9'$  and  $36^{\circ} 8'$ .

Ballarat, the second city of Victoria, about 100 miles westerly from Melbourne, and situated at a height of about 1,400 feet above sea-level, has a minimum temperature of  $29^{\circ} 2'$ , and a maximum of  $104^{\circ} 5'$ . Sandhurst, which is about 100 miles north of Melbourne, and 700 feet above the level of the sea, has a rather higher average temperature, ranging from  $33^{\circ}$  to a maximum of  $109^{\circ}$ . At Wilson's Promontory, the most southerly point of Australia, the minimum heat is  $37^{\circ}$ , and the maximum  $91^{\circ}$ .

The rainfall of Victoria averaged for a series of years  $25\cdot56$  inches, the average number of days on which rain fell was 130. During the year 1889, the rainfall at Melbourne amounted to

The Victorian  
Climate.

Climate of  
Ballarat and  
Sandhurst.

Rainfall of  
Victoria.

27·14 inches. At Ballarat, 32·41 inches fell, and 28·29 at Sandhurst. Among the mountain ranges in Gippsland, the rainfall averages 36 inches.

The climate of Queensland.

As about one half of the Colony of Queensland lies within the tropics, it is but natural to expect that the climate would be very warm. The temperature, however, has a less daily range than that of other countries under the same isothermal lines. This circumstance is due to the sea breezes which blow with great regularity, and temper what would otherwise be an excessive heat. The hot winds which prevail during the summer in the other colonies are unknown in Queensland. Of course in a territory of such large extent as that of Queensland there are many varieties of climate, and the heat is greater along the coast than on the elevated lands of the interior. In the northern parts of the colony the high temperature is very trying to persons of European descent.

Temperature of Queensland.

The mean temperature at Brisbane, during December, January, and February, is about  $77^{\circ} 5'$ , while during the months of June, July, and August, it averages about  $60^{\circ}$ . Brisbane, however, is situated near the extreme southern end of the colony, and its average temperature is considerably less than that of many of the towns further north. Thus the winter in Rockhampton averages nearly  $65^{\circ}$ , while the summer heat rises almost to  $85^{\circ}$ , and at Townsville and Normanton the average temperature is still higher.

Rainfall in Queensland.

The average rainfall of Queensland is high, especially along the northern coast, where it ranges from 60 to 70 inches per annum. Near Brisbane about 50 to 60 inches of rain fall annually, and even on the plains of the interior from 20 to 30 inches usually fall every year.

Climate of South Australia.

South Australia, extending as it does over about  $26^{\circ}$  of latitude, naturally presents considerable variations of climate. The southern portions have a climate greatly resembling that of the coast of Italy. The coldest months are June, July, and August, during

which the temperature is very agreeable averaging  $54^{\circ} 4'$ ,  $54^{\circ} 5'$ , and  $53^{\circ} 7'$  for those months respectively. On the plains slight frosts occasionally occur, and ice is sometimes seen on the highlands. The summer is the only really disagreeable portion of the year. The sun at that season has great power, and the temperature frequently reaches  $100^{\circ}$  in the shade, with hot winds blowing from the interior. The weather on the whole is remarkably dry. At Adelaide there are on an average 120 rainy days per annum; during the last fifty years the mean rainfall has been 20.26 inches per annum, while further north the quantity recorded was considerably less. It is said that no great epidemic has ever visited the colony.

The climate of the Northern Territory of South Australia is tropical, except on the elevated table-lands. Altogether the temperature of this part of the colony is very similar to that of Northern Queensland, and the climate is equally unfavourable to Europeans. It is a fact worthy of notice that the malarial fevers which are so troublesome to the pioneers of the northern parts of Australia almost, and in some cases entirely, disappear after the land has been settled and consolidated by stock. The rainfall in the extreme north, especially in January and February, is exceedingly heavy.

Western Australia has practically only two seasons. The winter, or wet season, commences in April and ends in October; the summer, or dry season, comprises the remainder of the year. During the wet season frequent and heavy rains fall, and thunderstorms with sharp showers occur in the summer. The extremes of drought and flood experienced in the other colonies are almost unknown in Western Australia, but the north-west coast is sometimes visited with hurricanes of great violence during the summer months. In the old settled parts of the colony the mean temperature is about  $64^{\circ}$ , but in the more northern portions the heat is excessive, though the dryness of the atmosphere makes it superior to most tropical climates. Although the heat is very great during

Climate of the  
Northern  
Territory.

The seasons in  
Western  
Australia.

three months of the year, the nights and mornings are almost always cool, and through there being so little moisture in the air, no danger arises from camping out.

The climate of  
Tasmania.

Tasmania, protected as it is by its geographical position, and by the tempering influence of the surrounding ocean, from extremes of heat or cold, enjoys an exceedingly genial climate. Greater part of the island in the settled regions is characterised by a mild and equable temperature, ranging between the extremes of 26° to 33° in winter to 78° to 98° in summer. Spring and autumn are the most pleasant seasons of the year, especially the latter, when the mean reading of the thermometer is about 57°. The richness of its flora is an evidence of the genial nature of the climate of Tasmania, while the purity of its atmosphere is proved by the small proportion of zymotic diseases recorded in the bills of mortality. The hot winds of the continent of Australia are felt in the northern parts of Tasmania only, and, even there, are greatly reduced in temperature by their passage across Bass' Straits. Generally speaking, all through the summer months there are alternate land and sea breezes which tend to cool the atmosphere even in the hottest days. The climate of Tasmania is fresh and invigorating, and is much recommended as a restorative for those whose constitutions have been enfeebled by residence in hotter climes. Large numbers of tourists in search of health visit the island every summer. The rainfall, except in the mountain districts, is moderate and regular. The average downfall for a long series of years was 22.93 inches, with 143 wet days per annum.

Climate of New  
Zealand.

The climate of New Zealand is in some respects similar to that of Tasmania, but the changes of weather and temperature are often very sudden. As the colony extends over more than 10 degrees of latitude it possesses a considerable amount of variety in regard to climate. The North Island, in this respect, is somewhat similar to Rome, Montpellier, and Milan, while the Middle or Southern Island more resembles Jersey, in the Channel Islands.



The mean temperature of New Zealand is lower than that of similar latitudes in Europe, though higher than is experienced in America on corresponding parallels. The mean temperature of the South or Middle Island is less by about 6° than that of the North Island. Snow very seldom lies on the ground at the sea-level in the North Island, and only occasionally in the South Island. The summits of Ruapehu, the highest mountain in the North Island, and of the great mountain chain in the South Island, are covered with perpetual snow from an altitude of 7,500 feet above the level of the sea. Ice is occasionally seen in winter time in all parts of New Zealand. The whole colony is subject to strong breezes which frequently culminate in gales.

The following table illustrates the rainfall of Australasia :—

Australasian rainfall.

Rainfall, Australasia.

Rainfall.	Rainfall area in square miles for each division.			
	Australia.	Tasmania.	New Zealand.	Australasia.
Under 10 inches ...	1,254,400	.....	.....	1,254,400
10 to 20 ,, ...	867,200	9,440	.....	876,640
20 to 30 ,, ...	411,300	.....	69,650	480,950
30 to 40 ,, ...	232,100	8,380	17,410	257,890
40 to 50 ,, ...	144,300	8,380	17,410	170,090
50 to 60 ,, ..	49,300	.....	.....	49,300
60 to 70 ,, ...	57,700	.....	.....	57,700
Above 70 ,, ...	14,500	.....	.....	14,500
	3,030,800	26,200	104,470	3,161,470

## POPULATION.

Population in  
the year 1889.

AT the end of 1889, one hundred and two years from its first settlement, Australasia had a population of 3,786,830 persons, 2,052,800 males and 1,734,030 females, divided amongst the various Colonies as under :—

	Males.	Females.	Total.
New South Wales .....	618,300	503,900	1,122,200
Victoria .....	593,800	524,230	1,118,030
Queensland .....	235,610	171,050	406,660
South Australia .....	167,440	157,040	324,480
Western Australia .....	25,070	18,630	43,700
Tasmania .....	80,810	70,670	151,480
New Zealand .....	331,770	288,510	620,280

If to these numbers, which are principally those of the people of European descent, there be added an estimated population of some 200,000 Australian aborigines and about 42,000 Maories, the inhabitants of Australasia will be found to be, in round numbers, 4,029,000 persons.

Density of Aus-  
tralasian popula-  
tion.

The population of Australasia, even including the native races, only reaches a density of 1·27 persons per square mile, which is far below that of any other civilised country excepting Canada. Including however only those of European descent the density is not more than 1·19 per square mile.

Other great colonies and foreign countries in process of extensive settlement, with which these colonies may be fairly

compared, show the following density of population, according to the latest available information :—

Population of great colonies and foreign countries in process of settlement.

Country.	Area in square Miles.	Population.	Persons per square Mile.
Algeria .....	184,500	3,860,000	20·9
Argentine Republic .....	1,125,000	4,046,600	3·6
Bolivia .....	772,500	2,300,000	2·9
Brazil .....	3,209,900	14,002,300	4·4
Canadian Dominion .....	3,379,000	5,075,900	1·5
Cape Colony.....	217,900	1,428,700	6·5
Mexico .....	739,700	11,388,700	15·4
United States .....	3,501,000	66,000,000	18·8

A comparison with the density of population in the older countries of the world is of little practical use, unless as giving some indication of the future of Australasia, when its population shall have reached the proportions found in the old world. The latest authoritative statement, that of Professor Grandeau, at the Millers' Congress recently held at Paris, gives the density of populations of the great divisions of the Globe, as follows :—

Density of population in European countries.

Continent.	Area in square Miles.	Population.	Persons per square Mile.
Europe .....	3,824,000	328,000,000	86·0
Asia .....	16,647,000	758,000,000	45·5
Africa .....	11,587,000	206,000,000	17·8
North America .....	9,347,000	72,000,000	7·7
South America .....	6,875,000	28,000,000	4·1
Oceania .....	4,250,000	37,000,000	8·7
The World .....	52,530,000	1,429,000,000	27·2

Captain Phillip brought with him, in 1788, an establishment of 1,030 persons, all told. Settlement soon spread from New South Wales, first to Tasmania, and afterwards to all parts of the

Progress of population in Australasia.

Australian Continent and to New Zealand. The progress of population in Australasia, and the rate of its increase for each successive period of twenty years, from 1801 to 1881, are shown in the following table :—

Years.	Population of Australasia.	Annual rate of Increase per cent.
1788 .....	1,030	.....
1801 .....	6,508	.....
1821 .....	35,610	8·87
1841 .....	251,000	10·26
1861 .....	1,265,898	8·43
1881 .....	2,822,046	4·09
1889 .....	3,786,827	3·74

Rates of increase for various periods compared.

In examining the various ratios of increase for each period above-mentioned, the high rates which prevailed prior to 1841 are to be accounted for by the smallness of the numbers operated upon; the high rate ruling from 1841 to 1861 is due to the extraordinary impetus given to immigration in the years which followed the discovery of gold in 1851. From 1861 to the present time the increase has been normal, the gold fever having practically died away before the period was entered on.

The following are the rates of increase over periods approximating to the last of the foregoing table in certain young countries undergoing extensive settlement :—

Country.	Period.	Annual rate of Increase.
Argentine Republic (Provinces) .....	1869-87	3·71
Cape Colony and Dependencies .....	1880-88	2·90
Brazil .....	1872-88	2·56
Canada .....	1881-89	1·79

Taking the year 1860 as a starting point of comparison between the various provinces, when Queensland, the last offshoot of the mother colony of New South Wales, appears for the first time

as an independent member of the group, the progress of the population of each colony of the Australian family was :—

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1860	348,546	537,847	28,056	124,112	15,500	87,775	79,111
1870	498,659	726,599	115,567	183,797	24,785	100,765	248,400
1880	741,893	860,067	226,077	267,573	29,019	114,762	484,864
1889	1,122,200	1,118,028	406,658	324,484	43,698	151,480	620,279

The total numerical increase in each colony during the twenty-nine years was, therefore :—

New South Wales .....	773,654 persons.
Victoria.....	580,181 "
Queensland .....	378,602 "
South Australia .....	200,372 "
Western Australia .....	28,198 "
Tasmania .....	63,705 "
New Zealand .....	541,186 "

Numerical increase in each of the Australasian Colonies.

The numerical increase for the whole of Australasia was 2,565,898, each colony contributing thereto in the following proportion :—

New South Wales ... ..	30·15 per cent.
Victoria .....	22·61 "
Queensland ... ..	14·76 "
South Australia .....	7·81 "
Western Australia.....	1·10 "
Tasmania.....	2·48 "
New Zealand ... ..	21·09 "
	100·00 "

The factors of this increase, viz., the excess of births over deaths, and the excess of immigration, were both abnormally large. The excess of births over deaths has contributed the following number to the population of each Colony, from 1860 to 1889 :—

New South Wales .....	437,158 persons.
Victoria .....	448,309 "
Queensland .....	111,348 "
South Australia .....	156,575 "
Western Australia .....	14,339 "
Tasmania .....	55,392 "
New Zealand .....	275,033 "

Increase due to the excess of Births over Deaths.

From this cause alone the population of Australasia has therefore gained 1,498,154 persons during the years mentioned; a number equivalent to 58·39 per cent. of the total increase.

Increase due to  
Immigration.

The difference between the figures just cited and the total increase during the period under examination, viz., 1,067,744 persons, represents the survivors among those immigrants who permanently settled in the Colonies in the years named, less the Australasian-born population which emigrated. These were distributed as follows :—

New South Wales .....	336,496 persons.
Victoria.....	131,872 „
Queensland .....	267,254 „
South Australia .....	43,797 „
Western Australia .....	13,859 „
Tasmania .....	8,313 „
New Zealand .....	266,153 „

The information conveyed by the above figures is important, as illustrating not only the movement of population, but also the effect of local influences upon immigration; as, for example, the attraction of liberal land laws, the fertility of the soil, the permanence of employment, and the policy of assisted immigration. It would appear that during the period which elapsed since 1860, New South Wales, Queensland, and New Zealand have exhibited the greatest power of attraction and absorption of the permanent element of immigration.

The bare statement, however, of the gross increase of each Colony due to immigration, if taken by itself, is apt to be misleading, since the original density of population must be deemed a factor affecting the current of immigration. The following figures show the density of population in each Colony at the various dates corresponding with those given in a preceding table :—

Density of Population per square mile.

	1860.	1870.	1880.	1889.
New South Wales .....	1·12	1·60	2·39	3·61
Victoria .....	6·12	8·27	9·79	12·72
Queensland .....	·04	·17	·34	·60
South Australia.....	·14	·20	·30	·36
Western Australia .....	·01	·02	·03	·04
Tasmania .....	3·35	3·84	4·38	5·78
New Zealand .....	·76	2·38	4·64	5·93

Taking the last ten years, which the following figures illustrate, it will be seen that no Colony exhibits uniformity in the immigration returns, while some show in several years an excess of departures:—

## Excess of Immigrants over Emigrants.

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1880...	19,311	11,661	3,047	1,763	200*	386	7,231
1881...	22,898	7,322	7,014	2,752	67	1,416	1,616
1882...	19,317	10,880	17,043	734	94	1,419	3,489
1883...	32,810	11,030	34,371	4,268	436	1,604	10,029
1884...	32,232	14,141	18,620	1,208	871	1,733	9,321
1885...	39,683	14,982	11,566	7,417*	1,628	649	4,504
1886...	28,492	25,302	13,190	7,608*	3,738	769	1,064
1887...	23,516	22,026	15,979	2,199*	2,050	2,692	977
1888...	21,545	41,803	11,805	113*	1,196*	930	9,175*
1889...	20,640	16,164	10,926	514	578	2,672	214
Total	260,444	175,311	143,561	*6,098	8,066	14,270	29,270

\* Excess of Emigrants.

There had always been, even in the earliest years of settlement, a small though steady stream of immigration to these colonies, but in 1851, memorable in Australasia for the finding of gold, this condition of things showed a marked change; for in that year there commenced one of the most remarkable population movements of modern times. Thousands of men in the prime of life were attracted to the shores of Australia by the hope of speedily acquiring wealth from the rich gold-fields that had been discovered, and by far the greater number of these new arrivals settled in the new Colony of Victoria, which had then just been separated from New South Wales. This rush continued for some years afterwards, causing an unprecedented increase in the population of the newly formed colony. In 1850, just previous to the gold rush, the population of the northern and southern portions of New South Wales was:—

New South Wales .....	189,341
Port Phillip (Victoria) .....	76,162

Effect of the discovery of gold.

But five years afterwards the positions were reversed, for Port Phillip, then an independent Colony, had a population considerably larger than that of its parent, New South Wales :—

Victoria .....	364,324
New South Wales .....	277,579

Victoria enjoyed the advantage in population for over thirty years, but fell behind in 1887, and although obtaining a lead towards the end of 1888, this was but temporary, and it is unlikely that the smaller Colony will ever again attain the leading position in point of population.

Effect of the discovery of gold in Queensland and New Zealand.

Queensland and New Zealand, also, owe much of their remarkable progress to the discovery of gold. In New Zealand the gold fever broke out in 1861, when the population numbered only 99,021, and the period of its activity extended to 1881. At the census taken in the last-named year the population had reached 500,910 souls, a fourfold increase in twenty years.

In Queensland the attractive force of the gold-fields came into active operation at a later date, and may still be considered a strong factor in stimulating the growth of population in that Colony.

### BIRTHS AND DEATHS.

The birth-rate of Australasia for the last ten years averaged 34·76 per thousand of the population, while for the previous ten years it was 37·09. The following are the rates of each Colony for the periods mentioned :—

Colony .....	Births per thousand.	
	1870-79	1880-89
New South Wales.....	38·90	36·98
Victoria .....	34·60	31·40
Queensland .....	39·17	37·08
South Australia.....	37·72	36·82
Western Australia.....	31·61	35·65
Tasmania.....	30·36	33·78
New Zealand .....	40·79	34·72
Australasia .....	37·09	34·76



In all except the two least populous Colonies the birth-rate shows a decline. The cause of this, so far as most of the Colonies are concerned, is the increase in the proportion which persons under marriage age bear to the whole community. If a comparison were possible between the number of births and the number of women of child-bearing age during the two decennial periods given above, the second period would probably be found to show little falling off.

The mean death-rate of the Australasian Colonies from 1880 to 1889 is 14·31, and varying from 10·56 per thousand in New Zealand, to 16·94, in Queensland. Five Colonies are over the mean rate:—Queensland, with 16·94; Western Australia, 16·76; Tasmania, 15·25; Victoria, 15·13; and New South Wales, 14·79 per thousand, while only two are lower,—South Australia, 13·74; and New Zealand, 10·56 per thousand.

Mean Death-rate of the Australasian Colonies.

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1880	15·48	13·70	14·08	14·79	13·24	16·12	11·46
1881	15·17	14·16	14·93	13·90	13·80	14·77	11·13
1882	16·12	15·32	17·99	14·84	14·16	15·79	11·19
1883	14·68	14·28	18·32	14·55	17·93	17·06	11·45
1884	16·14	14·46	22·97	15·24	21·87	15·50	10·39
1885	16·41	14·98	19·72	12·28	17·60	15·40	10·61
1886	14·88	15·15	16·77	13·38	21·56	14·58	10·54
1887	13·15	15·69	14·56	12·77	17·11	15·45	10·17
1888	13·54	15·31	14·66	12·02	15·90	14·11	9·43
1889	13·40	17·56	15·44	11·07	14·24	14·10	9·40
Mean . . . . .	14·79	15·13	16·94	13·74	16·76	15·25	10·56

Death-rate of Colonies compared with other nations.

Compared with European countries the Colonies occupy a very favourable position in respect to both birth and death rates. The Australasian birth-rate is high, and in those countries where it is slightly higher it will be seen on reference to the subjoined table that the death-rate is so considerably in excess, that the difference between the two, representing the gain to each country by natural increase, is largely in favour of Australasia. The following are the average rates :—

	Births per 1,000.	Deaths per 1,000.	Excess of Births per 1,000.
New South Wales .. .. .	36·98	14·79	22·19
Victoria.....	31·40	15·13	16·27
Queensland.....	37·08	16·94	20·14
South Australia.....	36·82	13·74	23·08
Western Australia.....	35·65	16·76	18·89
Tasmania.....	33·78	15·25	18·53
New Zealand.....	34·72	10·56	24·16
Australasia .. .. .	34·76	14·31	20·45
United Kingdom.....	31·69	19·21	12·48
England and Wales .. .. .	32·98	19·35	13·63
Scotland .. .. .	32·69	19·24	13·45
Ireland.....	23·96	18·40	5·56
France .. .. .	24·33	22·26	2·07
Spain .. .. .	36·64	31·06	5·58
Switzerland.....	28·66	21·14	7·52
Italy.....	37·17	27·86	9·31
Germany .. .. .	37·22	25·45	1·77
Prussia.....	37·61	24·95	12·66
Austria.....	38·22	29·80	8·42
Hungary .. .. .	44·07	33·77	10·30
Holland .. .. .	34·79	21·48	13·31
Belgium .. .. .	30·41	20·76	9·65
Denmark .. .. .	32·25	18·86	13·39
Norway .. .. .	30·94	16·50	14·44
Sweden .. .. .	29·59	17·34	12·25

No better testimony to the salubrity of the climate of Australia could be obtained than is afforded by these figures. There are, of course, various circumstances other than climatic which would tend to make the mortality lighter in these than older-settled

countries, but when all possible allowances are made for such circumstances, a comparison between these Colonies and the countries of Europe is still significantly favourable to Australasia.

MARRIAGES.

The marriage-rate of the Colonies per 1,000 of the population is as follows :— Marriage-rates of the Colonies.

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1880	7·68	6·22	7·22	8·66	7·42	7·38	6·71
1881	8·26	6·79	7·66	8·31	6·60	7·30	6·64
1882	8·74	7·09	8·56	8·87	7·07	8·03	7·07
1883	8·87	7·43	8·93	8·63	6·95	9·01	6·82
1884	8·49	7·73	8·91	8·42	7·11	7·81	6·87
1885	8·18	7·72	8·99	7·93	7·89	7·97	6·65
1886	7·97	7·84	8·37	6·41	7·94	7·27	5·99
1887	7·42	7·62	8·21	6·40	7·70	6·71	5·97
1888	7·37	8·41	8·63	6·66	7·18	6·60	5·97
1889	6·82	8·33	7·86	6·52	6·99	6·50	5·91
Mean...	7·92	7·56	8·37	7·64	7·25	7·42	6·45

The lowest marriage-rate of any of the Colonies is found in New Zealand, and the highest, taking a series of years, in Queensland. Lowest marriage-rate in New Zealand.  
 The rates during the last ten years, which have been given above, show that the average of the whole of Australia has been approximately 7·55.

The Colonies whose rates are above the average are:—

Queensland.....	8·37
New South Wales.....	7·92
South Australia.....	7·64
Victoria .....	7·56

Those below the average are :—

Tasmania .....	7·42
Western Australia .....	7·25
New Zealand .....	6·45

It must be borne in mind that the above are the ratios of *marriages* to population. To ascertain the ratios of *persons* married it is therefore necessary to double the figures in each case.

Marriage-rates  
of Colonies  
compared with  
other Nations.

Comparisons of the marriage-rate of Australasia with that of other countries, where the social conditions are essentially different, are not of much value, but as the marriage-rate is to some slight extent an index to the relative prosperity of the people, the rates which rule in the following countries will show that the Australasian Colonies rank in this respect on a par with the leading nations of the world :—

Marriage-rate per Thousand of Mean Population in certain  
European countries.

Countries.	Mean of years, 1881-88.
England and Wales .....	7·4
Scotland .....	6·6
Ireland .....	4·3
France .....	7·4
Spain .....	6·4
Switzerland ..	6·9
Italy .....	7·9
German Empire .....	7·8
Prussia .....	8·0
Austria .....	7·9
Hungary .....	9·9
Holland.....	7·1
Belgium.....	6·9
Denmark ..	7·5
Norway .....	6·5
Sweden .....	6·4

The social condition of the working-classes, in even the least forward of the Australasian Colonies, is much more advanced than in the British Islands; the probabilities are therefore greatly in favour of a higher marriage-rate, and the wonder is not that the marriage rate in Australasia is above that of Europe, but that the difference is not greater than it is.

BIRTH PLACES OF THE POPULATION.

At the last general census of Australasia (1881) the racial composition of the population was as follows:—

Nationalities.	No. of each Nation.	Per cent.	Racial composition of population of Colonies at census of 1881.
Australasia.....	1,667,376	60·80	
England and Wales.....	499,922	18·23	
Ireland.....	261,996	9·55	
Scotland.....	151,027	5·51	
Germany and Austria.....	43,714	1·59	
China.....	43,430	1·58	
Other British Possessions.....	14,060	0·51	
Scandinavia.....	13,899	0·51	
United States.....	6,274	0·23	
France.....	4,401	0·16	
Other Foreign Countries, not specified..	36,451	1·33	
<b>Total.....</b>	<b>2,742,550</b>	<b>100·00</b>	

Thus the Australasian-born element prevailed in the proportion of 60·80 per cent. throughout Australasia, and constituted the following percentage of the population of each Colony:—

New South Wales.....	62·18 per cent.
Victoria.....	57·89 „
Queensland.....	40·39 „
South Australia.....	59·83 „
Western Australia.....	59·83 „
Tasmania.....	69·13 „
New Zealand.....	45·60 „

The great bulk of the Australasian-born population is of British descent, and the major portion of the immigrant population is also of these races, the respective proportion for each Colony being:—

	English. per cent.	Irish. per cent.	Scotch. per cent.
New South Wales.....	14·72	9·21	3·34
Victoria.....	17·11	10·06	5·58
Queensland.....	17·51	13·25	4·65
South Australia.....	21·14	6·52	3·80
Western Australia.....	22·76	10·01	2·46
Tasmania.....	14·96	6·21	3·24
New Zealand.....	24·72	10·08	10·77
Australasia.....	18·23	9·55	5·51

The foreign  
element.

Among other European nationalities the Germans and Scandinavians contributed the largest numbers to the foreigners established in Australasia, being particularly numerous in Queensland and South Australia, where together they formed respectively 6·75 and 3·58 per cent. of the total population. Their total number in all the colonies was 57,613, and of these 14,399 were located in Queensland, and 10,010 in South Australia. Excluding Asiatics, the United States of America furnished the larger proportion of other foreigners represented in Australia, and the French ranked next in order. The Americans numbered 6,274 and the French 4,401, or 0·23 and 0·16 per cent. of the total population.

The percentage of foreigners, other than Asiatics in each Colony, at the census of 1881 was :—

	Germans and Austrians.	Scandi- navians.	Americans (United States.)	French.
New South Wales .....	1·04	0·37	0·34	0·20
Victoria .....	1·03	0·28	0·27	0·15
Queensland.....	5·52	1·23	0·19	0·16
South Australia.....	3·21	0·37	.....	0·10
Western Australia.....	0·28	0·17	0·29	0·10
Tasmania .....	0·69	0·19	0·12	0·05
New Zealand .....	1·08	0·97	0·17	0·17

At the census of 1881 the Aborigines were estimated to number 31,700, distributed as follows :—

Colony.	Males.	Females.	Total.
New South Wales .....	938	705	1,643
Victoria .....	460	320	780
Queensland .....	10,719	9,866	20,585
South Australia .....	3,478	2,868	6,346
Western Australia.....	1,640	706	2,346
Total.....	17,235	14,465	31,700

Estimate  
untrustworthy.

There are various reasons for believing that the above total does not include the entire aboriginal population of the colonies.

In New South Wales, for instance, only the so-called "civilized" blacks were enumerated in the returns, and, from reliable information since available, it is certain that the actual number, including those in a wild state, was much higher. The figures for Queensland are in a great measure derived from estimates which are considered by the Registrar-General of that Colony to be too low, for in his report on the census he says :—"In the northern parts of the Colony the aborigines are comparatively numerous, and some persons resident in the Cook and Palmer districts have supposed that there may be 70,000 in Queensland. This, however, is a very crude estimate, and may be far wide of the truth." In the case of South Australia, the aborigines in the Northern Territory were not included in the returns, and it seems probable that they are as numerous in that Colony as in Queensland. The census of Western Australia includes only those aboriginals in the employment of the colonists, and as large portions of this, the greatest in area of all the Australasian Colonies, are as yet unexplored, it may be presumed that the number of aborigines enumerated in the census is very far short of the total in the Colony. The aboriginal population of the entire Continent may be set down at something like 200,000.

The original inhabitants of New Zealand, or Maoris, as they The Maoris. are called, are quite a different race. They are gifted with a considerable amount of intelligence, quick at imitation, and brave even to rashness ; on the other hand they are avaricious, and oft-times ferocious. According to the census of 1881 they numbered 44,097. Like the Australian aborigines they appear to be decreasing in number, the census of 1886 enumerating only 41,432. The total in 1889 was estimated to be about 42,000 (23,000 males and 19,000 females). It is believed, however, that at the time the colonists first landed their number was fully 120,000. It is Aborigines decreasing. stated in the annual report of the Aborigines Protection Board that there were 7,529 aborigines in New South Wales in 1889, as compared with 7,485 in 1888.

Chinese in the  
Colonies in 1889.

In 1889 the Chinese in the whole group of Colonies were estimated to number 47,822 distributed as follows :—

New South Wales .....	15,581
Victoria .....	11,679
Queensland .....	7,691
South Australia .....	6,660
New Zealand.....	4,585
Tasmania .....	1,000
Western Australia .....	626
	<hr/>
Australasia .....	47,822

Prohibitive  
legislation.

Since 1880 it has been deemed expedient by the Governments of all the Colonies except Western Australia to enact prohibitive laws against the immigration of Chinese, and their migration from one Colony to another. For several years a poll-tax of £10 was imposed, but now, in accordance with the most recent legislation on the subject, masters of vessels are forbidden under a heavy penalty to bring more than one Chinese to every 300 tons, and a poll-tax of £100 is charged on landing. These stringent regulations have had the effect of bringing about the almost entire cessation of this class of immigration.

Persons  
naturalised.

The number of persons naturalised in Australasia during 1889 was 752, more than half of these belonged to Queensland. The following are the totals for each Colony :—

Colony.	Number.
New South Wales .....	137
Victoria .....	112
Queensland .....	418
South Australia .....	25
Western Australia.....	...
Tasmania .....	18
New Zealand .....	42
	<hr/>
Australasia .....	752

### CITIES AND TOWNS.

The progress of the chief cities of Australasia has been no less remarkable than that of the Colonies themselves, and has no parallel among the cities of the old world. Even in America the



rise of great cities has been accompanied by a corresponding increase in the rural population. In these Colonies, perhaps for the first time in history, is presented the spectacle of magnificent cities growing with marvellous rapidity, and embracing within their limits one-third of the population of the Colonies, of which they are the seat of Government. The abnormal aggregation of the population into their capital cities is a most unfortunate element in the progress of these Colonies, and is one which seems to become every year more marked.

The increase in the population of the chief cities of Australasia and the estimated numbers of their inhabitants at the various census periods, are given in the following table, which illustrates the remarkable progress referred to :—

Population of  
capital cities of  
Colonies at  
various dates.

	1841.	1851.	1861.	1871.	1881	1889.
Sydney .....	29,973	44,240	93,241	134,736	224,211	381,730
Melbourne .....	4,479	23,143	139,916	206,780	282,947	458,470
Brisbane .....	*829	.....	6,051	15,029	31,109	87,000
Adelaide .....	†6,107	.....	18,303	42,744	103,864	121,735
Perth .....	.....	.....	.....	5,244	5,822	9,000
Hobart .....	.....	.....	19,449	19,092	21,118	35,673
Wellington .....	.....	.....	.....	7,908	20,563	33,050

\* In 1846. † In 1844.

The aggregation of population is most marked in the case of Melbourne, but Adelaide and Sydney are also conspicuous. The proportion of population compared with that of each Colony is set forth in the subjoined table, for the two years 1881 and 1889 :—

	1881.	1889.
	Per cent.	Per cent.
Sydney .....	28·79	34·01
Melbourne .....	32·14	41·00
Brisbane .....	13·70	21·39
Adelaide .....	36·27	37·51
Perth .....	19·36	20·59
Hobart .....	17·75	22·43
Wellington .....	4·10	5·33

The percentage of New Zealand population resident in Wellington is small, but, though it is the capital of the Colony, this city is greatly exceeded in population by Auckland, as well as Dunedin and Christchurch; but even in the largest of these cities—Auckland—the population is not more than 9·67 per cent. of that of the whole Colony.

Population of principal towns in Colonies at latest available date.

Among other cities and towns of importance in Australasia the following may be cited in the order of their estimated population at the latest available date. In all cases the population of suburbs is included :—

City or Town.	Colony.	Population.
Auckland .....	New Zealand .. ..	60,000
Dunedin .....	” .. ..	47,500
Christchurch .....	” .. ..	48,000
Ballarat .....	Victoria .. ..	40,753
Sandhurst .....	” .. ..	36,020
Newcastle .....	New South Wales .. ..	27,750
Geelong .....	Victoria .. ..	20,984
Launceston .....	Tasmania .. ..	22,126
Broken Hill .....	New South Wales .. ..	14,000
Parramatta .....	” .. ..	12,000
Goulburn .....	” .. ..	11,400
Rockhampton .....	Queensland .. ..	10,793
Bathurst .....	New South Wales .. ..	9,000
Maitland .....	” .. ..	9,250
Castlemaine .....	Victoria .. ..	8,900
Invercargill .....	New Zealand .. ..	8,939
Townsville .....	Queensland .. ..	7,860
Ipswich .....	” .. ..	7,576
Toowoomba .....	” .. ..	6,270
Albury .....	New South Wales .. ..	6,000
Orange .....	” .. ..	5,600

## COMMERCE.

IT would be only natural to suppose that the commerce of these countries would increase in an equal ratio with the population. For many years, however, the expansion of trade was far more rapid than the increase of population; and Australasia now shows a larger ratio of trade compared with population than any other country.

It has been found impossible to accurately separate the external Total Trade. trade, that is the trade with countries outside Australasia, from the internal trade during the years prior to 1861. The following table, therefore, refers to the *total* trade since 1825, with the ratio per inhabitant. The external trade for the years over which information extends will be given subsequently :—

Total Trade of Australasia.

	Value.	Value per inhabitant.
	£	£ s. d.
1825 .....	511,998	10 13 11
1841 .....	5,573,000	22 4 0
1852 .....	23,609,585	43 7 7
1861 .....	51,001,071	40 5 5
1871 .....	69,093,778	35 1 5
1881 .....	101,513,485	35 16 4
1889 .....	131,749,505	35 5 11

The influence of the discovery of gold upon the growth of trade can be readily discerned from the figures just quoted. During the period 1852 to 1861 the average value of commerce was about twice as great, when compared with the population, as it was in the previous decade. The fall since 1861 is, to some extent, more apparent than real, for the volume of merchandise has increased though the monetary value in proportion to population has perceptibly declined; the decrease in the trade *per inhabitant* is

Influence of  
discovery of  
gold upon  
Australasian  
trade.

attributable to a depreciation in the value of wool, which is now, and has always been, the staple of Australasian products.

External trade. By far the greater part of the external trade of Australasia is with the United Kingdom; and of the remainder the larger proportion is carried on with foreign countries, the trade with British Possessions outside Australasia having greatly declined during recent years. The figures given in the next table show the distribution of the trade since 1861, in the three divisions to which reference has been made:—

External Trade—Imports and Exports.

Trade with—	1861.	1871.	1881.	1889.	
	£	£	£	£	
The United Kingdom.....	Imports	13,467,370	12,006,419	25,662,185	30,040,160
	Exports	12,207,228	18,486,703	24,342,422	29,275,850
	Total ...	25,674,598	30,493,122	50,004,607	59,316,010
British Possessions outside Australasia...	Imports	1,767,391	2,382,148	3,069,206	3,272,876
	Exports	3,656,065	764,652	4,243,173	1,559,942
	Total ...	5,423,456	3,146,800	7,312,379	4,832,818
Foreign Countries.....	Imports	3,216,738	2,245,124	4,576,733	7,168,636
	Exports	746,490	3,843,970	2,585,869	5,066,587
	Total ...	3,963,228	6,089,094	7,162,602	12,235,223
Total, External Trade .....	Imports	18,451,499	16,633,691	33,308,124	40,481,672
	Exports	16,609,783	23,095,325	31,171,464	35,902,379
	Total ...	35,061,282	39,729,016	64,479,588	76,384,051

The relative proportions of the above trade expressed centesimally are as follows:—

	1861.	1871.	1881.	1889.
United Kingdom.....	73·23	76·75	77·55	77·65
British Possessions outside Australasia	15·47	7·92	11·34	6·33
Foreign Countries .....	11·30	15·33	11·11	16·02
	100·00	100·00	100·00	100·00

It appears thus that the United Kingdom has not only preserved its hold upon the trade of the Colonies, but has increased it both in volume and proportion, notwithstanding the keen competition of foreign countries. The trade with British possessions shows a marked decrease, due mainly to the falling off in shipments of coin. In the earlier part of the period under notice there were large shipments of gold regularly made to the East, principally to Singapore and Ceylon ; but the export of gold to those places has greatly diminished, so that in 1889 the total value of trade, though larger in its actual amount than in 1871, was less than in 1881 or even in 1861, and was proportionately smaller than in any of these years.

Trade with United Kingdom.

The value of the trade of the principal foreign countries with Australasia may be gathered from the following statement :—

Trade with foreign countries.

	Imports.				Exports.			
	1861.	1871.	1881.	1889.	1861.	1871.	1881.	1889.
	£	£	£	£	£	£	£	£
Franco and Possessions	136,124	158,992	342,248	481,553	26,793	101,758	339,826	520,093
United States	1,080,673	616,625	1,592,644	2,847,089	76,154	367,361	1,298,905	1,658,587
Germany . . . .	100,172	3,599	222,672	1,300,089	....	....	82,415	767,020
Belgium . . . .	....	....	26,718	205,047	....	....	101,244	1,329,144
China . . . . .	827,347	874,925	1,431,893	812,850	114,140	29,137	78,599	65,105
Other Countries ..	1,063,422	590,683	960,563	1,431,999	529,394	3,345,714	684,880	726,633
Total . . . .	3,216,738	2,245,124	4,576,733	7,168,636	746,490	3,843,970	2,585,869	5,060,587

The import and export trade from the commencement of the period under review exhibits very satisfactory progress, the imports having doubled, while the exports have increased sixfold. This expansion is chiefly due to the development of the continental trade consequent on the diversion of part of the wool trade from the London to the continental market, which was mainly brought about by the display of local resources in the Sydney and Melbourne International Exhibitions, of 1879 and

Import and Export trade.

Trade with the Continent of Europe.

1880. The imports from Germany have increased about twelve-fold; those from France have quadrupled, while those from the United States have doubled. The import trade with Belgium, although as yet only in the initial stage, has increased eightfold in the course of the last eight years. In like manner the exports to the continent have increased, though in a much greater degree, more especially those to Belgium and Germany. The port of Antwerp is simply a distributing centre for the greater part of the wool destined for the continent; large quantities of the wool landed there ultimately find their way to Germany, France, and other countries. The French, in 1884, were the first to establish direct commercial relations, the steamers of the *Messageries Maritimes*, a subsidised line, making their appearance for the first time in Australian waters in the year named. In 1887 the vessels of the *Nord Deutscher Lloyd* Company, of Bremen, commenced trading with Australasia, and in the latter part of 1888 a line of German cargo boats opened up further communication between the great wool exporting cities of Sydney, Melbourne, and Adelaide, and the ports of Antwerp and Bremen.

Direct wool  
trade with  
Europe.

The effect of these efforts to establish commercial relations is evident from the increase of trade which the foregoing table discloses, and in the diversion, now rapidly being effected, in the channel by which the wool required for Europe reaches the market. The example of the South American Republics, the bulk of whose produce now finds a market at the ports of Antwerp, Bremen, Havre, and Dunkirk, without passing through London, was not lost on continental buyers. It was manifest that direct shipments of wool to Europe could as readily be made from Sydney or Melbourne, as from Buenos Ayres or Monte-Video, hence the presence, in increasing numbers in the local markets, of representative buyers from the principal continental firms.

Wool trade with  
the Continent.

The rapid growth of the continental wool trade during the period from 1881 to 1889 is illustrated by the following table, which shows the quantities exported to the principal countries, and the proportion of the total amount taken by each :—

Value of direct Export Trade of Wool to principal Countries.

Country.	1881.	1889.	1881.	1889.
	Numerically.		Centesimally.	
	£	£		
United Kingdom .....	15,777,327	18,840,984	97·78	88·29
France .....	26,965	172,723	·17	·81
Germany .....	53,809	714,602	·33	3·35
Belgium .....	96,557	1,407,568	·60	6·60
United States .....	132,699	173,916	·82	·81
Other Countries.....	48,725	29,028	·30	·14
Total .....	16,136,082	21,338,821	100·00	100·00

The quantity of wool shipped from Australasia has thus increased by the value of five millions sterling, or more than 32 per cent., in the nine years. It will be observed that while the wool exported to Great Britain has increased in value by the amount of more than three millions, the proportionate share of such exports to the total wool exports has declined from 98 to 88 per cent. The exports of wool to France, Germany, and Belgium have increased both absolutely and relatively, while the wool exported to the United States has increased in quantity only, its ratio to the whole export remaining the same.

Value of Australasian wool.

The following shows the total and proportionate (nominal) value of the wool shipped by each Colony :—

Value of direct Export Trade of Wool from each Colony :—

Colony.	1881.	1889.	1881.	1889.
	Numerically.		Centesimally.	
	£	£		
New South Wales.....	4,485,295	7,042,881	27·80	33·01
Victoria .....	5,327,934	5,886,149	33·02	27·58
Queensland .....	996,047	1,944,933	6·17	9·11
South Australia.....	1,747,696	1,890,929	10·83	8·86
Western Australia .....	256,689	387,730	1·59	1·82
Tasmania .....	416,572	232,944	2·58	1·09
New Zealand .....	2,905,849	3,953,255	18·01	18·53
Australasia .....	16,136,082	21,338,821	100·00	100·00

Wool exports  
from the various  
Colonies.

It will be seen by the table just given that Victoria was credited in 1881 with exporting wool to a considerable value in excess of that of New South Wales. In 1889, however, the positions were reversed, notwithstanding the fact that large quantities of wool from New South Wales are still sent to Melbourne for shipment, and are shipped as Victorian wool. In 1881 the wool produced in New South Wales, but credited to Victoria, was valued at £2,750,285; in 1889 the value was £3,241,954; the wool imported into and shipped from New South Wales, the produce of other Colonies, for the two years in question was £46,051 and £19,958 respectively. South Australia also receives a large quantity of New South Wales wool for shipment, though not to nearly so great an extent as Victoria.

Trade with the  
United States.

Australasia has for many years maintained important commercial relations with the United States of America, and in 1889 America's share of the total trade of Australasia with foreign countries was 36·8 per cent. The bulk of the exports, however, are comprised under the heading of coal and specie.

Australasian  
trade with  
China.

The imports from China largely increased during the twenty years previous to 1881, but from that date the amount has varied very little, showing, if anything, a tendency to decline, caused probably by the increasing preference for Indian over China teas. The Australasian exports to China are but small compared with the imports, and evince a considerable falling off since 1861. The figures given as showing the imports and exports between Australasia and China do not, however, represent the whole amount of the trade, as a considerable portion, especially of the exports, to Hong Kong are in reality intended for the Chinese Empire—Hong Kong, although a British possession, being to a large extent a distributing centre for the Empire.

Trade with  
other countries.

Of the remainder of the Australasian external trade the bulk is done with the Netherlands, Java, and Scandinavia, and consists mainly of imports from the last two mentioned countries.



The intercolonial trade of Australasia is increasing in a slightly higher ratio than does the population. The following figures represent the total value of this important branch of the general trade, as well as the value per inhabitant :—

Year.	Total.	Value per Inhabitant.
	£	£ s. d.
1861	15,939,789	12 11 9
1871	29,364,762	15 5 1
1881	37,033,897	13 10 1
1889	55,365,454	14 16 8

The amount for 1889 represents 42 per cent. of the total trade of Australasia, which in that year reached £131,749,505 ; but these figures not only include the value of the produce of one Colony exchanged for that of another, but also of goods passing through for foreign countries, and goods imported from abroad and re-exported, and must, therefore, not be taken as affording definite information as to the extent of the trade which the Colonies transact amongst themselves.

In the preceding tables the periods reviewed commenced with 1861 and ended with 1889 ; in the succeeding calculations, the decennial term from 1879 to 1889 will be adopted, and the progress made by Australasia during this period will be compared with that of other places, especially young countries in process of extensive development.

Dividing the trade amongst the various Colonies, the following table shows the proportion nominally belonging to each, and the value per head of population. The expression "nominally" is used, because the figures appear to make Victoria and South Australia somewhat more important than they really are, as the trade of a large portion of New South Wales passes through these Colonies before it can reach the sea, and the value of such trade

Intercolonial trade.

Australasian progress during the last decade.

External Trade of each Colony.

## EXTERNAL IMPORTS AND EXPORTS.

is not credited to New South Wales. Queensland also suffers in a similar way, as a large export of gold is not represented in its figures, such gold being sent to New South Wales for coinage, and therefore appearing as an export of the latter Colony when shipped therefrom.

## External Import Trade :—

Colony.	Total Value.		Value per Inhabitant.	
	1879.	1889.	1879.	1889.
	£	£	£ s. d.	£ s. d.
New South Wales .....	8,869,018	12,215,745	12 16 10	11 1 3
Victoria .....	8,904,548	15,862,906	10 13 6	14 7 3
Queensland .....	974,901	3,334,891	4 13 7	8 7 11
South Australia .....	3,384,869	2,821,050	13 6 5	8 15 6
Western Australia .....	213,923	483,158	7 10 6	11 5 1
Tasmania .....	424,306	573,957	3 16 3	3 17 2
New Zealand .....	6,177,133	5,189,965	13 15 9	8 9 1
Australasia .....	28,948,698	40,481,672	11. 4 11	10 16 11

## External Export Trade :—

Colony.	Total Value.		Value per Inhabitant.	
	1879.	1889.	1879.	1889.
	£	£	£ s. d.	£ s. d.
New South Wales .....	6,011,091	12,553,889	8 14 1	11 7 6
Victoria .....	8,270,056	8,712,680	9 18 4	7 17 9
Queensland .....	1,012,385	2,568,519	4 17 3	6 9 4
South Australia .....	3,296,544	4,008,011	12 19 5	12 9 5
Western Australia .....	300,060	613,835	10 11 2	14 6 1
Tasmania .....	601,171	251,851	5 8 2	1 13 10
New Zealand .....	4,353,626	7,193,594	9 14 3	11 14 4
Australasia .....	23,844,933	35,902,379	9 5 2	9 12 5

Combining the two previous tables, the total external trade of Australasia, and the proportion thereof per head of the population of each Colony, as well as the group, are as follows :—

Total External Trade.

Colony.	Total Value.		Value per Inhabitant.	
	1879.	1889.	1879.	1889.
	£	£	£ s. d.	£ s. d.
New South Wales.....	14,880,109	24,769,634	21 10 11	22 8 9
Victoria .....	17,174,604	24,575,586	20 11 10	22 5 0
Queensland.....	1,987,286	5,903,410	9 10 10	14 17 3
South Australia .....	6,681,413	6,829,061	26 5 10	21 4 11
Western Australia .....	513,983	1,096,993	18 1 8	25 11 2
Tasmania .....	1,025,477	825,808	9 4 5	5 11 0
New Zealand .....	10,530,759	12,383,559	23 10 0	20 3 6
Australasia .....	52,793,631	76,384,051	20 10 1	20 9 4

The foregoing tables evidence the increasing powers of production of Australasia, inasmuch as the exports have increased in a greater ratio than the imports during the decennial period, almost in the proportion of five to four. The imports of Victoria increased from £8,900,000 to £15,860,000 in the ten years, while the imports of New South Wales, which in 1879 were but a trifle less than those of Victoria, only increased to £12,200,000. The imports of New Zealand show a decline of nearly a million in the ten years. The exports, however, tell a different tale. Those of New South Wales have more than doubled during the ten years, having increased from a little over six million to more than twelve and a half millions, while the exports of Victoria only exceed those of 1879 by about half a million. New Zealand also has increased her exports during the same period from less than four and a half millions, to upwards of seven millions sterling. Taking the imports and exports together New South Wales heads the list in 1889 with twenty-four and three quarter millions, while the trade of Victoria only amounts to twenty-four and a half millions, which again is nearly double the trade of New Zealand, at the same period. Taking all the Colonies together the external imports and exports combined equal a trade of £20 9s. 4d. per head of the entire population of Australasia.

Production of Australasia increasing.

Trade with the  
United Kingdom  
and other British  
Possessions.

The value of the direct trade between Australasia and the United Kingdom, other British Possessions, and Foreign Countries is shown in the following tables :—

## External Imports.

Country.	1879.	1889.
	£	£
United Kingdom .....	22,163,226	30,040,160
India .....	505,770	801,017
Canadian Dominion .....	121,067	174,193
Cape Colony .....	256	11,752
Fiji .....	74,367	322,217
Mauritius .....	1,438,043	709,412
Hong Kong .....	412,864	1,017,946
Singapore .....	85,017	123,989
Other Possessions .....	431,840	112,350
<b>Total United Kingdom and other Possessions.</b>	<b>25,232,450</b>	<b>33,313,036</b>
<b>Foreign States—</b>		
France and Possessions .....	311,900	481,553
Germany .....	52,186	1,390,089
Belgium .....		205,047
United States .....	1,634,693	2,847,089
Holland and Java .....	309,804	593,188
China.....	927,372	812,859
Other Countries .....	480,293	838,811
<b>Total Foreign States .....</b>	<b>3,716,248</b>	<b>7,168,636</b>
<b>Total .....</b>	<b>28,948,698</b>	<b>40,481,726</b>

External Exports.

Country.	1879.	1889.
	£	£
United Kingdom .....	19,769,018	29,275,850
India .....	128,193	630,489
Canadian Dominion .....	798	.....
Cape Colony.....	251,547	37,924
Fiji .....	123,162	145,833
Mauritius .....	111,531	98,856
Hong Kong .....	243,980	431,884
Singapore .....	27,683	92,749
Other Possessions .....	2,124,902	122,207
<b>Total United Kingdom and other Possessions.</b>	<b>22,780,814</b>	<b>30,835,792</b>
Foreign States—		
France and Possessions .....	217,612	520,098
Germany .....	18,807	767,020
Belgium .....	.....	1,329,144
United States .....	441,160	1,658,587
Holland and Java .....	48,339	97,464
China.....	71,423	65,105
Other Countries .....	266,778	629,169
<b>Total Foreign States .....</b>	<b>1,064,119</b>	<b>5,066,587</b>
<b>Total .....</b>	<b>23,844,933</b>	<b>35,902,379</b>

## VALUE OF TOTAL EXTERNAL TRADE.

Total External Trade.		
Country.	1870.	1880.
	£	£
United Kingdom .....	41,932,244	59,316,010
India .....	633,963	1,431,506
Canadian Dominion .....	121,865	174,193
Cape Colony .....	251,803	49,676
Fiji .....	197,529	468,050
Mauritius .....	1,549,574	808,268
Hong Kong .....	656,844	1,449,830
Singapore .....	112,700	216,738
Other Possessions .....	2,556,742	234,557
 Total United Kingdom and other Possessions	 48,013,264	 64,148,828
Foreign States—		
France and Possessions .....	529,512	1,001,651
Germany .....	70,993	2,157,109
Belgium .....		1,534,191
United States .....	2,075,853	4,505,676
Holland and Java .....	358,143	690,652
China .....	998,795	877,964
Other Countries .....	747,071	1,467,980
 Total Foreign States .....	 4,780,367	 12,235,223
 Total .....	 52,793,631	 76,384,051

These figures show a steady and satisfactory advance. The trade of Australasia with Great Britain has increased at the rate of over 40 per cent. in the ten years, while that with India has more than doubled. It is a very remarkable circumstance that whereas the Australasian trade with Great Britain and British Possessions altogether has increased at the rate of over 33 per cent., the trade with foreign countries has developed to the extent of 156 per cent. in the decennial period.

The importance to the United Kingdom of its trade with the Australasian Colonies is increasing year by year. The following figures illustrate the position occupied by the imports from these Colonies into Great Britain, as compared with the sum of the imports from all her other possessions :—

#### Imports from British Possessions into the United Kingdom.

Year.	Total Imports from British Possessions.	Imports from Australasia.	Percentage of Imports from Australasia to total from British Possessions.
1879	£ 78,942,638	£ 19,769,018	25·04
1889	97,136,483	29,275,850	30·14

A comparison of the total trade done by the United Kingdom with some of her principal possessions discloses some peculiar facts. Although it is very little more than a century since the commencement of Australasian settlement, the trade of these Colonies with the United Kingdom is only exceeded by that of India, while it is largely above that of Canada, the Cape of Good Hope, or any other of the British Possessions. In the following table the trade of 1879 is compared with that of 1888, as the figures for 1889 for some of the possessions are not available :—

## TRADE OF THE UNITED KINGDOM.

## Trade of the United Kingdom with some of its Possessions.

Country.	1879.	1888.
	£	£
Canadian Dominion .....	16,564,556	17,960,255
India .....	47,412,895	64,593,950
Cape Colony and Natal .....	10,980,255	12,049,178
Straits Settlements.....	4,747,998	8,094,107
Australasia .....	41,932,244	58,860,908

Trade of United Kingdom with Europe and America.

The trade of the United Kingdom with Australasia occupies a very favourable position even as compared with that between the former country and the European and American States, as the following table will show. The United States stand first upon the list, with a trade of nearly £121,000,000, more than double that of Australasia. France comes next with about £63,000,000, the Australasian Colonies being third with £59,000,000, and Germany stands fourth, with £54,000,000. In this table also the figures are for 1888, as the European statistics for 1889 are not all to hand :—

## Trade of the United Kingdom with principal Foreign Countries.

Country.	1870.	1888.
	£	£
France .....	65,017,429	62,984,825
Germany .....	51,228,666	54,040,891
Belgium .....	22,613,181	28,600,593
Spain .....	12,157,493	15,212,444
Italy .....	9,273,372	9,996,937
United States .....	117,337,084	120,974,231
Argentine Republic.....	2,965,902	10,488,178
Chila .....	4,787,096	5,511,228
Brazil.....	10,735,824	11,772,560
Uruguay .....	1,339,793	2,308,953
Australasia .....	41,932,244	58,860,908



In the foregoing tables the external trade only has been considered, but the intercolonial trade, or trade of the several Colonies among themselves, is far from inconsiderable. This is evidenced by the following table, in which the Port Darwin trade is included with that of the Colony of South Australia :—

Intercolonial trade.

Total Intercolonial Trade and Percentage of Trade of each Colony to Total Trade.

Colony.	1879.	1889.	1879.	1889.
	£	£	per cent.	per cent.
New South Wales.....	12,755,648	21,388,357	35·27	38·63
Victoria .....	10,315,104	12,561,908	28·52	22·69
Queensland.....	4,527,637	7,885,461	12·52	14·24
South Australia.....	3,095,464	7,549,315	8·56	13·64
Western Australia .....	341,300	482,526	0·94	0·87
Tasmania .....	1,543,095	2,245,084	4·27	4·06
New Zealand .....	3,586,952	3,252,803	9·92	5·87
Australasia.....	36,165,200	55,365,454	100·00	100·00

Taking together the External and the Intercolonial trade of each Colony, for the respective years 1879 and 1889, the following results are arrived at. The imports were :—

Total trade of Australasia

Value of External and Intercolonial Imports.

Colony.	Total Value.		Value per Inhabitant	
	1879.	1889.	1879.	1889.
	£	£	£ s. d.	£ s. d.
New South Wales .....	14,503,826	22,863,057	21 0 0	20 14 2
Victoria .....	15,035,538	24,402,760	18 0 6	22 1 10
Queensland.....	3,080,889	6,052,562	14 15 11	15 4 10
South Australia.....	5,014,150	6,998,795	19 14 7	21 15 6
Western Australia .....	407,299	818,127	14 6 8	19 1 3
Tasmania .....	1,267,475	1,611,035	11 7 11	10 16 6
New Zealand .....	8,374,585	6,297,097	18 13 9	10 5 2
Australasia.....	47,683,762	69,043,433	18 10 4	18 9 11

## TOTAL AUSTRALASIAN TRADE.

The exports were :—

## Value of External and Intercolonial Exports.

Colony.	Total Value.		Value per Inhabitant.	
	1879.	1889.	1879.	1889.
	£	£	£ s. d.	£ s. d.
New South Wales.....	13,131,931	23,294,934	19 0 3	21 2 0
Victoria .....	12,454,170	12,734,734	14 18 8	11 10 7
Queensland.....	3,434,034	7,736,309	16 9 9	19 2 8
South Australia.....	4,762,727	7,379,581	18 14 10	22 19 3
Western Australia .....	447,984	761,392	15 15 2	17 14 10
Tasmania .....	1,301,097	1,459,857	11 14 0	9 16 2
New Zealand .....	5,743,126	9,339,265	12 16 3	15 4 3
Australasia.....	41,275,069	62,706,072	16 0 7	16 16 0

The total trade, or imports and exports combined, was as follows :—

## Total External and Intercolonial Trade.

Colony.	1879.	1889.	Per head of Population.	
			1879.	1889.
	£	£	£ s. d.	£ s. d.
New South Wales ...	27,635,757	46,157,991	40 0 3	41 16 2
Victoria.....	27,489,708	37,137,494	32 19 2	33 12 5
Queensland .....	6,514,923	13,788,871	31 5 8	34 14 6
South Australia .....	9,776,877	14,378,376	38 9 5	44 14 9
Western Australia ...	855,283	1,579,519	30 1 10	36 16 1
Tasmania .....	2,568,572	3,070,892	23 1 11	20 12 8
New Zealand .....	14,117,711	15,636,362	31 10 0	25 9 5
Australasia.....	88,958,831	131,749,505	34 10 11	35 5 11

The trade of Australasia has therefore increased in a greater ratio than that of the increase of the population during the decade, the gain being at the rate of 15s. per head, taking the whole group together. Each of the Colonies exhibits a proportionate increase with the exception of Tasmania and New Zealand, both of which did less trade per head of the population in 1889 than they did in 1879. Of the other Colonies Victoria had a gain of 13s. 3d. per head; New South Wales, £1 15s. 11d.; Queensland, £3 8s. 10d.;

South Australia, £6 5s. 4d. ; and Western Australia, £6 14s. 2d. per head. The greatest actual increase is that of New South Wales, from 27½ millions in 1879 to over 46 millions in 1889. Victoria in 1879 had a total trade very little less than that of New South Wales, but had only increased to a little more than 37 millions in 1889.

It will be interesting to compare the measure of Australasian trade afforded by the foregoing figures with the latest returns respecting the trade of other large Colonies and countries, which will be found in the following table :—

Australasian trade compared with that of other countries.

Country.	Year.	Total Trade.	Per Head.
		£	£ s. d.
Australasia .....	1889	131,749,505	35 5 11
Cape Colony .....	1888	16,978,300	11 17 8
Canada .....	1889	40,867,800	8 1 0
Algeria .....	1887	17,150,000	4 8 10
Brazil .....	1888	54,412,800	3 17 8
Argentine Republic.....	1887	43,497,800	11 3 4
Chili .....	1885	19,702,000	7 15 9
United Kingdom .....	1889	740,242,600	19 11 7
France .....	1886	374,500,000	9 16 0
Germany .....	1885	429,390,000	9 3 3
Italy .....	1888	86,911,000	2 16 10
Spain .....	1888	58,884,000	3 7 1
United States .....	1889	331,512,000	5 0 5
Belgium .....	1888	235,491,000	39 1 0

The distribution of the import, export, and total trade of the seven Colonies, expressed centesimally, is given in the following table :—

Centesimal distribution of Australasian Trade.

Proportion of Imports, Exports, and Total Trade to various Countries.

IMPORTS.

Year.	United Kingdom.	Intercolonial.	Other British Possessions.	Foreign Countries.
1879 .....	46·48	39·29	6·44	7·79
1889 .....	43·61	41·39	4·59	10·41

## INCREASE OF AUSTRALASIAN TRADE.

EXPORTS.				
Year.	United Kingdom.	Intercolonial.	Other British Possessions.	Foreign Countries.
1879 .....	47·90	42·22	7·30	2·58
1889 .....	46·77	42·71	2·44	8·08

TOTAL TRADE.				
Year.	United Kingdom.	Intercolonial.	Other British Possessions.	Foreign Countries.
1879 .....	47·14	40·65	6·84	5·37
1889 ...	45·12	42·02	3·56	9·30

Increase of  
Australasian  
Trade.

The figures already given show that the total Australasian trade—that is, external and intercolonial trade taken together—had increased from £88,958,831 in 1879 to £131,749,505 in 1889. The last table shows that the proportionate distribution of the trade has changed somewhat in the period specified. Thus, the trade between Australasia and the United Kingdom in 1879 was £41,932,244, or 47·14 of the total trade of Australasia with the world for that year; while in 1889, although this particular branch of the trade had grown to £59,316,010, its percentage of the grand total trade for that year was but 45·12, or a proportionate decline of 2·02 per cent. With regard to the trade between Australasia and foreign countries, however, there was not only an absolute increase during the decade from £4,780,367 to £12,235,223, but a proportionate increase from 5·37 to 9·30 per cent. of the whole, or an increase of 3·93 per cent. The trade with other British possessions, on the other hand, fell from £6,081,020 in 1879 to £4,832,818 in 1889, the proportion being 6·84 per cent. in the former year as against 3·56 in the latter, showing a proportionate decline of 3·28 per cent. The intercolonial trade had increased both proportionately and absolutely

during the period in question, having risen from £36,165,200 in 1879 to £55,365,454 in 1889, or from 40·65 to 42·02 per cent., an increase of 1·37 per cent.

From the foregoing tables it will be readily seen that an excess in the value of imports over exports is a prominent feature of the trade of Australasia taken as a whole, although in some Colonies the reverse is the case. The surplus of imports is due to two causes: (1) the importation, by the Governments of the various Colonies, of money to cover the cost of construction of public works; and (2) the excess of private capital sent to Australia for investment. In most of the Colonies (New Zealand and South Australia being the exceptions), the money so imported exceeds the payments for interest on public and private loans, and the sum drawn from Australia by absentees. Hereunder is shown the balance of trade of each Colony and of Australasia for the five years, 1885-1889, and the amount of loan money expended during the same period. There was an excess of imports over exports in all cases except those marked.

Balance of Trade and Loan Expenditure, 1885-9.

Colony.	Excess of Imports.	Expenditure from Loans.
	£	£
New South Wales .....	13,109,381	13,083,727
Victoria .....	38,685,503	10,977,774
Queensland .....	552,638	8,808,861
South Australia .....	*1,317,817	6,156,958
Western Australia .....	721,578	681,435
Tasmania .....	1,444,243	2,108,798
New Zealand .....	*4,742,043	5,457,541
Total Australasia .....	48,453,483	47,275,094

\* Excess of exports.

Domestic  
produce.

The values of the exports of Australasia, and of its various provinces, have been given without respect to the locality where the articles were produced. It will be interesting to see to what extent the exports have been the produce of the Colony whence they were shipped. The following table shows the value of the exports of domestic produce from each Colony for the years 1879 and 1889, and the value thereof per head of population :—

Value of Domestic Produce Exported.

Colony.	Total Value.		Value per Head of Mean Population.	
	1879.	1889.	1889.	1889.
	£	£	£ s. d.	£ s. d.
*New South Wales .....	9,966,820	17,130,263	13 19 11	15 10 4
*Victoria .....	7,280,197	6,916,252	8 14 5	6 5 3
Queensland .....	3,039,901	7,511,744	14 11 11	18 18 4
*South Australia .....	3,810,567	3,173,336	14 19 10	9 17 6
Western Australia .....	447,984	748,899	15 5 3	17 9 0
Tasmania .....	1,289,395	1,442,605	11 14 6	9 13 10
New Zealand .....	5,563,455	9,042,008	12 8 3	14 14 7
Australasia.....	31,398,319	45,965,107	12 3 10	12 6 4

\* As corrected.

Australasian  
trade in  
domestic  
produce.

The foregoing figures show the total external and intercolonial exports of domestic produce for the seven Colonies, but must be regarded as merely an approximation, since it is difficult to ascertain exactly the home produce of some of the Colonies. This is especially the case with Victoria, South Australia, and New South Wales, as the two former take credit for large quantities of New South Wales wool shipped from Melbourne and Adelaide as domestic produce, while in the mother Colony, refined copper and tin, no matter where produced, are shipped as local produce. Although it was not found possible to estimate the amount of these over-statements with exactness, an approximation has been made in the table just given which will be found very near the truth, and fairly indicative of the producing power of each Colony.

Comparing the exports of domestic production of Australasia with those of other British possessions and foreign countries, the relative positions were :—

Exports of Domestic Produce.

Country.	Year.	Domestic Trade.	Per Head.
		£	£ s. d.
Cape Colony .....	1888	8,732,600	6 2 3
Canada .....	1889	16,496,600	3 5 0
Algeria .....	1887	7,837,443	2 0 7
Argentine Republic .....	1887	16,884,000	4 6 8
Chili .....	1885	10,679,000	4 4 6
United Kingdom .....	1889	248,091,959	6 11 2
France .....	1886	129,952,000	3 8 0
Germany .....	1885	143,015,000	3 1 0
Austria-Hungary .....	1888	60,733,000	1 10 0
Belgium .....	1888	49,748,000	8 5 0
Italy .....	1888	35,677,000	1 3 5
United States .....	1889	150,079,000	2 5 6
Australasia .....	1889	45,965,107	12 6 4

The extent to which the geographical position of a Colony enables it to benefit by the production of its neighbours, is illustrated by the proportion which the non-domestic bear to the total exports. The following table indicates this proportion for each Colony; and it would appear that South Australia and Victoria benefit most largely by their position, and New South Wales in a less degree. The re-export trade of the other Colonies is insignificant.

Re-export trade of each Colony.

Percentage of Non-domestic Produce Exported to Total Exports.

Colony.	Year.	
	1879.	1889.
New South Wales .....	24·10	26·46
Victoria .....	41·54	45·69
Queensland .....	11·48	0·20
South Australia .....	20·00	58·62
Western Australia .....	0·00	1·64
Tasmania .....	0·90	0·80
New Zealand .....	2·99	3·18
Australasia .....	23·93	26·70

Re-exports of  
other countries.

The proportion of exports of non-domestic produce to the total exports of some of the principal countries of the world was:—

Proportion of Non-domestic Produce Exported to Total Exports.

Country.	Year.	Percentage.
Cape Colony .....	1888	2·81
Canada .....	1889	10·00
Argentine Republic .....	1888	1·82
Chili .....	1885	2·65
United Kingdom.....	1889	20·78
France .....	1886	23·59
Germany .....	1885	32·91
Belgium .....	1888	55·58
Italy .....	1888	5·68
United States .....	1889	12·96

Average value of  
domestic exports

The average value of the produce of Australasia exported during the ten years, 1879 to 1889, was £42,939,381 per annum, equal to £13 9s. 3d. per inhabitant—an amount far in excess of the export of any other producing country. The details are as follow:—

Domestic Produce Exported—Average for last ten years.

Colony.	Average for ten years, 1879-1889.	Average per head of mean population 1879-1889.
	£	£ s. d.
New South Wales .....	13,731,915	15 3 0
Victoria .....	11,286,231	11 15 5
Queensland .....	4,982,186	16 10 1
South Australia .....	4,116,600	13 10 9
Western Australia .....	553,304	15 4 9
Tasmania .....	1,453,841	11 2 11
New Zealand .....	6,765,254	12 5 2
Total, Australasia .....	42,939,381	13 9 3

Exports of  
Pastoral  
Produce.

Of the £43,000,000 sterling, which represents the total value of domestic produce exported, more than £30,000,000 worth was derived directly from the pastoral industry. The figures in the table next given show the value of the wool produced by each Colony for export, as distinguished from the



remainder of its pastoral produce. There is also shown the proportion of the domestic pastoral exports of each Colony to its gross export of domestic produce. For the purposes of this table, however, the correction for over-stated exports, which was applied with regard to the figures on page 52, has not been used, but the returns given by the Custom House of each Colony have been taken :—

Domestic Pastoral Produce Exported, 1889.

Colony.	Wool.	Other Pastoral Produce.	Total.	Percentage of Exports of Pastoral Produce to Total Export of Domestic Products.
New South Wales...	10,620,636	1,995,482	12,616,118	72·41
Victoria .....	5,928,847	937,297	6,866,144	70·23
Queensland.....	2,680,134	1,121,715	3,801,849	50·61
South Australia.....	2,194,701	318,931	2,513,632	66·21
Western Australia..	395,904	7,811	403,715	53·91
Tasmania .....	283,237	108,340	391,577	27·14
New Zealand.....	3,976,375	1,434,446	5,410,821	59·84
Australasia.....	26,079,834	5,924,022	32,003,856	64·34

Since the discovery of gold in the year 1851 large quantities of that metal—in the form of coin as well as bullion—have been exported from the Australasian Colonies every year. The returns for Western Australia have not been officially kept, and therefore are not available, but the amount of gold imported and exported from each of the other Colonies, calculated for five-year periods from the year 1851 to the end of 1889, is given herewith. The tables also show the amount by which the exports have exceeded the imports in the various Colonies, or *vice versa*, as the case may be, and the average amount of such excess per annum.

The largest exporters of gold, it will be found, are the largest producers, as Victoria, New Zealand, and Queensland. The other Colonies now produce very little more than suffices to meet their local requirements. The returns of the gold imports and exports for New South Wales, it must be remembered, are swollen by large quantities of Queensland gold, which is simply sent to Sydney to be minted, and then exported in the shape of coin.

Import and export of Gold.

Producers the largest exporters.

## IMPORT AND EXPORT OF GOLD.

## Excess of Exports over Imports of Gold (Bullion and Specie).

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Tasmania.	New Zealand.
	£	£	£	£	£	£
1851-55	3,713,016	33,378,823	.....	2,000,482	818,228	39,139
1856-60	4,624,051	52,963,311	.....	*99,527	24,801	9,842
1861-65	8,533,232	34,817,803	98,383	*331,204	*9,680	8,256,520
1866-70	5,123,418	27,791,239	1,670,192	*64,429	*30,890	12,038,302
1871-75	4,457,264	22,330,671	4,425,195	*505,355	*1,381	8,600,358
1876-80	791,730	14,891,961	5,004,942	*594,954	160,077	5,614,785
1881-85	1,126,554	14,719,540	3,629,355	*543,306	554,633	4,178,000
1886-89	*519,535	6,247,331	5,946,317	*106,680	305,516	2,789,190
Total, excess of exports	27,849,730	207,140,679	20,774,384	*244,973	1,821,304	41,526,136

\* Excess of imports.

## Excess of Exports over Imports of Gold (Australasia).

Year.	Amount.	Average per annum.
	£	£
1851-55	39,949,688	7,989,938
1856-60	57,522,478	11,504,496
1861-65	51,365,054	10,273,011
1866-70	46,527,832	9,305,566
1871-75	39,306,752	7,861,350
1876-80	25,868,541	5,173,708
1881-85	23,664,776	4,732,955
1886-89	14,662,139	3,665,535
1851-89	298,867,260	7,663,263

Import and Excise Duties.

The amounts collected by the various Colonies under the head of "Import and Excise Duties" are given in the next table, which includes also a column showing the percentage borne by the import duties collected to the total value of the imports; or in other words the average "ad valorem" duty actually in force. The highest proportion of duties was collected by New Zealand, to the extent of 23·30 per cent. of the value of the imports. South Australia makes the lowest charge, being 8·14 per cent., while New South Wales closely follows with the import of 8·34 per

cent. of the value of the articles imported. All the Colonies impose very heavy duties on spirits, and to this circumstance is due the apparently high percentage which the duties bear to the value of the goods imported.

Amount of Import and Excise Duties, 1889.

Colony.	Duties.			Percentage of Import Duties to total value of Imports.
	External Revenue (Import Duties.)	Internal Revenue(excise)	Total Import and Excise Duties.	
	£	£	£	
New South Wales.....	1,905,883	261,371	2,167,254	8·34
Victoria .....	2,890,719	147,730	3,038,449	11·84
Queensland.....	1,346,768	35,149	1,381,917	22·25
South Australia.....	569,469	3,712	573,181	8·14
Western Australia ...	171,990	.....	171,990	21·02
Tasmania .....	307,352	15,672	323,024	19·08
New Zealand .....	1,467,316	56,608	1,523,924	23·30
Total, Australasia...	8,659,497	520,242	9,179,739	12·54

The following table shows the amount of import duty collected in various countries, and the relation existing between it, and the total value of articles imported:—

Import duties in other countries.

Import Duties and Percentage of same to Total Value of Imports of various Countries, 1888.

Country.	Amount of Import Duties.	Percentage of Import Duties to Total Value of Imports.
	£	
United Kingdom.....	19,995,000	5·16
France .....	15,252,000	7·35
Germany .....	13,518,000	5·56
Belgium.....	1,240,000	1·00
Italy .....	7,541,000	15·36
United States .....	45,009,000	29·84
Argentine Republic .....	7,290,000	27·21
Chili .....	2,673,000	19·55
India .....	3,215,000	4·03
Canadian Dominion .....	4,542,000	19·93
Cape Colony.....	1,045,000	14·90
Australasia .....	8,659,497	12·54

Development of  
Australasian  
Trade.

The figures given in this chapter illustrate the remarkably rapid development of the trade of Australasia. Since the year 1825 the population has increased at the average rate of 7·06 per cent. per annum, but the trade, during the same period, has grown at the still greater average rate of 8·91 per cent. per annum. This improvement is noticed in all branches of Australasian trade.

Trade with the  
United Kingdom.

The importance to the United Kingdom of its commerce with the Colonies can hardly be over-estimated, but there are not wanting signs that part of this trade will be diverted to Belgium, France, and Germany. Already there is a large export trade to these countries, and the return trade is sure to follow, which in all likelihood will be at the expense of the United Kingdom. Inter-course with the United States also shows a probability of increased development, in spite of the present artificial restrictions, as proved by the fact that steamers have commenced running direct from the Atlantic States to Australasia, and further lines are projected, in addition to the Pacific Line between Sydney and San Francisco.

Trade with the  
United States.

Trade with the  
East.

Trade with the east also gives good promise for the future, especially with India, China, Japan, and the East Indian Archipelago, where markets for Australasian wool will possibly in time be opened up—little or nothing in that direction having been accomplished up to the present. A large amount of business is already transacted with the island of Ceylon, which bids fair to increase, particularly in regard to tea, which is rapidly supplanting the Chinese leaf in public estimation. The value of the direct import trade in this article alone, in the year 1889, was £180,000, or about one-fifth of the imports from China for the same year. Trade with the South Pacific Islands is valuable, and increasing; consisting mostly of raw articles imported from them, in exchange for Australasian manufactures. The bulk of this trade is done with Fiji and New Caledonia, and the latter deals principally with New South Wales, Sydney being the terminal port for the French mail steamers of the Messageries line. The

The Island trade.

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trade with New Guinea is at present but small, though when the resources of that prolific island come to be developed a large amount of trade may be expected. Every year steamers of greater tonnage and higher speed are visiting the Colonies from the United Kingdom, Europe, and America. A considerable expansion of commerce must of necessity spring up, owing to the new outlets for trade being constantly opened through this increased communication, and to the striking advance in shipping facilities, which will be found fully described in the succeeding chapter.

Improvement of  
steamers.

## SHIPPING.

Growth of  
Australasian  
shipping.

THE earliest date for which there is reliable information in regard to Australasian shipping is 1822. The growth of the trade of Australasia since that date has been marvellous, greatly exceeding even that of population, which, as preceding figures show, has been abnormal. The following summary will make this abundantly clear:—

## Vessels Entered and Cleared at Australasian Ports.

Year.	No. of Vessels.	Tonnage.	Tonnage per inhabitant.	Annual increase of tonnage per cent. for each period.
1822	268	147,869	3·85	.....
1841	2,576	552,347	2·20	7·18
1851	5,340	1,088,108	2·35	7·01
1861	10,766	2,892,503	2·28	10·27
1871	13,733	4,395,172	2·23	4·27
1881	16,699	9,504,130	3·37	8·01
1889	19,984	16,162,820	4·27	6·86

Tonnage entered  
and cleared.

An exact distribution of the tonnage amongst the various Colonies can only be made since 1861. In the year 1822 all the Colonies on the mainland were comprised in the designation of New South Wales, and in 1851 Queensland still formed part of the mother Colony. In the following table a distribution has been made as far as practicable. The Queensland figures for 1881 are, however, greatly overstated. It was the practice formerly to reckon shipping at every port of call, instead of only at the terminal port. The custom has been discontinued of late years, so that the figures for 1889 give the exact state of the shipping trade of the Colony.

Total Tonnage Entered and Cleared.

	1822.		1841.		1851.		1861.		1871.		1881.		1889.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
New South Wales . . . . .	..	.....	..	....	1,056	292,022	2,718	745,696	4,014	1,500,479	4,357	2,736,500	6,483	5,321,170
Victoria . . . . .	...	....	1,404	355,896	1,370	240,431	3,598	1,090,002	4,394	1,355,025	4,248	2,411,902	5,741	4,599,178
Queensland . . . . .	131	113,717	..	....	included in N.S.W.		485	108,664	966	282,675	2,663	1,533,808	1,533	1,001,009
South Australia . . . . .	..	....	197	37,036	533	155,002	788	199,331	1,238	373,624	2,153	1,269,491	2,239	2,123,504
Western Australia . . . . .	...	....	No information.		247	49,352	455	115,256	400	126,948	368	285,046	694	1,004,813
Tasmania . . . . .	137	34,152	975	159,415	1,509	239,152	1,580	230,218	1,283	216,160	1,383	333,762	1,661	912,246
New Zealand . . . . .	..	....	..	....	560	112,149	1,142	403,336	1,438	540,261	1,527	833,621	1,543	1,195,886
Australasia . . . . .	238	147,860	2,576	552,347	5,340	1,083,103	10,766	2,892,503	13,733	4,395,172	16,699	9,504,130	19,894	16,162,820

TOTAL TONNAGE ENTERED AND CLEARED.

Increased capacity of vessels.

Owing in a great measure to the utilisation of steam as a motive power, the average carrying capacity of vessels has greatly increased, especially during recent years. In considering the average tonnage, the year 1822 is omitted from the comparison, as a large proportion of that year's tonnage was made up of vessels of the Royal Navy conveying men and stores to penal establishments, and therefore not fairly included under the term "trade" :—

#### Average Australasian Tonnage.

Year.	Average Tonnage.
1841 .....	214
1851 .....	204
1861 .....	269
1871 .....	320
1881 .....	570
1889 .....	812

The increase in the carrying capacity of vessels trading with Australasia is truly remarkable, especially since 1871. The change, however, is due, not so much to Australasian enterprise, as to the general tendency everywhere exhibited to substitute large and speedy steamships for the sailing vessels of former days.

Average daily movements of tonnage.

The following figures represent the average daily movement of tonnage (entered and cleared) in Australasian ports at various periods :—

#### Australian Shipping Movements.

In 1822.....	58 tons per diem.
1841.....	1,486    "
1851.....	2,981    "
1861.....	7,928    "
1871.....	12,041   "
1881.....	26,038   "
1889.....	44,282   "

that is to say, five vessels of 406 tons in the aggregate, entered or cleared every week during the year 1822, whilst in 1889 the average weekly shipping movement was 382 vessels, aggregating 310,823 tons. The daily movement of tonnage in these Colonies is larger than that of any European country, except Great Britain, France, and Germany, and probably of any other country of the world, the United States alone excepted.



Taking the last complete period of ten years for which there are returns—1879 to 1889—it will be seen that the tonnage entering the ports of Australia has doubled. The ratio of increase has not been uniform for the various Colonies. This would naturally be expected, as the Colonies with the largest shipping business would have less room for development, compared with those whose tonnage was small at the commencement of the period. Victoria, however, has a somewhat exceptional increase, amounting during the ten years to 136 per cent., which is equal to the progress of any of the less populous Colonies, except Western Australia—

## External and Intercolonial Tonnage—Inwards.

Colony.	1879.		1889.		Increase per cent., 1879-89.
	No.	Tonnage.	No.	Tonnage.	
New South Wales .....	2,391	1,268,377	3,254	2,632,081	107
Victoria .....	2,084	963,087	2,855	2,270,827	136
Queensland .....	1,261	637,695	760	506,780	*21
South Australia .....	1,092	467,729	1,116	1,063,130	127
Western Australia .....	160	84,500	349	497,232	488
Tasmania .....	705	189,087	842	458,247	142
New Zealand .....	894	473,940	781	602,634	27
Australasia .....	8,587	4,084,415	9,957	8,030,931	97

\* Decrease.

For reasons already adverted to Queensland apparently did not participate in the general increase; still, no one who knows that important Colony can doubt that its trade has greatly developed. It is unfortunate, therefore, that the figures for 1879, were not taken on the same plan as those of late years.

In the foregoing tables the Intercolonial trade has been included. Considering the Colonies only in their relations with external countries, the number and tonnage of vessels for 1879 and 1889 arriving at each Colony direct from other than Australasian posts were as follows:—

## AUSTRALASIAN EXTERNAL TONNAGE.

## External Tonnage—Inwards.

Colony.	1879.		1889.	
	No.	Tonnage.	No.	Tonnage.
New South Wales.....	437	363,193	560	815,307
Victoria .....	323	311,638	554	832,908
Queensland.....	228	129,521	231	180,005
South Australia.....	216	188,566	298	471,913
Western Australia .....	80	42,250	179	254,481
Tasmania .....	34	13,540	58	95,318
New Zealand .. .....	310	221,640	260	236,872
Australasia .....	1,628	1,270,348	2,140	2,886,804

Relative  
Positions of  
Victoria and  
New South  
Wales.

Victoria had slightly greater tonnage in 1889 than New South Wales, though the positions were the reverse ten years previously. As regards tonnage outwards, New South Wales had considerably more than twice the tonnage of Victoria, and 44·37 per cent. of the whole of Australasia. This apparent anomaly is due to the large amount shipping of leaving the various Colonies in ballast for Newcastle, New South Wales, where they load coal for foreign ports. Such vessels arriving would be classed as Intercolonial, and on departing they would be considered as engaged in external trade. The following table contains a statement of the external trade outwards :—

## External Tonnage—Outwards.

Colony.	1879.		1889.	
	No.	Tonnage.	No.	Tonnage.
New South Wales.....	616	494,038	979	1,267,306
Victoria .....	223	249,570	314	515,343
Queensland.....	208	119,630	177	128,871
South Australia.....	230	185,749	249	417,315
Western Australia.....	82	42,774	183	245,507
Tasmania.....	24	9,273	13	6,353
New Zealand .....	291	200,663	284	282,184
Australasia .....	1,674	1,301,697	2,159	2,862,879

By combining the tonnage inwards and outwards a more just idea may be obtained of the value of the shipping trade of each Colony. In the following table is given the total external tonnage, inwards and outwards, as well as the proportion claimed by each Colony for 1879 and 1889. At both periods New South Wales had the largest share of tonnage. The most noticeable feature of the table is the fall in the proportion of the Queensland and New Zealand trade. As regards the first-named Colony the fall is more apparent than real, as the figures for 1879 were exaggerated, so that the Queensland trade in that year appeared more important than was actually the case. Western Australia shows a remarkably high proportion of tonnage. In 1889 its share was 8·59 per cent. as against 5·37 per cent. of Queensland. The figures, taken by themselves, are misleading, as the present importance of Western Australia is not to be compared with that of Queensland. A correct idea of the importance of these, as well as of the other Colonies, will be obtained from the import and export statistics, and not from the returns of external tonnage :—

External tonnage—Inwards and Outwards.

Colony.	1879.		1889.		Percentage of tonnage to each Colony.	
	No.	Tonnage.	No.	Tonnage.	1879.	1889.
New South Wales...	1,053	857,231	1,539	2,082,613	33·32	36·22
Victoria .....	546	561,208	868	1,348,251	21·82	23·45
Queensland .....	436	249,151	408	308,876	9·68	5·37
South Australia.....	446	374,315	547	889,228	14·55	15·47
Western Australia...	162	85,024	362	499,988	3·31	8·70
Tasmania .....	58	22,813	71	101,671	0·90	1·76
New Zealand .....	601	422,303	544	519,056	16·42	9·03
Australasia.....	3,302	2,572,045	4,339	5,749,683	100·00	100·00

A peculiar feature of Australasian trade is the small and decreasing proportion of tonnage arriving or departing in ballast for places outside Australasia. Thus, in 1879 the tonnage so arriving and departing was 7·66 per cent. of the whole ; in 1889 the

## FOREIGN TONNAGE IN BALLAST.

proportion was only 4·14 per cent., while in European and American countries of which there are available returns, the proportion varies from 10 to 25 per cent. The details of arrivals and departures in ballast for the years 1879 and 1889 are:—

## External Tonnage Inwards and Outwards with Ballast only.

Colony.	1879.	1889.	Percentage of Tonnage to each Colony.	
	Tonnage.	Tonnage.	1879.	1889.
New South Wales.....	21,042	48,320	2·46	2·32
Victoria .....	63,554	101,659	11·33	7·54
Queensland.....	19,279	13,753	7·74	4·46
South Australia.....	27,939	36,601	7·46	4·12
Western Australia .....	.....	14,947	0·00	2·99
Tasmania .....	4,018	1,965	17·61	1·94
New Zealand .....	61,187	20,615	14·49	3·97
Australasia.....	197,019	237,860	7·66	4·14

Varied resources  
of Australasia.

The reason why so small a proportion of Australasian shipping leaves in ballast is no doubt to be found in the large and varied resources of the country, for when the staple produce—wool—is not available, cargoes of wheat and coal may be obtained. The following table shows the percentage of tonnage in ballast during 1888 for some of the principal countries of the world:—

## European and American Tonnage in Ballast.

Country.	Percentage of Tonnage in Ballast.
United Kingdom .....	14·27
France .....	19·65
Germany .....	18·49
Belgium.....	23·95
Italy .....	24·23
Spain .....	20·94
United States .....	10·47
Australasia (1889) .....	4·14

The intercolonial shipping trade of Australasia has increased at a slightly higher ratio than even that of the external trade, and this is noticeable in the case of all the Colonies except Queensland and New Zealand. In regard to the first mentioned Colony, the shipping figures were formerly very much over-stated, as already explained, and although it is well known that the intercolonial shipping trade of Queensland has decidedly increased, the figures, as shown in the following tables, appear to indicate a decrease. If, however, it were possible to eliminate from the 1879 returns the tonnage that merely passed through certain Queensland ports, as is done now, it would be found that the figures for 1889 show a considerable improvement. In the case of New Zealand, although there is a small increase in the actual tonnage of intercolonial trade, the relative proportion of that trade to the total trade shows a diminution of nearly 3 per cent. as compared with that of 1879. This is due in some measure to the opening up of direct relations with Great Britain, in place of indirect communication through the Colonies of New South Wales and Victoria ; also, perhaps, partly to the fact that the Colony is now more self-contained than at any former period of its history.

The following is a statement of the inward trade of each Colony from other members of the group :—

Intercolonial Tonnage Inwards (Cargo and Ballast).

Colony.	1879.		1880	
	No.	Tonnage.	No.	Tonnage.
New South Wales.....	1,954	905,184	2,694	1,816,774
Victoria .....	1,761	651,449	2,301	1,437,919
Queensland.....	1,033	508,174	529	326,775
South Australia.....	876	279,163	818	591,217
Western Australia .....	80	42,250	170	242,751
Tasmania .....	671	175,547	784	362,929
New Zealand .....	584	252,300	521	365,762
Australasia.....	6,959	2,814,067	7,817	5,144,127

Position of New  
South Wales.

New South Wales, it will be seen, heads the list with a little over one-third of the total intercolonial inward shipping—a position, doubtless in a large measure, due to the fact that vessels which have discharged cargo in other Colonies come to New South Wales for cargoes for foreign ports. Victoria stands second to New South Wales for vessels inwards from other Colonies, but in regard to outward trade she stands first, as the following figures show :—

Intercolonial Tonnage Outwards (Cargo and Ballast).

Colony.	1879.		1880.	
	No.	Tonnage.	No.	Tonnage.
New South Wales.....	1,780	778,309	2,250	1,421,792
Victoria .....	1,860	727,565	2,572	1,813,008
Queensland.....	1,043	499,069	596	365,358
South Australia .....	809	279,413	877	648,059
Western Australia .....	82	42,763	162	262,079
Tasmania .....	699	183,535	806	447,646
New Zealand ....	617	275,089	478	311,068
Australasia.....	6,890	2,785,743	7,741	5,269,010

Position of  
Victoria.

It should be remembered, in explanation of the peculiar position occupied by Victoria as compared with New South Wales, in the table just given, that vessels which come to New South Wales from other Colonies in ballast generally leave with cargoes—chiefly of coal—for foreign countries. A large proportion of the tonnage from Victoria to New South Wales is of ships in ballast requiring coal, not for Victoria only, but for places outside Australasia.

The combined tonnage inward and outward will be found in the following table, with the percentage due to each Colony. The cause of the apparent decline in the proportion of trade due to Queensland has already been explained :—

Intercolonial Tonnage, Inwards and Outwards (Cargo and Ballast.)

Colony.	1870.	1880.	Percentage of Tonnage to each Colony.	
	Tonnage.	Tonnage.	1870.	1880.
	Numerically.	Numerically.	Centesimally.	Centesimally.
New South Wales .....	1,683,493	3,238,566	30·06	31·10
Victoria .....	1,379,014	3,250,927	24·63	31·22
Queensland .....	1,007,243	692,133	17·99	6·65
South Australia .....	558,576	1,239,276	9·97	11·90
Western Australia .....	85,013	504,830	1·52	4·85
Tasmania .....	359,082	810,575	6·41	7·78
New Zealand .....	527,389	676,830	9·42	6·50
Australasia .....	5,599,810	10,413,137	100·00	100·00

The records of some of the Colonies do not admit of a distinction being made between steam and sailing vessels, so that a complete comparison can only be made for four Colonies. It will be seen from the statement appended that the displacement of sailing vessels by steamers, which is so marked a feature of modern trade, is rapidly proceeding in Australasia :—

Steam and sailing tonnage.

External and Intercolonial Steam Tonnage.

Colony.	1870.	1880.	Percentage of Steam Tonnage to Steam and Sailing.	
			1870.	1880.
New South Wales.....	1,231,423	3,718,378	48·46	69·88
Victoria .....	1,211,741	3,563,828	62·45	77·49
Western Australia .....	92,929	926,238	54·65	92·18
Tasmania .....	251,509	794,857	65·85	87·13
New Zealand .....	.....	727,043	.....	60·80

The relative importance of the various ports of Australasia may be ascertained from an inspection of the following table. Melbourne takes the first place; but the figures quoted comprise a considerable amount of tonnage which merely passes through the port and whose destination is Sydney. Sydney occupies the second place in the table, with Newcastle third, and Port Adelaide fourth.

Relative importance of Australasian ports.

## TOTAL AUSTRALASIAN TRADE.

Total Tonnage of Vessels inwards and outwards at the principal Ports of Australasia, 1879, 1889.

Colony.	Port.	1879.	1889.
New South Wales .....	Sydney .....	1,341,674	3,191,998
	Newcastle .....	1,143,664	1,871,005
	Eden .....	19,737	73,147
	Wollongong .....	30,504	41,145
Victoria .....	Melbourne .....	860,429	4,251,021
	Geelong .....	34,002	192,567
Queensland .....	Brisbane .....	323,482	879,366
	Townsville .....	124,047	570,634
	Rockhampton .....	208,401	496,022
	Cooktown .....	168,787	437,797
South Australia .....	Port Adelaide .....	626,090	1,629,462
	Port Pirie .....	63,813	167,228
Western Australia .....	Albany .....	365,780	*910,296
	Freemantle .....	70,640	*54,941
Tasmania .....	Hobart .....	208,743	509,851
	Launceston .....	173,152	294,731
New Zealand .....	Auckland .....	247,259	318,437
	Wellington .....	147,940	294,482
	Bluff Harbour .....	80,294	166,206
	Lyttleton .....	193,565	149,053
	Dunedin .....	180,385	98,603

\* For the year 1885.

Total trade of principal ports

The above figures, as already explained, only partially represent the relative position of the various ports. A better idea of their actual positions will be gained from the following table, which shows the value of the total trade, and the value to every ton of shipping, for the principal ports of each Colony for which there is information.

Total Trade to the principal Ports of Australasia 1889.

Colony.	Chief Port.	Total Trade.	Trade to each ton of Shipping.
		£	£
New South Wales .....	Sydney .....	33,200,696	10·40
Victoria .....	Melbourne .....	31,345,812	7·37
Queensland .....	Brisbane .....	5,191,866	5·90
South Australia .....	Port Adelaide .....	5,325,640	3·26
Tasmania .....	Launceston .....	1,005,412	3·41
New Zealand .....	Wellington .....	2,548,902	8·65



The comparative importance of the trade of Sydney and Melbourne may be seen from viewing it in connection with the trade of the chief cities of Great Britain. In absolute tonnage, it will be observed, Melbourne is exceeded only by London, Liverpool, Cardiff and Newcastle. Hull comes next on the list, having but a very small lead over Sydney, which in its turn exceeds Glasgow, Newport, Sunderland, and all the other British ports. In the following table the figures for Sydney and Melbourne are for the year 1889; those for British ports are for 1888 :—

Australasian compared with British shipping.

Tonnage of principal Ports of Great Britain and of Sydney.

Port.	Inwards.	Outwards.	Total.
	Tons.	Tons.	Tons.
London... ..	7,470,949	5,470,912	12,941,861
Liverpool.....	5,368,196	4,941,556	10,309,753
Cardiff .....	2,928,265	5,148,068	8,076,333
Newcastle (England)	1,809,991	3,320,901	5,130,892
Melbourne .....	2,082,044	2,168,977	4,251,021
Hull .....	1,897,868	1,503,824	3,401,692
Sydney... ..	1,759,658	1,432,340	3,191,998
Glasgow .....	994,311	1,554,571	2,548,882
Newport .....	962,329	1,469,403	2,431,732
Sunderland .....	743,443	930,345	1,673,788
Southampton .....	867,737	790,391	1,658,128
Dover .....	692,759	671,411	1,364,170
Middlesbrough .....	681,144	555,048	1,236,192
Swansea .....	504,813	733,952	1,238,765
Bristol .....	577,524	182,634	760,158

Nationality of  
Tonnage.

The shipping trade of Australasia is almost entirely in British hands, as will be seen from the subjoined table. Although in recent years direct communication with continental Europe has been established, and two splendid lines of steamers have entered on the direct trade, the proportion of the total shipping belonging to Great Britain and her dependencies has fallen only from 92·11 to 88·46 per cent. in ten years :—

Nationality of Tonnage.—External and Intercolonial Tonnage,  
Inwards and Outwards.

Nationality.	1879.		1889.		Percentage of each Nation to External and Intercolonial Tonnage.	
	No.	Tonnage.	No.	Tonnage.	1879.	1889.
British .....	16,256	7,527,159	18,355	14,298,239	92·11	88·46
French .....	128	54,221	247	542,321	·66	3·35
German .....	110	49,429	461	571,589	·60	3·54
Scandinavian .....	80	54,550	307	226,611	·67	1·40
United States .....	395	361,634	402	414,305	4·43	2·57
Other nationalities...	182	124,862	125	109,755	1·53	·68
Total.....	17,151	8,171,855	19,897	16,162,820	100·00	100·00

## AGRICULTURE.

AUSTRALASIA may, as a whole, be considered as in the first phase of agricultural settlement, indeed several Colonies have not yet emerged from the pastoral stage. Nevertheless, the value of agricultural produce, estimated at farm prices, is considerable, and amounts to £24,806,453, which is about seven-tenths of the value of pastoral produce. The return from agriculture in each Colony during 1889 was, approximately :—

Value of agricultural products.

	Total value of crops.	Value of produce per acre under crop.	Percentage of value to total value of Australasia.
	£	£ s. d.	
New South Wales .....	4,931,620	5 4 2	19·88
Victoria .....	6,945,392	3 6 3	28·00
Queensland .....	1,855,929	7 19 7	7·48
South Australia .....	4,780,557	2 2 7	19·27
Western Australia .....	298,300	4 1 3	1·20
Tasmania .....	1,254,885	6 12 1	5·06
New Zealand .....	4,739,770	3 8 5	19·11
Australasia .....	24,806,453	3 9 2	100·00

From this estimate it would seem that the value of crops, in proportion to the area cultivated, is much larger in Queensland, Tasmania, and New South Wales than in the other Colonies. The reason of this, as far as Queensland and New South Wales are concerned, will be found in the more extended cultivation of maize, sugar-cane, fruit, and vines in proportion to the total extent cropped. In point of gross value Victoria and New Zealand are much in advance of the other members of the group.

The following figures, giving the areas under the principal grain and other crops, and the total extent of land under cultivation in each of the Colonies at different epochs since the year 1861, will serve to illustrate the progress agriculture has made.

Area under cultivation in Australasia, 1861-89.

Colony.	Year.	Area under.								Total Area under Crops.	Land under Permanent Artificial Grasses.
		For Grain.				Potatoes.	Vines.	Hay.	Other Crops.		
		Wheat.	Oats.	Maize.	Barley.						
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
New South Wales ...	1861	123,468	7,224	57,959	2,924	10,040	1,692	45,175	47,435	295,917	1,658
	1871	154,030	13,795	119,956	3,461	14,770	6,618	51,805	28,978	393,413	24,388
	1881	221,888	16,348	117,478	6,427	15,943	6,624	146,610	37,925	569,243	75,825
	1889	419,758	22,358	173,836	5,440	17,551	11,470	212,106	84,553	947,072	217,403
Victoria....	1861	196,922	91,061	1,714	3,419	27,174	1,464	74,681	13,971	410,406	12,654
	1871	334,609	175,944	1,709	16,772	39,064	5,523	103,206	174,527	851,354	6,282
	1881	926,729	146,995	1,783	48,652	39,129	4,923	212,150	55,085	1,435,446	241,947
	1889	1,178,735	236,496	8,447	90,724	47,139	15,662	451,546	69,196	2,097,945	149,616
Queensland..	1861	392	69	1,914	13	512	40	280	1,220	4,440	.....
	1871	3,024	131	20,329	971	3,121	568	3,828	27,997	59,969	838
	1881	10,958	88	46,480	256	5,086	1,212	16,926	36,658	117,664	8,565
	1889	8,459	750	97,698	1,254	7,185	2,418	45,617	69,262	232,643	16,120
South Australia..	1861	310,636	1,638	18	10,637	2,612	3,918	62,874	8,384	400,717	838
	1871	692,508	3,586	.....	17,225	3,156	5,455	97,812	17,988	837,730	5,213
	1881	1,768,781	3,023	.....	11,953	6,136	4,202	333,467	28,845	2,156,407	16,438
	1889	1,842,961	10,297	.....	19,679	6,383	7,352	329,643	28,799	2,245,114	28,331

AREA UNDER CROPS.

Colony.	Year.	Area under								Total Area under Crops.	Land under Permanent Artificial Grasses.
		For Grain.				Potatoes.	Vines.	Hay.	Other Crops.		
		Wheat.	Oats.	Maize.	Barley.						
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
Western Australia	1861	13,584	507	73	2,412	277	457	6,676	719	24,705	.....
	1871	25,697	1,474	113	5,083	494	692	.....	18,171	51,724	.....
	1881	21,951	827	36	3,679	278	527	24,445	1,610	53,353	.....
	1889	35,517	2,075	80	5,475	462	1,088	25,694	3,017	73,408	.....
Tasmania ....	1861	58,823	29,022	.....	7,279	9,349	.....	31,803	27,109	163,385	.....
	1871	63,332	29,631	.....	4,275	8,154	.....	31,578	18,076	155,046	90,247
	1881	51,757	27,535	.....	4,597	9,670	.....	34,790	20,145	148,494	136,321
	1889	49,055	40,169	.....	4,446	17,015	.....	50,913	28,361	189,959	190,717
New Zealand	1861	29,531	15,872	770	3,457	7,292	.....	.....	11,584	68,506	157,994
	1871	108,720	139,185	.....	13,305	11,933	.....	30,717	33,422	337,282	792,529
	1881	365,715	243,387	3,177	29,808	22,540	.....	68,423	337,856	1,070,906	3,869,646
	1889	335,861	426,071	6,253	42,402	30,577	.....	45,889	499,234	1,336,287	6,479,160
Australasia ..	1861	733,356	145,393	62,448	30,141	57,256	7,571	221,489	110,422	1,368,076	173,144
	1871	1,381,920	363,746	142,107	61,092	80,692	18,856	318,946	319,159	2,686,518	929,497
	1881	3,367,779	438,203	168,954	105,372	98,782	17,488	836,811	518,124	5,551,513	4,348,742
	1889	3,870,346	738,216	286,314	169,420	126,312	37,990	1,161,408	782,422	7,172,428	7,081,347

AREA UNDER CROPS.

Agricultural  
year.

In this table, as well as in the whole chapter on Agriculture, the years 1861, '71, '81, and '89 embrace the periods from 1st April 1861, '71, '81, and '89 to 31st March, 1862, '72, '82 and '90 respectively.

As will be seen from the foregoing figures, the area under crop in Australasia is now more than five times as large as it was in 1861. If, however, the land artificially grassed be included the total is 14,253,775 acres, or nine and a quarter times the area under crop in 1861. A comparison with the increase of population may perhaps best serve to give an idea of the progress of agriculture. This is shown in the following table:—

Great increase  
of area under  
crop.

Average acreage under crop to each person in the several Colonies.

Colony.	1861.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales.....	·83	·76	·73	·84
Victoria .....	·76	1·14	1·63	1·88
Queensland.....	·13	·48	·52	·57
South Australia.....	3·16	4·51	7·53	6·92
Western Australia .....	1·57	2·04	1·78	1·68
Tasmania .. .....	1·81	1·52	1·25	1·25
New Zealand .....	·69	1·26	2·14	2·23
Australasia.....	1·08	1·36	1·97	1·89

Progress since  
1861.

Taking the Colonies as a whole, the area under crop has increased in a greater ratio than that of the increase of the population. The decade from 1861 to 1871 exhibits the greatest amount of progress. This is what naturally might be expected, as the gold fever had then subsided to a considerable extent, and a large portion of the population were seeking employment of a more settled nature than that afforded by the gold-fields. During the

next ten years—from 1871 to 1881—the advance was most marked in the case of the Colony of South Australia, which increased from 4·51 acres per cent. to 7·53. With reference to the other Colonies the changes were unimportant. During the period from 1881 to 1889 the ratio showed a slight decline as regards the Colonies as a group, but South Australia had fallen off from 7·53 acres to 6·92. The increase of agriculture, as compared with that of population, will be clearly seen in the following table, which shows the growth for each period, all the Colonies being grouped as one :—

Increase per cent. of average under crop compared to that of population.

	1861-1871.	1871-1881.	1881-1889.
	Per cent.	Per cent.	Per cent.
Increase of acreage under crop .....	96·4	106·6	29·2
Increase of population .....	55·6	43·2	34·2

During the period covered by the table the population of Australasia was trebled, while the breadth of land devoted to agriculture increased five and a quarter times, so that the ratio of increase of agriculture was one and three-quarters that of the population. This improvement took place entirely during the period from 1861 to 1881, and chiefly during the latter portion of that time ; while in the years from 1881 to 1889 the percentage of increase of acreage under crops had fallen off by 5 per cent., as compared with the increase of population. This comparative decrease is owing to various causes, such as the general tendency already alluded to, of the population to congregate in the several metropolitan centres, the difficulty of taking up good land within easy access to markets ; and also to the fact that there have been large accessions to the numbers of those engaged in other callings, without a corresponding increase in the agricultural classes. As regards the Colony of New South Wales, it is very probable that

Area under crop compared with population.

Extension of  
agriculture in  
New South  
Wales.

the agricultural returns will show a more than usual increase during the next few years, principally in consequence of the falling in of the pastoral leases in the Eastern Division in 1889, through which large tracts of arable land in close proximity to extensively settled districts became available for settlement.

Area under crop. In the following table will be found the proportion of land under crop to the total area of each Colony, and to Australasia as a whole. In instituting comparisons between the several Colonies, however, it must be borne in mind that other circumstances than the mere area under cultivation require to be taken into consideration. It would not be fair, for instance, to compare Tasmania, with 5·78 persons per square mile, to Western Australia, which has only 0·4 inhabitant to the square mile. The table is valuable chiefly as showing how each Colony has progressed in regard to cultivation during the periods named :—

Percentage of areas under crop.

Colony.	1861.	1871.	1881.	1889.
	Per cent.	Per cent.	Per cent.	Per cent.
New South Wales .....	·15	·20	·29	·48
Victoria .....	·73	1·51	2·55	3·73
Queensland.....	·001	·01	·03	·05
South Australia.....	·07	·15	·37	·39
Western Australia .....	·004	·008	·009	·01
Tasmania .....	·97	·92	0·88	1·13
New Zealand .....	·10	·50	1·60	2·07
Australasia .....	·07	·13	·27	·35

The relative position occupied by each of the principal agricultural products, in proportion to the total area under crop in



Australasia, may be seen by inspection of the table appended. It will be observed that the proportions of the different crops cultivated in 1861 differed very little from those in 1889, with the exception of potatoes, which had fallen from 4·19 to 1·76 per cent. of the total area under crop. Wheat took up 53·60 per cent. of the total area in 1861, and 53·96 per cent. in 1889, but had attained the large proportion of 60·67 per cent. in 1881. Oats and maize were at their maximum in 1871, with the respective proportions of 13·54 and 5·29 per cent. of the total area. Barley, in the ratio of 2·36 per cent., was at its highest in 1889; potatoes, as already indicated, were at the minimum in the same year. Grape vines stood at the ratio of ·53 per cent. in 1889, as against ·55 in 1861; but the proportion had gone up to ·70 in 1871, and dropped to ·32 in 1881. Hay occupied almost the same position in 1889 as in 1861, the rates given being 16·19 at the earlier period, and 16·20 last year, while in 1871 the proportion had dropped down as low as 11·88.

Proportion of land under Principal Crops.

Product.	1861.	1871.	1881.	1889.
	Per cent.	Per cent.	Per cent.	Per cent.
Wheat .....	53·60	51·44	60·67	53·96
Oats .....	10·63	13·54	7·89	10·29
Maize .....	4·56	5·29	3·04	3·99
Barley .....	2·20	2·28	1·90	2·36
Potatoes .....	4·19	3·00	1·78	1·76
Hay .....	16·20	11·87	15·07	16·20
Vines .....	·55	·70	·32	·53
Other crops .....	8·07	11·88	9·33	10·91
Total .....	100·00	100·00	100·00	100·00

## WHEAT.

Only three of the seven Colonies of Australasia—Victoria, South Australia, and New Zealand—produce sufficient wheat for their own requirements; but after the deficiencies of the rest of Australasia are supplied by these Colonies, there is, in most seasons,

Wheat-producing Colonies.

a large balance for external export, which finds a ready market in Europe, where the grain of Victoria and South Australia is well and favourably known.

Progress of  
wheat-growing.

The subjoined table shows the progress since 1861 of this branch of agriculture :—

Area under Wheat.

Colony.	1861.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales .....	123,468	154,030	221,888	419,758
Victoria .....	196,922	334,609	926,729	1,178,735
Queensland .....	392	3,024	10,958	8,459
South Australia .....	310,636	692,508	1,768,781	1,842,961
Western Australia .....	13,584	25,697	21,951	35,517
Tasmania .....	58,523	63,332	51,757	49,055
New Zealand .....	29,531	108,720	365,715	335,861
Australasia .....	733,356	1,381,920	3,367,779	3,870,346

Production.

Colony.	1861.	1871.	1881.	1889.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales .....	1,606,034	2,229,642	3,405,966	6,570,335
Victoria .....	3,607,727	4,500,795	8,714,377	11,495,720
Queensland .....	5,880	36,288	39,612	134,335
South Australia .....	3,410,756	3,967,079	8,087,032	14,577,358
Western Australia .....	160,155	345,368	153,657	497,238
Tasmania .....	1,380,913	847,962	977,365	756,639
New Zealand .....	772,531	2,448,203	8,297,890	8,448,506
Australasia .....	10,943,996	14,375,337	29,675,899	42,480,131

The average production of wheat per acre for the years 1881 and 1889, and also for the decade which concluded with the last-named year, are shown in the following table. It will be seen that the year 1889 was a prolific one, giving an average produce per acre in excess of the average for the decennial period :—

Average Production of Wheat per Acre.

Colony.	1881.	1889.	Average for the ten years, 1880-89.
New South Wales .....	15·35	15·65	13·68
Victoria .....	9·43	9·73	10·01
Queensland .....	3·62	15·88	10·38
South Australia .....	4·56	7·91	6·59
Western Australia .....	7·00	14·00	11·94
Tasmania .....	18·88	15·42	17·79
New Zealand .....	22·68	25·15	25·09
Australasia .....	8·81	10·98	10·25

Average amount of wheat produced.

The average production of wheat per acre in 1889 was above the decennial average in all the Colonies except Victoria and Tasmania, but as the production of Victoria in that year was 27 per cent. of the whole, it is obvious that a reduction in the ratio of production of this province must largely affect the general rate ; hence the slight increase for Australasia which 1889 shows over the general average.

The proportion of wheat produced by each separate Colony to the total Australasian production is exemplified in the following figures :—

Wheat produced by each Colony.

Percentage of Production of Wheat in each Colony.

Colony.	1881.	1889.
New South Wales .....	11·48	15·47
Victoria .....	29·37	27·06
Queensland .....	·13	·32
South Australia .....	27·25	34·31
Western Australia .....	·52	1·17
Tasmania .....	3·29	1·78
New Zealand .....	27·96	19·89
Australasia .....	100·00	100·00

South Australia takes the lead among the seven Colonies with regard to the production of wheat, having to her credit more than one third of the total yield. Victoria comes next, with 27·06 of the gross production, but nevertheless showing a small decline since 1881; New Zealand exhibits a still greater falling-off since that date, while New South Wales shows an increase of some 4 per cent. Tasmania, in 1881, produced wheat to the extent of 3·29 of the total Australasian production, and was able to export a trifling quantity, but in 1889 that Colony only produced 1·78 per cent., and had to import wheat to the amount of 171,989 bushels.

Yield of wheat in other countries.

Compared with the majority of European countries, the yield of wheat in Australasia must appear inconsiderable, both in regard to the total quantity obtained and the produce per acre. The return from some of the chief wheat-growing countries averages as follows :—

Yield of Wheat in Other Countries.

Wheat-growing Countries.	Average produce of wheat per acre.
	Bushels.
Denmark .....	31·1
United Kingdom .....	26·9
Norway .....	25·1
Belgium .....	21·5
Holland .....	21·5
Manitoba .....	20·3
Germany .....	18·8
France .....	16·9
Austria .....	16·4
British Columbia .....	15·0
Ontario .....	14·1
Hungary .....	13·6
Italy .....	12·1
United States .....	11·7
Quebec, Nova Scotia, and New Brunswick .....	9·9
Russia in Europe .....	4·6
Australasia .....	10·25

Imports of wheat and flour.

The following is a statement of the imports of wheat and flour, in 1889, expressed in bushels of wheat, for each of the Austral-

asian Colonies. In using these figures it should be remembered that the season referred to was one of drought, in which the failure of the wheat crop was almost general.

Net Import and Export of Wheat and Flour for each Colony.

Colony.	Net Imports.	Net Exports.
	Bushels.	Bushels.
New South Wales .....	5,077,928	.....
Victoria .....	.....	1,486,650
Queensland .....	2,173,113	.....
South Australia .....	.....	3,811,872
Western Australia .....	193,682	.....
Tasmania .....	171,989	.....
New Zealand .....	.....	2,802,471
Net exports .....	.....	484,281

New South Wales, it thus appears, was the largest importer of wheat, Queensland being second, followed by Western Australia, and Tasmania. South Australia, New Zealand, and Victoria were the only exporting Colonies, the amount they had to spare being slightly above the requirements of the importing Colonies. The external imports of Australasia for the year 1889, chiefly from the United States, amounted to 972,656 bushels, and the external exports, mostly to the United Kingdom, were to the amount of 2,532,478 bushels. The following table shows the annual yield and consumption of each Colony for the ten years ending with 1889, with the surplus or deficiency in each case :—

Yield and consumption of wheat in each Colony.

## Wheat Yield and Consumption in Australasia.—Ten Years' Average.

Colony.	Annual Yield, less required for Seed.	Annual Consumption.	Annual Surplus available for Export.	Annual Deficiency to be Imported.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales.....	3,709,000	5,913,000	.....	2,204,000
Victoria .....	9,445,000	6,022,000	3,423,000	.....
Queensland.....	92,000	1,838,000	.....	1,746,000
South Australia .....	8,600,000	1,962,000	6,638,000	.....
Western Australia .....	297,200	385,000	.....	87,800
Tasmania .....	694,000	874,000	.....	180,000
New Zealand.....	7,656,000	4,172,000	3,484,000	.....
Australasia.....	30,493,200	21,166,000	9,327,200	.....

Relative  
importance of  
Australasian  
wheat.

The importance of Australasia as a producer of wheat is but small when compared with the great wheat-producing centres of the world. Out of 2,057 million bushels produced in 1889, only 42 million bushels, or 2.06 per cent., were of Australasian growth. The subjoined statement, based on the returns of the United States Department of Agriculture, gives the approximate crop of the world for the year mentioned:—

## Wheat Crop of the World in 1889.

Countries.	Bushels.	Countries.	Bushels.
Europe—		Asia—	
Austria .....	42,000,000	India .....	243,076,549
Hungary .....	94,020,333	Asia Minor.....	36,887,500
Belgium .....	19,000,000	Persia .....	22,500,000
Denmark .....	5,000,000	Syria .....	12,768,750
France ..	316,268,369	Africa—	
Germany ..	82,000,000	Algeria .....	22,400,000
Great Britain .....	75,576,353	Egypt ..	7,945,000
Ireland .....	2,680,838	Cape Colony .....	3,800,000
Greece .....	5,000,000	North America—	
Italy .....	103,832,354	United States.....	490,560,000
Netherlands.....	5,675,000	Canada .....	31,217,494
Portugal .....	8,512,500	South America—	
Roumania.....	44,784,853	Argentina .....	11,350,000
Russia .....	188,535,989	Chili .....	12,768,750
Servia .....	5,000,000	Australasia .....	42,480,131
Spain .....	75,622,213		
Sweden .....	3,708,045	Total .....	2,057,249,801
Norway.....	283,750		
Switzerland .....	2,270,000		
Turkey .....	39,725,000		

Wheat crop of  
the world.

The following figures show that the average consumption for Australasia is higher than that of any other part of the world for which records are available, with the exception of France and Canada, Consumption of wheat.

	Consumption per Head. (Bushels.)
United Kingdom.....	5·9
France .....	8·1
Germany .....	3·0
Russia .....	2·1
Austria .....	2·9
Italy .....	5·4
Spain and Portugal.....	6·4
Belgium and Holland .....	5·0
Scandinavia .....	1·4
Turkey .....	6·1
United States .....	5·4
Canada .....	6·6
Australasia .....	6·6

That of the Australasian Colonics will be found below :—

New South Wales.....	6·50
Victoria .....	6·28
Queensland.....	6·09
South Australia .....	6·50
Western Australia .....	11·00
Tasmania .....	6·70
New Zealand .....	7·56

The figures for Western Australia may appear abnormal, but are the result of a careful computation from the official returns for the last five years.

During the period from 1881 to 1889 the area under wheat in Australasia increased at an annual average rate of 1·76 per cent. Surplus for export. Assuming that the same rate held good for 1890, the area cropped in that year would be 3,938,464 acres, which area, at the average rate of production for the last ten years—10·25 bushels per acre—would yield 40,369,256 bushels of wheat. Taking the population at four million souls, and the average consumption per head at 6·5 bushels, a total of 26,000,000 bushels would be required for food, in addition to 4,923,000 bushels for seed, being at the rate of 1·25 bushels per acre for 3,938,464 acres. The aggregate requirements for Australasia would thus be 30,923,000 bushels

of wheat for the year, which, deducted from the total production as above, would leave 9,446,000 bushels available for external exportation. But as the yield per acre for the present year promises to exceed the average of the last ten years, this estimate will probably be exceeded. The average production of 1889 was 10.98 bushels, and if the same average should be reached in 1890, the production for that year would be 43,244,000 bushels, which is higher than the production of any previous year except 1886 and 1887; and, indeed, even for those years the production may have been over-stated, owing to the lack of reliable figures from South Australia. A production of 43,244,000 bushels would leave a surplus for external export of 12,321,000 bushels, or about equal to the amount exported in 1888, which was the highest on record.

Increase of  
Australasian  
wheat culture.

Taking Australasia as a whole, the acreage under wheat has increased by about 503,000 acres since 1881. The larger proportion of the increase is due to Victoria and New South Wales. South Australia shows some slight increase, while New Zealand, on the contrary, exhibits a decline of nearly 30,000 acres. From this it will be seen that, with the exception of the farmers of Victoria, those of the other wheat-exporting Colonies show a disposition to decrease the acreage under wheat and extend the cultivation of other crops. Nor is this experience exceptional. Mr. Roper, the compiler of the "Year-Book of Canada," states that "Were it not for the British demand it is questionable whether wheat would be any longer a profitable crop beyond the limit of home consumption; and in any case one thing appears certain, that only under some unexpected and untoward circumstances can wheat ever approach in value to the price in former years." The statistician of the Department of Agriculture, United States, is of opinion that, "Western Europe alone now is left to supplement its nearly full garners with the contributions of all other countries, those of Europe included." Taking all the circumstances of the case into consideration, it is evident that any large extension



of wheat-growing cannot be expected, unless, perhaps, in New South Wales, the only Colony of importance which, though adapted for wheat-growing, produces less than the requirements of its population.

OATS.

The cultivation of oats, coming next in importance to wheat as Oats. a grain crop, is rapidly increasing, as the following figures show:—

Area under Crop.

Colony.	1861.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales...	7,224	13,795	16,348	22,358
Victoria .....	91,061	175,944	146,995	236,496
Queensland.....	69	131	88	750
South Australia.....	1,638	3,586	3,023	10,297
Western Australia..	507	1,474	827	2,075
Tasmania .....	29,022	29,631	27,535	40,169
New Zealand .....	15,872	139,185	243,387	426,071
Australasia.....	145,393	363,746	438,203	738,216

Production.

Colony.	1861.	1871.	1881.	1889.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales...	152,426	280,887	356,566	543,330
Victoria .....	2,136,430	3,299,889	3,612,111	5,644,867
Queensland.....	.....	.....	1,121	14,561
South Australia .....	33,160	38,894	32,219	131,449
Western Australia..	8,162	28,330	8,270	41,500
Tasmania .....	751,475	593,477	783,129	1,148,935
New Zealand .....	512,665	3,726,810	6,924,848	13,673,584
Australasia.....	3,594,318	7,968,287	11,718,264	21,198,226

The following table shows the average production per acre for 1881, 1889, and the decennial period, 1880-89. It will be observed that the season of 1889 was an exceptionally good one, the averages in all cases exceeding those for the decade:—

Average production of oats.

## AVERAGE PRODUCTION OF OATS.

## Average Production of Oats per Acre.

Colony.	1881.	1889.	Average for the ten years, 1880-1889.
New South Wales .....	21·81	24·30	22·05
Victoria .....	24·58	23·87	22·28
Queensland .....	12·74	19·15	14·90
South Australia .....	10·69	12·76	12·50
Western Australia .....	10·00	20·00	17·35
Tasmania .....	28·44	28·60	26·61
New Zealand .....	28·45	32·09	31·36
Australasia .....	26·74	28·71	27·62

High yield of New Zealand.

For Australasia as a whole the average yield of oats for the last ten years was 27·62 bushels per acre, New Zealand, with its high average yield, furnishing 64·5 per cent. of the total production. The cultivation of this cereal is comparatively neglected in New South Wales; in Victoria, however, it is next in importance to wheat, whilst in Queensland and South Australia, the yield being small and the climate ill-adapted, oats count for very little in the total grain production. Large areas are, nevertheless, sown for hay.

Average yield in principal countries.

The average yield in the principal countries of the world where oats are extensively grown is as follows:—

## Average Produce of Oats per Acre.

	Bushels.
Holland .....	42·1
Belgium .....	41·8
Norway .....	39·7
United Kingdom .....	37·7
Denmark .....	32·3
France .....	26·0
United States of America .....	26·0
Germany .....	21·9
Austria .....	20·9
Hungary .....	20·2
Italy .....	19·3
Russia .....	12·3
Cape of Good Hope .....	8·1
Australasia .....	27·6

The proportion grown by each individual Colony of the total production of oats in Australasia was :—

Proportion of oats grown by each Colony.

Percentage of Production of Oats in each Colony.

Colony.	1881.	1880.
New South Wales .....	3·05	2·56
Victoria .....	30·82	26·63
Queensland .....	·01	·07
South Australia .....	·27	·62
Western Australia .....	·07	·20
Tasmania .....	6·68	5·42
New Zealand .....	59·10	64·50
<b>Australasia .....</b>	<b>100·00</b>	<b>100·00</b>

The net import or export of oats for each of the Colonies was :—

Import and export of oats.

Imports and Export of Oats.

Colony.	Oats.	
	Net imports.	Net exports.
	Bushels.	Bushels.
New South Wales .....	882,479	.....
Victoria.....	1,231,974	.....
Queensland .....	181,829	.....
South Australia .....	51,254	.....
Western Australia .....	53,320	.....
Tasmania .....	.....	267,506
New Zealand .....	.....	2,655,893
<b>Net Exports.....</b>	<b>.....</b>	<b>522,543</b>

MAIZE.

Maize is the principal crop grown in Queensland, and is one of the most important products of New South Wales; it is not cultivated to a great extent in any of the other Colonies.

The following figures disclose the progress made in the cultivation of this cereal since 1861:—

## AREA AND PRODUCTION OF MAIZE.

## Cultivation of Maize.

## Area.

Colony.	1861.	1871.	1881.	1880.
	Acres.	Acres.	Acres.	Acres.
New South Wales...	57,959	119,956	117,478	173,836
Victoria .....	1,714	1,709	1,783	8,447
Queensland .....	1,914	20,329	46,480	97,698
New Zealand .....	770	.....	3,177	6,253
Other Colonies .....	91	113	36	80
Australasia .....	62,448	142,107	168,954	286,314

## Production.

Colony.	1861.	1871.	1881.	1889.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales...	1,727,434	4,015,973	4,330,956	5,354,827.
Victoria .....	20,788	30,833	81,007	357,047
Queensland .....	42,100	508,000	1,313,655	1,743,051
New Zealand .....	31,570	.....	127,257	270,282
Other Colonies .....	367	2,000	648	1,200
Australasia .....	1,822,259	4,556,806	5,853,523	7,726,407

Rate of production of Maize.

The following is the average rate of production of each Colony, and of the whole group for 1881, 1889, and the decade ended with the last-mentioned year :—

## Average Production of Maize per Acre :—

Colony.	1881.	1889.	Average for ten years, 1880-89.
New South Wales .....	36·86	30·80	31·73
Victoria .....	45·43	42·27	45·10
Queensland .....	28·26	17·84	23·92
Western Australia.....	18·00	15·00	*15·51
New Zealand .....	40·05	43·22	*41·83
Australasia .....	34·64	26·98	29·62

\* Last three years.

Although the table shows a high rate of production for Victoria and New Zealand, it must be remembered that the quantity of maize produced in those Colonies is exceedingly small. The following are the rates of production for this cereal in other countries :—

Average Maize Production in other Countries.

Country.	Acreage, per acre.	Country.	Acreage, per acre.
Austria .....	16·0	United States.....	23·5
Italy .....	20·0	Australasia.....	29·6
Portugal .....	25·0		
Spain .....	25·0		

The proportion of the total Australasian yield of maize grown by each Colony in 1881 and 1889, was :—

Proportion of Maize grown by each Colony.

Percentage of Maize Production of each Colony.

Colony.	1881.	1889.
New South Wales .....	73·99	69·30
Victoria .....	1·38	4·62
Queensland .....	22·45	22·56
Western Australia.....	·01	·02
New Zealand .....	2·17	3·50
Australasia.....	100·00	100·00

The net import or export of maize for each Colony during 1889 was :—

Imports and Exports of Maize.

Imports and Exports of Maize.

Colony.	Net Imports.	Net Exports.
	Bushels.	Bushels.
New South Wales .....	.....	128,403
Victoria .....	185,630	.....
Queensland .....	216,138	.....
South Australia .....	2,006	.....
Western Australia.....	7,060	.....
Tasmania .....	1,219	.....
New Zealand .....	.....	92,668
Net imports.....	190,982	.....

## BARLEY.

Barley.

Barley is not cultivated to the extent it deserves, as the sub-joined table shows:—

## Area.

Colony.	1861.	1871.	1881.	1880.
	Acres.	Acres.	Acres.	Acres.
New South Wales.....	2,924	3,461	6,427	5,440
Victoria .....	3,419	16,772	48,652	90,724
Queensland.....	13	971	256	1,254
South Australia.....	10,637	17,225	11,953	19,679
Western Australia .....	2,412	5,083	3,679	5,475
Tasmania .....	7,279	4,275	4,597	4,446
New Zealand .....	3,457	13,305	29,808	42,402
Australasia.....	30,141	61,092	105,372	169,420

## Production.

Colony.	1861.	1871.	1881.	1880.
	Bushels.	Bushels.	Bushels.	Bushels.
New South Wales.....	41,054	55,284	135,218	113,109
Victoria .....	68,118	335,506	927,566	1,831,132
Queensland.....	158	11,836	3,207	26,630
South Australia.....	168,137	164,161	137,165	246,841
Western Australia .....	2,412	5,083	36,790	93,075
Tasmania .....	169,381	76,812	102,475	105,574
New Zealand .....	96,658	287,646	664,093	1,342,823
Australasia.....	545,918	936,328	2,006,514	3,759,184

The average production of barley per acre for each Colony is given in the following table for 1881, 1889, and for the decade 1880-89:—

Production of Barley.

Average Production of Barley per Acre.

Colony.	1881.	1889.	Average for ten years, 1880-89.
	Bushels.	Bushels.	Bushels.
New South Wales .....	21·04	20·79	19·77
Victoria .. .....	19·06	20·18	18·37
Queensland .. .....	12·53	21·23	12·19
South Australia .. .....	11·47	12·54	12·31
Western Australia .. .....	10·00	17·00	15·04
Tasmania .. .....	22·29	23·74	23·53
New Zealand .. .....	22·28	31·67	27·96
Australasia .. .....	19·04	22·19	20·54

These figures show that the yield of barley was exceptionally good in 1889 for all the Colonies—better in every case than the decennial average. New Zealand has the largest yield of barley per acre of all the Colonies, and, as will be seen by the next table, she produces nearly 36 per cent. of the total Australasian yield, while Victoria produces 48·71 per cent., or nearly one-half. The figures appended show the proportion produced by each Colony in 1881 and in 1889:—

Large yield of barley in 1889.

Percentage of Production of Barley in each Colony.

Colony.	1881.	1889.
New South Wales .....	6·74	3·01
Victoria .. .....	46·23	48·71
Queensland .. .....	·16	·71
South Australia .. .....	6·83	6·57
Western Australia .. .....	1·83	2·47
Tasmania .. .....	5·11	2·81
New Zealand .. .....	33·10	35·72
Australasia .. .....	100·00	100·00

## IMPORTS AND EXPORTS OF BARLEY.

The average production of barley per acre for some of the principal producing countries of the world is as follows :—

## Production of Barley in other Countries.

Country.	Average produce of barley per acre.	Country.	Average produce of barley per acre.
	Bushels.		Bushels.
Austria .....	17·5	Italy .....	9·9
Belgium .....	56·0	Norway .....	31·0
Denmark .....	29·8	Russia .....	7·3
France .....	20·3	United Kingdom .....	31·1
Germany .....	24·1	United States.....	20·7
Holland.....	39·5		
Hungary .....	14·2	Australasia.....	20·5

Imports and exports of barley.

The net import or export of barley for each Colony for the year 1889 was :—

## Import and Export of Barley.

Colony.	Barley.	
	Net Imports.	Net Exports.
	Bushels.	Bushels.
New South Wales .....	103,803	.....
Victoria .....	359,392	.....
Queensland .....	13,132	.....
South Australia .....	20,195	.....
Western Australia.....	5,220	.....
Tasmania .....	.....	1,210
New Zealand .....	.....	494,669
Net Imports.....	5,863	.....

New Zealand and Tasmania, and the latter to a very small extent, are the only Colonies that are able to produce sufficient barley for home requirements, and have a surplus left for exportation. It is remarkable that, while Victoria produced nearly 49 per cent. of the whole Australasian yield of barley in 1889 and New South Wales only 3 per cent., Victoria imported this cereal to the amount of 359,392 bushels, while New South Wales only required to import to the extent of 103,803 bushels.



The explanation of this seeming anomaly will probably be found in the Victorian high import duty on malt, which practically prohibits the importation of that article, and necessitates its manufacture from barley in the Colony.

POTATOES.

The cultivation of the potato is not confined to any particular *Potatoes*. Colony, but Victoria and New Zealand are the leading growers, as will be seen from the subjoined table :—

Area.

Colony.	1861.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales.....	10,040	14,770	15,943	17,551
Victoria .....	27,174	39,064	39,129	47,139
Queensland .....	512	3,121	5,086	7,185
South Australia.....	2,612	3,156	6,136	6,383
Western Australia .....	277	494	278	462
Tasmania .....	9,349	8,154	9,670	17,015
New Zealand .....	7,292	11,933	22,540	30,577
Australasia .....	57,256	80,692	98,782	126,312

Production.

Colony.	1861.	1871.	1881.	1889.
	Tons.	Tons.	Tons.	Tons.
New South Wales.....	30,942	44,758	44,323	50,096
Victoria .....	59,364	125,841	134,290	157,104
Queensland.....	1,080	6,585	11,984	25,889
South Australia.....	7,726	10,989	18,154	23,853
Western Australia .....	817	1,457	556	1,386
Tasmania .....	47,428	22,608	33,565	72,275
New Zealand.. .....	37,554	42,130	121,890	159,720
Australasia .....	184,911	254,368	364,762	490,323

## FOREIGN PRODUCTION OF POTATOES.

Production of  
potatoes.

The average production of potatoes per acre, expressed in tons, for Australasia and for each of the separate Colonies is next given, for the years 1881 and 1889, as well as the average for the ten years which ended with 1889. New Zealand, it will be seen, shows a considerably larger return per acre than any of the other Colonies :—

## Average Production of Potatoes for each Colony.

Colony.	1881.	1889.	Average for the 10 years, 1880- 1889.
	Tons.	Tons.	Tons.
New South Wales .....	2·78	2·85	2·70
Victoria .....	3·43	3·33	3·05
Queensland .....	2·36	3·60	* 2·11
South Australia ... ..	2·96	2·94	3·30
Western Australia .....	2·00	3·00	2·95
Tasmania .....	3·47	4·25	3·98
New Zealand .....	5·41	5·22	5·15
Australasia .....	3·69	3·88	3·83

\* For six years.

## The average production of potatoes for other countries was :—

Country.	Average produce of Potatoes per acre.	Country.	Average produce of Potatoes per acre.
	Tons.		Tons.
Austria .....	2·3	Italy .....	2·5
Brazil .....	3·7	Russia ... ..	3·0
Canada .....	3·0	Spain.....	2·5
France .....	3·0	United Kingdom ...	3·5
Germany .....	3·1	United States .....	1·9
Holland .....	3·7	Australasia ... ..	3·8

The percentage of the total Australian production of potatoes due to each Colony is shown by the following figures. It will be seen that Tasmania and Queensland have increased their ratio of production, while New South Wales and Victoria exhibit a decline :—

Percentage of Production of Potatoes in each Colony.

Colony.	1881.	1889.
New South Wales .....	12·15	10·22
Victoria .....	36·82	32·04
Queensland .....	3·28	5·28
South Australia .....	4·98	4·87
Western Australia .....	·15	·28
Tasmania .....	9·20	14·74
New Zealand .....	33·42	32·57
Australasia .....	100·00	100·00

Only three of the Colonies are in a position to export potatoes. Of these Tasmania stands first, with a surplus nearly twice that of New Zealand, which ranks second, while Victoria, in the third place, has little over 7,000 tons to send away. New South Wales and Queensland are the chief importers :—

Imports and exports of potatoes.

Imports and Exports of Potatoes.

Colony.	Net Imports.	Net Exports.
	Tons.	Tons.
New South Wales .....	48,941	.....
Victoria .....	.....	7,195
Queensland .....	17,262	.....
South Australia .....	1,557	.....
Western Australia .....	808	.....
Tasmania .....	.....	41,381
New Zealand .....	.....	21,596
Net Exports.....	.....	1,604

## HAY.

Hay.

Considerable quantities of wheat, oats, and barley are grown for the purpose of being converted into hay. The average under crop for hay has of late years steadily and largely increased, as will be seen from the table herewith—

## Area under Hay.

Colony.	1861.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales.....	45,175	51,805	146,610	212,106
Victoria .....	74,681	103,206	212,150	451,546
Queensland.....	280	3,828	16,926	45,617
South Australia .....	62,874	97,812	333,467	329,643
Western Australia .....	6,676	*14,342	24,445	25,694
Tasmania.....	31,803	31,578	34,790	50,913
New Zealand .....	†27,160	30,717	68,423	45,889
Australasia.....	248,649	333,288	836,811	1,161,408

\* In 1869.

† In 1867.

## Production.

Colony.	1861.	1871.	1881.	1889.
	Tons.	Tons.	Tons.	Tons.
New South Wales.....	57,363	77,460	198,532	366,229
Victoria .....	92,497	144,637	238,793	666,385
Queensland.....	459	6,278	19,640	88,172
South Australia.....	78,886	98,266	240,827	395,920
Western Australia .....	6,609	14,288	24,445	25,694
Tasmania .....	59,851	30,891	44,957	73,859
New Zealand .....	36,666	35,674	89,081	65,476
Australasia.....	332,331	407,494	856,275	1,681,735

Production of hay.

The average production of hay per acre for each Colony will be found in the next table for the years 1881 and 1889, as well as for the decade ended with the last-mentioned period :—

Average Production of Hay per Acre.

Colony.	1881.	1889.	Average for the years 1880-9.
	Tons.	Tons.	Tons.
New South Wales .. .. .	1·35	1·72	1·36
Victoria .. .. .	1·12	1·47	1·17
Queensland .. .. .	1·16	1·83	1·64
South Australia .. .. .	·72	1·20	1·08
Western Australia .. .. .	1·00	1·00	·99
Tasmania .. .. .	1·29	1·47	1·23
New Zealand .. .. .	1·30	1·42	1·35
Australasia .. .. .	1·02	1·44	1·20

Victoria, New South Wales, and South Australia, are the largest growers of hay, as will be seen by the following figures, which show the proportion of the total yield of Australasia which each of the Colonies produces :—

Percentage of Production of Hay by each Colony.

Colony.	1881.	1889.
New South Wales .. .. .	23·19	21·78
Victoria .. .. .	27·89	39·63
Queensland .. .. .	2·29	5·24
South Australia .. .. .	28·13	23·54
Western Australia .. .. .	2·85	1·53
Tasmania .. .. .	5·25	4·39
New Zealand .. .. .	10·40	3·89
Australasia .. .. .	100·00	100·00

Imports and exports of hay.

The net import or export of hay for each Colony for the year 1889 was :—

Imports and Exports of Hay.

Colony.	Net Imports.	Net Exports.
	Tons.	Tons.
New South Wales .....	51,998	.....
Victoria .....	.....	20,636
Queensland .....	1,491	.....
South Australia .....	.....	23,015
Western Australia .....	268	.....
Tasmania .....	.....	9,423
New Zealand .....	.....	1,864
Net exports .....	.....	1,181

THE VINE.

The grape vine.

The history of the vine in these Colonies dates from the year 1828, when cuttings from the celebrated vineyards of France, Spain, and the Rhine Valley, were planted in the Hunter River District of New South Wales, and formed the nursery for the principal vineyards of that Colony. Years afterwards the vine was planted in the Murray River District and other parts of New South Wales, and was afterwards introduced into Victoria and South Australia, and is now cultivated in all the Colonies on the Australian continent. In South Australia a large proportion of Germans are employed in the industry of wine-making. Through sustained efforts on the part of the growers the wines of Australia have obtained a large and increasing foreign sale, apart from local consumption. The climate and soil of Australia are peculiarly adapted to the successful cultivation of the vine, and a marked expansion of the wine trade may be confidently expected.

Wine trade with Europe.

The following table illustrates the progress of the Australian wine trade with Europe since 1881. The total value of this trade in 1889, it will be noticed, had grown to nearly ten times what it was in 1881, while the number of gallons exported to Europe had increased nearly fourteen times :—

AREA CULTIVATED WITH VINES.

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Australian Wine Trade with Europe

Colony.	1881.		1880.	
	Quantity.	Value.	Quantity.	Value.
	Galls.	£	Galls.	£
New South Wales .....	13,271	3,520	26,466	5,492
Victoria .....	5,588	2,341	147,749	28,573
Queensland .....	124	60	2,438	879
South Australia .....	2,859	580	123,168	25,860
Western Australia .....	.....	.....	160	40
Australasia.....	21,842	6,501	301,981	60,844

The progress of vine cultivation since the year 1861 is illustrated by the table subjoined. The areas given include the vines grown for table use, as well as for wine-making; also the young vines not yet in bearing :—

Progress of vine cultivation.

Areas under Cultivation with Vines.

Colony.	1861.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales .....	1,692	6,618	6,624	11,470
Victoria .....	1,464	5,523	4,923	15,662
Queensland .....	40	568	1,212	2,418
South Australia.....	3,918	5,455	4,202	7,352
Western Australia .....	457	692	527	1,088
Australasia .....	7,571	18,856	17,488	37,990

The wine-growing industry has, therefore, passed from an experimental to a permanent stage. The production of wine and table grapes for the years specified was :—

## Production of Wine and Table Grapes.

Colony.	1861.		1871.		1881.		1889.	
	Wine.	Table Grapes.	Wine.	Table Grapes.	Wine.	Table Grapes.	Wine.	Table Grapes.
	Gallons.	Tons.	Gallons.	Tons.	Gallons.	Tons.	Gallons.	Tons.
New South Wales .. .. .	85,328	224	413,321	508	513,688	1,103	688,685	2,951
Victoria .....	47,568	849	713,589	1,545	539,191	740	1,578,590	2,971
Queensland .....	.....	.....	.....	.....	72,121	255	164,626	874
South Australia .....	312,021	1,161	852,315	1,692	313,060	1,498	510,674	4,023
Western Australia .....	.....	.....	.....	.....	99,600	.....	205,632	.....
<b>Australasia .....</b>	<b>444,917</b>	<b>2,234</b>	<b>1,979,225</b>	<b>3,745</b>	<b>1,537,660</b>	<b>3,596</b>	<b>3,148,207</b>	<b>10,819</b>



Compared with the wine production of other countries, as given hereunder, that of Australia appears small, but the prospects of this industry are sufficiently promising to encourage a hope that the coming years will witness important developments :—

Production of Wine in other Countries.

Country.	Production in million gallons.	Country.	Production in million gallons.
Australia .....	3	Roumania .....	18
Austria .....	92	Russia .....	92
Algeria .....	72	Servia .....	53
Cape Colony .....	5	Spain .....	608
France .....	795	Switzerland .....	29
Greece .....	46	Turkey and Cyprus .....	69
Hungary .....	185	United States .....	32
Italy .....	798		
Portugal .....	132	Total .....	3,029

The average production for New South Wales, calculated on the yields for 29 years, amounts to 204·52 gallons per acre—the maximum being 262·96, and the minimum 144·83. The average for Queensland and New South Wales for the last ten years has been computed at 231·20 and 202·37 gallons per acre respectively. It is impossible to tabulate the averages of all the various Colonies, as in many instances the acreage under cultivation for wine-making purposes cannot be separated from young unproductive vineyards, or areas cultivated for table varieties of grape only.

The quantity of wine produced and exported by each Colony in the years 1881 and 1889 is shown below. The figures include those given on page 101 :—

Australasian Export of Wine.

Colony.	1881.		1889.	
	Gallons.	£	Gallons.	£
New South Wales.....	22,377	7,233	58,378	19,167
Victoria .....	12,544	5,388	159,114	33,240
Queensland.....	124	60	2,457	891
South Australia.....	57,812	12,879	180,135	44,870
Western Australia .....			160	40
Australasia.....	92,857	25,560	400,244	98,208

## AREA AND PRODUCTION OF TOBACCO.

The average production in gallons per acre for other countries, in comparison with Australia, is shown by the following figures:—

## Production of Wine per Acre.

Country.	Average produce of wine per acre.
	Gallons.
Algeria .....	176
Argentine Republic.....	160
Austria .....	196
France .....	140
Germany ..	230
Italy .....	125
Portugal .....	190
Russia .....	170
Spain .....	118
South Africa.....	220
United States .....	160
New South Wales .....	202
Queensland .....	231
Western Australia .....	160

## TOBACCO.

Tobacco.

The cultivation of the tobacco plant has received attention in the three eastern Colonies, especially in New South Wales, as the following table shows:—

## Area and Production of Tobacco.

Year.	New South Wales.		Victoria.		Queensland.		Australasia.	
	Acres.	cwt. of leaf.	Acres.	cwt. of leaf.	Acres.	cwt. of leaf.	Acres.	cwt. of leaf.
1861	224	2,047	220	2,552	..	.. .....	444	5,199
1871	567	4,475	209	2,307	44	.....	910	6,782
1881	1,625	18,311	1,461	12,876	68	521	3,154	31,708
1889	3,239	27,724	955	4,123	266	2,531.	4,400	34,378

The average production of tobacco per acre for 1889, and for the ten years from 1880 to 1889, was :—

Average Production per Acre.

Colony.	Average for 1889.	Average for 1880 to 1889.
New South Wales .....	Cwt. 8·56	Cwt. 10·71
Victoria .....	4·32	6·75
Queensland .....	9·52	8·73
Australasia .....	7·73	9·03

The average production for other countries, compared with Australasia, was :—

Production of Tobacco in other countries.

Country.	Average Produce per acre.
Austria .....	Cwt. 9·2
Brazil .....	7·2
France .....	11·6
Germany .....	12·2
Japan .....	8·0
Russia .....	13·6
United States .....	6·4
Australasia .....	5·0

Tobacco requires much care and attention while in the field, as well as skill and experience in the preparation of the leaf for market. In New South Wales the cultivation of tobacco is chiefly in the hands of Chinese, who, probably, are deficient in their curing processes, for, although the soil is well suited to tobacco, Colonial leaf is inferior to that of American growth, and cannot, therefore, be exported at paying prices. In 1888 there were in New South Wales 4,833 acres, and in Victoria 1,685 acres cropped with tobacco, producing respectively 55,478 cwt. and 13,355 cwt. of leaf—a quantity largely in excess of local requirements. Consequently the tobacco sold to the manufacturers realised very low

Cultivation of tobacco.

prices, and a large portion of the crop remained on the growers' hands. The result was that many farmers abandoned the growing of tobacco, so that the area under this crop during 1889 was only 3,239 acres in New South Wales, and 955 acres in Victoria, producing respectively 27,724 cwt. and 4,123 cwt. of leaf—less than half the crop of the previous year. In Queensland, on the other hand, the acreage increased from 123 acres in 1888 to 266 acres in 1889, and the production increased from 1,418 to 2,531 cwt. of leaf. The Agricultural Department of Queensland is endeavouring to assist the tobacco-growers by the importation of American seed of first quality, suitable to the Queensland climate. New Zealand also has commenced the cultivation of tobacco. In 1889 that Colony had 25 acres cropped with the plant, and produced 102 cwt. of leaf.

Importation of tobacco and cigars.

The following table shows the net importation of tobacco, cigars, and cigarettes into Australasia for the year 1889 :—

Net Import of Tobacco, Cigars, and Cigarettes, 1889.

Colony.	Quantity.
	lb.
New South Wales .....	1,432,005
Victoria .....	2,466,184
Queensland .....	1,351,406
South Australia .....	523,098
Western Australia .....	180,760
Tasmania .....	310,338
New Zealand ..	1,266,293
Australasia .....	7,530,084

SUGAR CANE.

Sugar cane.

The growth of the cane and manufacture of sugar are important features in the industry of Queensland and New South Wales, but whilst the climate of the former Colony renders the employment of white labour in the field almost impossible, the plantations of the latter are worked without the assistance of coloured labour.

The owners of Queensland plantations usually combine the functions of cane-growers and sugar manufacturers, but in New South Wales, where the numerous holdings, are as a rule, small in area, the cane is purchased from the planters principally by the Colonial Sugar Company, whose various crushing mills and refinery are fitted with machinery of the most modern character. The importation of coloured labour must, according to Queensland legislation, cease in the year 1892 ; leaving the planters the difficult problem to solve as to whether successful sugar-growing is compatible with the employment of white labour.

The area under cane for the years specified below was :—

	1864.	1871.	1881.	1889.
	Acres.	Acres.	Acres.	Acres.
New South Wales .....	22	4,394	12,167	18,730
Queensland .....	94	9,581	28,026	49,741
Total .....	116	13,975	40,193	68,471

The progress of this industry has been very rapid, especially in Queensland, the area of suitable land being very large in that Colony. Some years ago sugar-growing was started on the Daly River, in the Northern territory of South Australia, but no statistics are available regarding acreage or production.

Progress of sugar-growing.

The progress made in sugar-growing during the last six years is illustrated by the following figures :—

	1884.	1885.	1886.	1887.	1888.	1889.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
New South Wales ...	17,517	16,418	15,117	15,287	15,281	18,730
Queensland .....	57,687	59,186	54,010	51,815	47,340	49,741
Total.....	75,204	75,604	69,127	67,102	62,621	68,471

It will be noticed that the area under cane in New South Wales was greater in 1884 than in any subsequent year till 1889, and that a considerable and continuous decline in the Northern Colony

Area under cane.

is observable since 1885. This retrogression was owing to a fall in the price of sugar, joined to the difficulties surrounding the labour question. New South Wales was affected to some extent by the decline in price of the manufactured article, but the prospects of the industry are now thought to be fairly good.

The area given includes all the cane planted, whether cut during the year or not, for sugar-cane is generally cut every alternate year. The following table shows the acreage actually cut during the last six years :—

Acreage of cane actually cut.

	1884.	1885.	1886.	1887.	1888.	1889.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
New South Wales ...	6,997	9,583	5,915	8,380	4,997	7,348
Queensland .....	29,930	38,557	34,657	36,806	32,375	29,438
Total.....	36,927	48,140	40,572	45,186	37,372	36,786

The returns of the sugar industry, both for Queensland and New South Wales, are incomplete. In those of the former Colony the yield of cane per acre is not stated; and in the latter the production of sugar per ton of cane crushed is not given. As regards the latter it varies, of course, with the density of the juice, but in ordinary seasons it may be set down at something over 9 per cent.

Quantity of sugar produced.

The production of sugar from cane crushed for the last six years was as follows :—

	1884.	1885.	1886.	1887.	1888.	1889.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales ...	11,500	18,464	13,750	22,500	11,279	19,016
Queensland .....	33,361	55,796	58,545	60,806	34,659	40,169
Total .....	44,861	74,260	72,295	83,306	45,938	59,185

The figures in the foregoing are from the returns made by the growers in each Colony. So far as Queensland is concerned, it is probable they considerably understate the truth, and are, therefore, given simply for what they are worth.

The net imports of sugar by each Colony for 1889 are shown in the following table. Queensland was the only Colony that was able to supply sugar enough for its own requirements, and spare some for export. The surplus amounted to 24,094 tons, valued at £439,517, which was mostly exported to the other Colonies, only 303 tons, having been for foreign export :—

## Net imports of Sugar.

	Intercolonial and Foreign Imports.	
	Quantity.	Value.
	Tons.	£
New South Wales .....	40,338	851,320
Victoria .....	48,971	859,696
South Australia .....	12,480	280,542
Western Australia .....	2,300	69,015
Tasmania .....	5,532	117,457
New Zealand .....	24,433	350,228
Australasia .....	134,054	2,528,258

The foregoing figures include the Queensland export of 24,094 tons mentioned above, the import from abroad was, therefore, 109,960 tons, of which only 104,782 can be traced to the original country of shipment, viz. :—

## Australasian Import of Sugar from abroad.

Country.	Quantity.
	Tons.
Mauritius .....	33,201
Fiji .....	30,509
Java .....	15,109
Hong Kong .....	7,842
Other countries .....	18,121
Total .....	104,782

## SOWN GRASSES.

Artificial grasses. The cultivation of permanent, sown grasses, commonly called "artificial," is principally confined to districts where dairy-farming is carried on. The area grassed in this way for the years 1881 and 1889, and the increase per cent. for each Colony were :—

	1881.	1889.	Increase per cent.
	Acres.	Acres.	
New South Wales .....	75,825	217,403	186·72
Victoria .....	241,947	149,616	38·16*
Queensland .....	8,565	16,120	88·21
South Australia .....	16,438	28,331	72·35
Western Australia .....	.....	.....	.....
Tasmania .....	136,321	190,717	39·90
New Zealand .....	3,869,646	6,479,160	67·43
Australasia .....	4,348,742	7,081,347	62·83

\* Decrease.

All the Colonies are rapidly extending this kind of cultivation, with the exception of Victoria. New South Wales has increased her area of sown grasses by 186·72 per cent. ; New Zealand has placed over 2,800,000 acres under grass, during eight years, while in Queensland and South Australia the area has been largely increased.

Condition of  
Agriculture in  
the Colonies.

Notwithstanding the rapid advance made in some of the Colonies in the cultivation of certain crops, it must be allowed that, speaking generally, agriculture in the Colonies has scarcely passed the tentative stage. The typical Australian agriculturist, relying largely on a bountiful Nature, does not exercise upon crops anything approaching the same patience, care, and labour that are bestowed by the European cultivator ; nor, as a rule, does he avail himself of the benefits of scientific farming and improved implements to the extent that prevails in America and Europe.



## IRRIGATION.

Owing to the irregular character of the rainfall in the interior of the continent, irrigation is absolutely necessary to ensure successful husbandry ; and as it has been demonstrated that the irrigation of vast areas in the vicinity of the Murray, Murrumbidgee, Lachlan, and Darling Rivers can be readily effected, the question of carrying out a comprehensive scheme is now seriously entertained by the Government of New South Wales. Victoria, and South Australia were the first to offer facilities for irrigation on a large scale. Necessity for irrigation.

A few years ago a special Act was passed by the Victorian Legislature, enabling the Government to hand over to the firm of Chaffey Brothers an area of 250,000 acres of mallee scrub, situated at Mildura, in the Swan Hill district, about 340 miles north-west of Melbourne. The land was then uninhabited and practically valueless. Now it has grown into a flourishing Colony, with a population of 2,500. The promoters have expended about £200,000 on the scheme, in compliance with the requirements of the Act, and have thus become entitled to the freehold of 40,000 acres, holding the balance of the 250,000 acres on lease. Mildura.

Some time later the South Australian Government also entered into a contract with this firm, An area of 250,000 acres, situated at Renmark, 134 miles E.N.E. of Adelaide, was set apart for irrigation purposes. On this land the Messrs. Chaffey have, so far, expended about £75,000, and although Renmark has not progressed so rapidly as Mildura, it promises in time to become an important settlement. Renmark.

Mulgoa.

The same firm now intends to commence operations in New South Wales under even greater promises of success, if possible, than at Mildura. An area of from 16,000 to 18,000 acres, in the Mulgoa district, has been purchased at an average price, it is said, of about £10 per acre. The soil consists chiefly of a rich friable loam, but the district suffers from an unequal rainfall. An Act, passed by the New South Wales Legislature in 1890, gives the right to tap the Nepean, and if necessary the Warragamba River, for the purpose of irrigating this area. The promoters intend to spend, if necessary, £150,000 on the scheme, and when the works are completed the area dealt with is expected to support a population of 5,000, instead of 50 as at present. It is proposed to devote the land chiefly to the cultivation of vines and fruit-trees. A general Irrigation Bill for New South Wales may be expected to be passed at an early date, as there is scarcely any subject which deserves the more immediate attention of the Legislature, or one on the careful treatment of which the future of Australia so much depends.

## PASTORAL RESOURCES AND DAIRY INDUSTRY.

**N**OTWITHSTANDING the fact that the soil, climate, and indigenous herbage of Australasia are admirably adapted to the sustenance of animal life, no attempt was made to test the capabilities of the land as a feeding ground for flocks and herds on a large scale, until the example of Captain Macarthur had demonstrated, beyond doubt, that Nature favoured the production in Australasia of a quality of wool unsurpassed by that of any part of the world. Then the settlers began to understand and utilise the natural resources of the country, and as the indomitable spirit of exploration gradually opened up the apparently boundless plains of the interior, pastoralists extended their domain, and sheep and cattle in increasing numbers spread over the face of Eastern Australia. The expansion of the pastoral industry is gradually converting the central and western portions of the continent into holdings, devoted to the production of the greatest element of the wealth of Australasia.

Commencement  
of the pastoral  
industry.

The beginnings of pastoral enterprise in the parent Colony were very humble. The whole stock of the community which accompanied Captain Phillip comprised only 1 bull, 4 cows, 1 calf, 1 stallion, 3 mares, 3 foals, 29 sheep, 12 pigs, and a few goats; and although the whole of the present flocks and herds of Australasia have not sprung from these animals alone, it will be seen on how small a scale the business of stock-raising was first attempted. No systematic record of the arrival of stock seems to have been kept in the early days of settlement, but it appears that in the period between Governor Phillip's landing and the year 1800 there were some slight importations, chiefly of sheep from India.

Humble  
beginnings of  
stock breeding.

In the last-mentioned year the stock in Australasia of the various kinds was—6,124 sheep, 1,044 cattle, 203 horses, and a small number of swine, the precise figures not being obtainable; in 1889 the numbers had increased to 101,267,084 sheep, 9,497,665 cattle, 1,542,957 horses, and 1,131,545 swine.

## NUMBERS OF LIVE STOCK.

The following figures give the number of stock in the Colonies at various epochs ending with 1851 :—

Year.	Sheep.	Cattle.	Horses.	Swine.
1800 .....	6,124	1,044	203	.....
1810 .....	25,888	12,442	1,134	9,544
1821 .....	209,158	102,939	4,564	33,906
1842 .....	6,312,004	1,014,833	70,615	66,086
1851 .....	17,326,021	1,921,963	166,421	121,035

The progress since 1861 is illustrated in the following table :—

Year.	Sheep.	Cattle.	Horses.	Swine.
1861 .....	23,741,706	4,039,839	459,970	362,417
1871 .....	49,773,584	4,713,820	782,558	737,477
1881 .....	78,063,426	8,709,628	1,249,765	903,271
1889 .....	101,276,084	9,497,665	1,542,957	1,131,547

The numbers of each class of stock per inhabitant at the same periods were :—

Year.	Sheep.	Cattle.	Horses.	Swine.
1861 .....	18·76	3·19	0·36	0·29
1871 .....	25·26	2·39	0·40	0·37
1881 .....	27·66	3·09	0·44	0·32
1889 .....	26·74	2·51	0·41	0·30

It will be seen that during 1861 there were 18·76 sheep for every person in the Colonies, increasing in 1889 to 26·74. On the other hand cattle had decreased from 3·19 per inhabitant at the former period to 2·51 in the latter. The breeding of horses and swine had about kept pace with the population.

## SHEEP.

Country suitable  
for sheep.

The suitability of the land discovered in the early days of New South Wales for pastoral pursuits was undoubtedly the means of leading the infant Colony to take its first step on the path of commercial progress; and it is not a little surprising at this

distance of time how steadily some of the settlers, in the face of the almost insurmountable difficulty of transport which existed a century ago, availed themselves of the opportunities at their disposal. The importation of valuable specimens of sheep from England or the Cape of Good Hope, prior to the introduction of steam, was at all times attended with great risk, and it frequently happened that many of these costly animals died during the tedious voyage. These enterprises were, however, on the whole successful, and thus the flocks and herds of the colonists surely, if at first slowly, increased and multiplied.

By the year 1795, Captain Macarthur, one of the first promoters of sheep-breeding in New South Wales, had accumulated a flock of 1,000, which were held in great estimation, and gradually increased in value, until, as recorded by an entry in his journal ten years later, the market price of a fat wether had risen to £5. Not satisfied with the natural increase of his flocks, Macarthur sought to improve the quality of his fleeces, by which means he could see opening before him the promise of great wealth, and the prospect of establishing important commercial relations with Great Britain. With these ends in view, he procured from the Cape of Good Hope, at great cost and trouble, a number of superior rams and ewes. A happy circumstance occurred which favoured his enterprise; for he had the good fortune to secure possession of three rams and five ewes of very fine Spanish breed, which had been presented by the King of Spain to the Dutch Government. These animals, out of a total of twenty-nine purchased at the Cape, arrived in Sydney in 1797, and were disposed of to various breeders. With the exception of Macarthur, however, those who had secured sheep of the superior breed made no attempt to follow up the advantage, being probably amply satisfied with the larger gains from the sale of an increased number of animals. Macarthur, on the other hand, thought little of present profits, and still less of breeding entirely for human consumption. He attentively watched the results of crossing his imported rams with the old stock, and by systematically selecting the finer ewes which

Captain  
Macarthur  
promotes  
wool-growing.

Improvement  
to the flocks.

were the offspring for further mingling with the sires, he gradually improved the strain, and in a few years obtained fleeces of very fine texture which met with the ready appreciation of English manufacturers.

Spain formerly  
chief wool-  
grower.

Prior to the present century the production of the finest wool had been confined chiefly to Spain, and woollen manufactures were necessarily carried on in England upon a somewhat limited scale, which was not likely to improve in face of certain restrictions the operatives endeavoured to place upon their employers. These men, in support of their contention that the woollen trade could not be expanded, on account of the limited supply of the raw material, argued that fine wool was obtainable only in Spain; and it was at this favourable period that Macarthur arrived in England with specimens of the wool obtained from his finest sheep, conclusively proving the capabilities of Australia as

Trade opened up  
with Great  
Britain.

a wool-producing country. In this way he opened up a small trade with English manufacturers, which, as Australasian wool rose in public estimation, gradually increased until it reached its present enormous dimensions. During his visit to England, Macarthur purchased an additional stock of ten rams and ewes of the noted Spanish breed, nearly equal in quality to those which in 1797 he had procured from the Cape of Good Hope. That these animals were the finest obtainable in Europe may be gathered from the fact they also had formed portion of a present from the King of Spain to George III. Thus did Macarthur, after his return to New South Wales, patiently continue for many years the process of selection, with such success, that in 1858, when his flock was finally dispersed, it was estimated that his superior ewes numbered fully 1,000. Victoria secured a considerable portion of Macarthur's flock, and the process of breeding proceeded simultaneously in that and other adjacent Colonies.

Importation  
of sheep.

Although the increase in the numbers of the finer sheep was satisfactory, the importation of superior stock was not discontinued, and the stock of the Colonies was augmented in 1823 and 1825 by the further introduction of Spanish sheep. Sheep-breeding

was about this period commenced in the Mudgee district, and the climate of that region has produced a still more favourable result upon the quality of the fleeces than any other part of the Colony, and it was thence that the finest merinos were for a long time procured. As might have been anticipated, the climate has in some respects changed the character of the Spanish fleece. The wool has become softer and more elastic, and while having diminished in density it has increased in length, so that the weight of the fleece has only slightly altered. The quality of the wool has thus on the whole improved under the beneficial influence of the climate, and if no further enhancement in its value can be reasonably hoped for, there is at least every reason to believe that Australasian wool will maintain its present high standard of excellence.

Texture of wool.

The following table shows the number of sheep at the close of 1861 and 1889 for each Colony ; also, the annual increase per cent. in comparison to that of the population :—

Colony.	1861.	1889.	Annual Increase from 1861 to 1889.	Annual Increase from 1861 to 1889.
			Sheep per cent.	Population per cent.
New South Wales.....	5,615,054	50,106,768	8·13	4·16
Victoria .....	6,239,258	10,882,231	2·01	2·62
Queensland .....	4,093,381	14,470,095	4·61	9·23
South Australia.....	3,038,356	6,386,617	2·86	3·42
Western Australia .....	279,576	2,366,681	7·93	3·73
Tasmania .....	1,714,498	1,551,429	*0·36	1·87
New Zealand .....	2,761,583	15,503,263	6·36	6·77
Australasia.....	23,741,706	101,267,084	5·32	3·99

\* Decrease.

Tasmania is the only Colony of the group in which the business of sheep-breeding has not advanced since 1861. In all the others there has been a material increase, though, except in the case of New South Wales and Western Australia, the increase per cent. has been less than that of the population. In Queensland and New Zealand there has been a very substantial increase in the number of sheep depastured during the period covered by the

Progress of Sheep-breeding

table, but the population also increased at a rate even more rapid. In South Australia the area adapted to sheep is limited, and no great expansion in sheep-farming can be looked for. As regards Victoria, the important strides made by this Colony in agriculture and kindred pursuits, afford sufficient explanation of the slow rate at which her flocks are increasing. The reasons for the large falling-off in the sheep-farming of Tasmania are various. Mr. Johnston, the Statistician of Tasmania, in the "Official Record," expresses his opinion thus:—"Rabbits, fluke, and the increasing tendency to fatten stock for market, are the reasons generally assigned for the decrease in sheep. No doubt, however, the greater extent of land taken up in respect of cattle and pigs must be considered." The following statement shows the proportion of sheep in each Colony to the total flocks of Australasia. In 1861 out of every 100 sheep New South Wales depastured 23·65, while, in 1889, the proportion had increased to 49·48, or little short of one-half the total flocks. New Zealand came second, with 15·31 per cent. Except Western Australia, whose flocks are small, all the other Colonies occupy a less prominent place in sheep-breeding than they did in 1861:—

Proportion of  
sheep in each  
Colony

Proportion of Sheep in each Colony to total number of Sheep in Australasia.

Colony.	1861.	1889.
	Per cent.	Per cent.
New South Wales .....	23·65	49·48
Victoria .....	26·28	10·74
Queensland .....	17·24	14·29
South Australia .....	12·80	6·31
Western Australia .....	1·18	2·34
Tasmania .....	7·22	1·53
New Zealand .....	11·63	15·31
Australasia .....	100·00	100·00

### CATTLE.

Cattle in Aus-  
tralasia.

Except in Queensland cattle breeding is secondary to that of sheep. In New South Wales the industry does not occupy so important a position as it formerly did, the decline being 23·34



per cent. since 1861, or at the rate of 0·95 per cent. per annum. The lowest point was reached in 1885, when the herds only numbered 1,317,315, the result partly of continuous bad seasons, but principally of the more profitable character of sheep-farming, which induced graziers on many runs to substitute sheep for cattle. Since that period the improvement has been gradual, and, though small, would seem to indicate a disposition on the part of pastoralists in some parts of the Colony to devote more attention to cattle-breeding. The progress of Victoria in this direction has been small but steady, the relative position occupied by the Colony now being much the same as in 1861 in regard to the number of cattle depastured. Queensland has largely increased her herds, and now possesses 50·31 per cent. of the total cattle of the whole group. New Zealand and Western Australia—especially the former—show decided improvement, and the breeding of this class of stock seems to be greatly in favour in those colonies.

The following table shows the number of cattle in 1861 and 1889, with the yearly increase or decrease per cent. for the whole period, as well as the growth of the population :—

Numbers and increase of Cattle.

Colony.	1861.	1889.	Increase or Decrease per cent. per annum, 1861-1889.	
			Cattle.	Population.
New South Wales.....	2,271,923	1,741,592	*0·95	4·16
Victoria .....	628,092	1,394,209	2·89	2·62
Queensland.....	560,196	4,872,416	8·03	9·23
South Australia.....	265,434	324,412	0·72	3·42
Western Australia .....	33,795	119,571	4·62	3·73
Tasmania .....	87,114	150,004	1·96	1·87
New Zealand .....	193,285	895,461	5·63	6·77
Australasia.....	4,039,839	9,497,665	3·10	3·99

\* Decrease.

The proportion of cattle belonging to each Colony in 1861 and 1889 is shown in the next table. It will be noticed that Queens- Proportion of cattle in each Colony.

land has increased its position from 13·87 per cent. to 51·30 per cent., while the other important Colonies have retrogressed, Victoria only slightly, but New South Wales from 56·24 per cent. in 1861 to only 18·34 per cent. in 1889 :—

Proportion of Cattle in each Colony.

Colony.	1861.	1889.
New South Wales ... ..	6·24	18·34
Victoria ... ..	15·55	14·68
Queensland ... ..	13·87	51·30
South Australia ... ..	6·57	3·41
Western Australia.....	·84	1·26
Tasmania ... ..	2·15	1·58
New Zealand ... ..	4·78	9·43
Australasia.....	100·00	100·00

## HORSES.

Horse-breeding.

Australasia is eminently fitted for the breeding of most descriptions of horses, and attention has long been directed to this industry. At an early period the stock of colonial bred horses was enriched by the importation of some excellent thoroughbred Arabians from India; and the high name which was acquired by the horses of Australasia was largely due to this cause. The abundance of good pasture everywhere obtainable also contributed to this result. The native kangaroo-grass, especially when in seed, is full of saccharine matter, and young stock thrive excellently upon it. This abundance of natural provender allowed a large increase in the stock of the settlers, which would have been a great advantage, had it not been that the general cheapness of horses led to a neglect of the canons of breeding. In consequence of the discovery of gold, horses became very high priced. Under ordinary conditions this circumstance would have been favourable to the breed of horses, and such was the case in Victoria. In New South Wales it was far otherwise. The best of the stock of that Colony, including a large proportion of the most valuable breeding mares, was taken by

Excellence of native grasses.

Victoria, with the result that for twenty years after the gold rush the horses of New South Wales greatly deteriorated. One class of stock only escaped. The thoroughbred racer was probably improved both by the importation of fresh stock from England and by the judicious selection of mares.

Partial deterioration of stock.

The Colonies are specially adapted for the breeding of saddle and light-harness horses, and it is doubtful whether these particular breeds of Australasian horses are anywhere surpassed. The bush horse is hardy and swift, and capable of making very long and rapid journeys, when fed only on the ordinary herbage of the country; and in times of drought, when the grass and water have become scanty, these animals often perform astonishing feats of endurance. Generally speaking, the breed of horses is improving, owing to the introduction of superior stud horses and the breeding from good mares. Where there has been a deterioration in the stock, this has been due to breeding from weedy mares for racing purposes and from the effect of droughts.

Saddle and harness horses.

Endurance of colonial horses.

Although the demand for horses in India is considerable and Australia is a natural market from which supplies may be derived there is no one employed habitually by the Indian Government to make himself acquainted with the resources of the Colonies, or to furnish information to intending shippers. The speculation of sending horses to India is one open to many risks, as, apart from the dangers of the voyage, there is always an uncertainty as to the stock being accepted. Owing, therefore, to the limited demand, it has not been found advantageous to breed horses for any but local requirements.

Foreign demand for horses limited.

The following table shows the number of horses in each Colony for 1861 and 1889, also the proportion in each case to the total at each period. In 1861, New South Wales possessed 50·70 per cent. of all the horses in Australasia, Victoria being second, with 18·27 per cent. In 1889, New South Wales still held the leading

Number of horses in Australasia.

## HORSES OWNED BY EACH COLONY.

position as regards numbers, but her proportion to the whole had fallen to 27·92 per cent. Queensland and New Zealand exhibit the most relative progress, having increased their respective proportions of the total from 6·30 and 6·15 per cent. in 1861 to 22·84, and 12·14 per cent. in 1889. The numbers and proportion for each Colony were :—

## Horses.

Colony.	Number.		Percentage of each Colony to total of Australasia.	
	1861.	1889.	1861.	1889.
New South Wales...	233,220	430,777	50·70	27·92
Victoria .....	84,057	329,335	18·27	21·34
Queensland.....	28,983	352,364	6·30	22·84
South Australia.....	52,597	170,515	11·44	11·05
Western Australia...	10,720	42,806	2·33	2·78
Tasmania .....	22,118	29,778	4·81	1·93
New Zealand .....	28,275	187,382	6·15	12·14
Australasia .....	459,970	1,542,957	100·00	100·00

## STOCK CARRYING CAPACITY OF AUSTRALASIA.

Capacity of the Colonies to carry stock.

None of the Colonies are stocked to their full capacity, while in the large territory of Western Australia, and the Northern territory of South Australia, the process has only begun. A clear idea of the comparative extent to which each Colony is stocked cannot be given unless the different classes of stock are reduced to a common value. Assuming, therefore, that one head of large stock is equivalent to ten sheep, and stating cattle and horses in terms

of sheep, it will be found that the number of acres per sheep for each Colony is as follows :—

Stock carried by each Colony.

Colony.	No. of acres per sheep.
New South Wales .....	2·81
Victoria.....	2·00
Queensland .....	6·41
South Australia .....	51·02
Western Australia .....	170·01
Tasmania .....	5·01
New Zealand .....	2·54
Australasia .....	9·50

The most closely stocked Colony is Victoria, with 2 acres per sheep, but this is by no means the limit of the carrying capacity of that Colony. On the contrary, there is still a considerable tract yet to be brought under the sway of the pastoralist. Neither New Zealand, with 2·54 acres per sheep, nor New South Wales, with 2·81 acres, can be said to have reached their full carrying capacity. If the present average of New South Wales be taken as the possible limit to which Australasia may be stocked; then there is room in these Colonies for 600 million of sheep, or 60 million cattle more than now depastured. That Australasia can carry 1 sheep to 2·8 acres is an improbable supposition. In almost every Colony the best land is under occupation, and the demands of the farmer must diminish the area at present at the disposal of the grazier. This will more especially prove true in regard to Victoria, New Zealand, and Tasmania. On the other hand, by resisting the temptation to overstock inferior country, and by increasing the natural carrying capacity by water conservation and irrigation, and the artificial cultivation of grasses, the Colonies where agriculture has made most progress will be able to carry stock in even larger numbers than they have hitherto attempted. Taking all circumstances into consideration it may be fairly estimated that under the present system the Colonies are capable of maintaining, in ordinary seasons, stock equivalent to 390,000,000 sheep; that is, about 180,000,000 sheep, or their equivalent in cattle, more than are now depastured.

Limit of production not yet reached.

Stock, expressed  
in terms of  
sheep.

The number of stock in Australasia, expressed in terms of sheep, the number of acres per sheep, and number of sheep per head of population for the various dates herein mentioned, were :—

Stock in terms of Sheep.

Year.	Sheep.	Cattle. In terms of Sheep.	Horses. In terms of Sheep.	Total.	Acres per Sheep.	Sheep per head of Population.
1861	23,741,706	40,398,390	4,599,700	68,739,796	29·43	54·30
1871	49,773,584	47,138,200	7,825,580	104,737,364	19·31	53·16
1881	78,063,426	87,096,280	12,497,650	177,657,356	11·39	62·95
1889	101,267,084	94,976,650	15,425,450	211,673,304	9·56	55·89

Value of  
Pastoral  
property.

The total capital value of pastoral property, including land, improvements, and plant, as well as stock, was estimated at the beginning of 1890 at £417,000,000, and of this large sum £167,000,000, or 40 per cent., belonged to New South Wales. In the amount quoted the value of stock alone (including swine), comes to about £107,693,000. The annual return from pastoral pursuits is £34,745,300, the share of each Colony in the total production being :—

Value of Australasian Pastoral Products.

New South Wales .....	£14,725,300
Victoria .....	4,920,500
Queensland .....	5,678,900
South Australia.....	2,054,600
Western Australia .....	585,800
Tasmania .....	561,400
New Zealand .....	6,218,800
<hr/>	
Australasia .....	£34,745,300

The products of dairy cattle and swine are not included in the foregoing statement, the figures being given in another place. It should be understood that the values quoted are those at the place of production. The value of the return from each class of stock may be approximately reckoned as follows:—

Return from each class of Australasian Stock.

Sheep.....	£26,046,000
Cattle .....	5,985,000
Horses .....	2,714,300
	£34,745,300

As might be supposed the greater part of the value of stock returns is due to wool. Thus, out of the £34,745,300 quoted above, £20,257,515 is the value of wool, viz:—£20,032,010 for wool exported, and £225,505 for wool used locally. The clip of the Australasian Colonies during 1889 was 603,367,400 pounds weighed in the grease, the export value being £21,474,000—that is to say, £1,441,990 more than shown by the foregoing tables. The latter sum represents the cost of freight, handling, and brokerage between the sheep-walks and the port of shipment.

The quantity and export value of the wool clip in the grease is given for each Colony in the subjoined table for 1881 and 1889. The values of the clip for the latter year for Victoria, South Australia, and Tasmania, do not compare favourably with those of 1881; indeed for the two Colonies last named there has been a serious fall, not only in value, but in the quantity exported. New South Wales, maintains its high position as a wool producer, nor can it be denied that in New Zealand sheep-breeding is a flourishing concern, for though the numbers of sheep in 1889 were less than those of 1885, this is mainly due to the heavy demand upon the resources of the Colony for the supply of stock to meet the requirements of the London market in regard to frozen meat.

## Net Export of Wool for each Colony, 1881 and 1889.

Colony.	Weight of clip in grease.		Values.	
	1881.	1889.	1881.	1889.
	lb	lb	£	£
New South Wales.....	165,436,500	294,054,800	7,175,200	10,455,000
Victoria .....	58,832,500	64,967,200	2,562,800	2,333,400
Queensland.....	32,532,500	69,617,600	1,331,900	2,679,900
South Australia.....	46,328,200	42,337,600	1,573,300	1,350,300
Western Australia .....	4,107,000	9,501,000	256,700	395,900
Tasmania .....	8,269,700	6,241,000	498,400	283,200
New Zealand .....	70,787,000	116,648,200	2,910,600	3,976,300
Australasia.....	386,293,400	603,367,400	16,308,900	21,474,000

Price of wool in grease.

The average price per lb. obtained for wool in grease, at the London Wool Sales, for the five series during each year from 1885, for the principal producing Colonies was:—

Year.	New South Wales. (Merino).	Victoria. (Merino).	New Zealand. (Merino.)
	d.	d.	d.
1885 .....	8½	10½	8½
1886 .....	8½	10½	9½
1887 .....	9½	10½	9½
1888 .....	8½	10½	9½
1889 .....	9½	11½	9½

New South Wales wool exported *via* Melbourne.

It will be noticed that Victorian wool averages about 2d. per lb. higher than New South Wales wool. The figures must be taken with qualification. Much of the New South Wales wool, the product of the Riverina districts, is exported *via* Melbourne, and sold as Port Phillip wool, and brings a price considerably in excess of the average given in the table for the Colony of which it is the produce.

Frozen and preserved meats.

The domestic export trade of frozen and preserved meat is now largely confined to New Zealand, where the industry is in a flourishing condition. In 1881 the value of the trade done by that Colony was only £22,391, or 6 per cent. of that of Austral-



asia ; in 1889 it had increased to £911,151, or 81 per cent. of the total. New South Wales and Queensland are the principal exporters in this trade after New Zealand, the value of export being almost the same for each Colony—£94,296 and £93,437, respectively. In 1881 New South Wales and Victoria together exported meat to the value of £304,909, but in 1889 the joint export had fallen to £113,808, the larger portion of the decline being due to Victoria. The diminution appears to be caused by the lessened demand for preserved meats.

The following table shows the quantity of fresh and preserved meats exported by each Colony in 1881 and 1889 :—

Quantity and value of meats exported.

Export of Fresh and Preserved Meats.

Colony.	Quantity.			
	1881.		1889.	
	Fresh and Frozen.	Salt and Preserved.	Fresh and Frozen.	Salt and Preserved.
New South Wales...	Cwt. 17,740	Cwt. 62,094	Cwt. 40,394	Cwt. 27,625
Victoria .....	8,136	35,947	1,382	8,912
Queensland.....	.....	22,051	24,296	10,486
South Australia.....	22	746	217	1,086
Western Australia..	.....	.....	.....	.....
Tasmania .....	.....	.....	.....	.....
New Zealand .....	.....	9,595	654,999	65,915
Australasia.....	25,898	130,433	721,288	114,024

DAIRY FARMING.

Dairy farming has of late years made fair progress in Australasia, especially in New South Wales, Victoria, and New Zealand. The introduction of the factory system at convenient centres, and the use of the cream separator, have done much to cause the extension of this industry. The number of dairy cows and the milk produced by them in each Colony were as follows in 1889 :—

Progress of dairy farming

## Dairy Cows and Milk Produced.

Colony.	Dairy Cows.	Quantity of milk produced (estimated).
	No.	Gallons.
New South Wales.....	261,315	117,450,000
Victoria.....	346,444	151,609,000
Queensland.....	120,000*	53,445,000
South Australia.....	104,000*	47,545,000
Western Australia.....	10,000*	4,454,000
Tasmania.....	30,263	15,000,000
New Zealand.....	272,344	107,961,000
Australasia.....	1,144,366	497,464,000

\* Estimated.

Breeding of swine.

The breeding of swine is usually carried on in conjunction with dairy farming. Below will be found a return of the number of swine in each Colony in 1861, and in 1889, together with the proportion owned by each Colony in comparison with the total stock. It will be observed that the actual number owned by the various Colonies has in all cases increased, though the relative proportions have altered considerably. New South Wales, for instance, held over 40 per cent. of the stock of swine in 1861, but in 1889 the proportion had receded to 21 per cent. In the same interval New Zealand had increased from nearly 12 per cent. to something under 33 per cent. of the whole:—

## Swine.

Colony.	Number.		Percentage of each Colony to total of Australasia.	
	1861.	1889.	1861.	1889.
	No.	No.	Per cent.	Per cent.
New South Wales.....	146,091	238,585	40·31	21·09
Victoria.....	43,480	249,673	12·00	22·06
Queensland.....	7,465	80,730	2·06	7·14
South Australia.....	69,286	106,856	19·11	9·44
Western Australia.....	11,984	27,079	3·31	2·39
Tasmania.....	40,841	58,632	11·27	5·18
New Zealand.....	43,270	369,992	11·94	32·70
Australasia.....	362,417	1,131,547	100·00	100·00

The value of the milk and its products, butter and cheese, and of the return obtained from swine, together with the total value of dairy produce for each Colony in 1889 were :—

Value of Dairy Produce.

Colony.	Value of Milk, Butter, and Cheese.	Value of Return from Swine.	Total Value of Dairy and Swine Produce.
	£	£	£
New South Wales .....	1,397,000	255,000	1,652,000
Victoria .....	1,838,000	350,000	2,188,000
Queensland .....	652,000	113,000	765,000
South Australia .....	576,000	150,000	726,000
Western Australia.....	59,000	32,000	91,000
Tasmania.....	178,000	82,000	260,000
New Zealand .....	1,219,000	389,000	1,608,000
Australasia .....	5,919,000	1,371,000	7,290,000

The production of butter and cheese for 1889 in each Colony is estimated to have been as follows :—

Production of Butter and Cheese.

Colony.	Butter.	Cheese.
	lb.	lb
New South Wales .....	17,600,000	4,834,000
Victoria .....	19,802,000	5,664,000
Queensland .....	6,018,000	706,000
South Australia .....	5,996,000	1,429,000
Western Australia.....	332,000	43,000
Tasmania .....	2,228,000	657,000
New Zealand .....	14,723,000	5,985,000
Australasia .....	66,699,000	19,318,000

Export of butter  
and cheese.

The Colonies having a surplus of butter and cheese available for exportation are shown in the following table :—

Net Export of Dairy Produce.

Colony.	Quantity.		Value.	
	Butter.	Cheese.	Butter.	Cheese.
	lb.	lb.	£	£
Victoria .....	949,000	155,000	34,022	3,816
South Australia.....	509,000	.....	18,052	.....
New Zealand .....	4,245,000	2,934,000	146,647	66,334
Total .....	5,703,000	3,089,000	198,721	70,150

Import of butter  
and cheese.

The Colonies which, on the other hand, are obliged to import butter and cheese are shown below :—

Net Import of Dairy Produce.

Colony.	Quantity.		Value.	
	Butter.	Cheese.	Butter.	Cheese.
	lb.	lb.	£	£
New South Wales.....	1,242,000	655,000	55,788	11,736
Queensland.....	760,000	1,267,000	33,934	31,375
South Australia.....	.....	169,000	.....	3,903
Western Australia .....	400,000	171,000	16,680	6,397
Tasmania.....	312,000	82,000	11,585	2,554
Total .....	2,714,000	2,344,000	117,987	55,965

From the foregoing figures it will be seen that those Colonies which produce a surplus of butter and cheese, have, after providing for the deficiency of the other Colonies, a balance available for external exportation. The quantity in 1889 amounted to 2,989,000 lb. butter. and 745,000 lb. cheese, valued at £80,734 and £14,185 respectively. Butter and cheese have for some time past been exported chiefly from New Zealand, but during

1890 Victorian and New South Wales butter was sent to the London market, and its very favourable reception there should act as a fresh stimulus to the dairying industry in those Colonies.

The products of the swine—bacon, ham, lard, and salt pork—Products of the swine. are still imported by all the Colonies with the exception of South Australia and New Zealand, as is shown in the following table, which relates to the year 1890 :—

Colony.	Bacon and ham.	Salt pork.	Lard.	Net value imported.
	£	£	£	£
New South Wales...	46,546	*3,843	1,042	43,745
Victoria .....	4,774	2,153	*356	6,571
Queensland .....	23,595	6,460	632	30,687
South Australia .....	*3,239	*2,953	.....	*6,192
Western Australia...	7,669	.....	357	8,026
Tasmania .....	1,145	1,447	.....	2,592
New Zealand .....	*31,066	*9,037	*1,787	*41,890
Australasia .....	49,424	*5,773	*112	43,539

The figures marked (\*) show an excess of exports, all the others represent an excess of imports. There seems to be considerable scope for an extension of this particular branch of farming in most of the Colonies. The minor products of dairying, such as eggs Eggs and honey and honey, are produced in sufficient quantities by the Colonies taken as a whole. The most remarkable feature is the trade in eggs between South Australia as supplier and Victoria and New South Wales as buyers. The figures for 1889 show that during that year South Australia exported eggs to the value of £37,433, while the imports of Victoria and New South Wales were £39,905 and £16,164 respectively, chiefly from South Australia.

## MINERAL RESOURCES.

ALMOST all the principal metals of economic value are found in Australasia, and many are common to several Colonies. In dealing with the occurrence and value of mineral deposits, the classification into noble metals, metallic minerals, carbon minerals, soluble and insoluble salts, diamonds and other gem stones, has been adopted.

## NOBLE METALS.

Gold. Gold, the most valuable of noble metals, is found throughout Australasia, and the present prosperity of the Colonies is largely due to gold discoveries, the development of other industries being, in a country of varied resources, a natural sequence to the acquisition of mineral treasure.

Discovery of gold.

Settlement in Australia was still young when many-tongued rumour spoke of the existence of gold, but it was not until the 16th February, 1823, that the Government was officially apprised of a discovery destined to be the precursor of a prosperity seldom surpassed in the history of nations. On the date mentioned Mr. Assistant-Surveyor M'Brien reported that, at a spot on the Fish River, about 15 miles east of Bathurst, he had discovered gold. Mention is made, in the early records of New South Wales, of several other finds, but it remained for Count Strzlecki and the Rev. W. B. Clarke to demonstrate the existence of the precious metal in payable quantities, and to assert their belief in its abundance, an opinion strongly supported in England by several eminent authorities, and substantiated by Hargraves' discovery in the year 1851. The gold-fields of Lewis Ponds and Summer Hill Creek had hardly been opened up when, on the day that witnessed the severance of the Port Phillip district from the mother Colony of New South Wales, Mr. J. M. Esmond discovered gold in Victoria. Shortly afterwards, a rush set in for Ballarat, and the gold fever

took possession of Australia. The following year (1852) saw gold found in South Australia and Tasmania ; the rush to Canoona, in Queensland, took place in 1858 ; and gold was also discovered in New Zealand in the same year, though it was not until 1861 that a large population was, by the prospect of rapidly obtained wealth, attracted to the last-mentioned colony. It would be strange if Western Australia could not also claim the possession of auriferous deposits, and, although for many years belief in the existence of gold in that Colony was simply speculative, the reports of explorers in the Kimberley District, and subsequent developments, proved that the great territory of the west has a share of the treasure.

The following table gives the weight and value of gold raised from the start of mining in the various Colonies to the end of the year 1889, and the proportion due to each :—

Production of Gold, 1851-89.

Colony.	Weight.	Value.	Proportion of value raised by each Colony.
	oz.	£	per cent.
New South Wales.....	10,092,356	37,614,887	11·20
Victoria.....	56,250,798	225,003,192	66·98
Queensland.....	6,827,888	23,897,608	7·11
South Australia.....	273,441	1,068,191	0·32
Western Australia.....	135,492	518,871	0·16
Tasmania.....	565,174	2,151,071	0·64
New Zealand.....	11,625,028	45,652,191	13·59
Australasia.....	85,770,177	335,906,011	100·00

It will be readily understood from the foregoing figures how Victoria, though comparatively small in area, achieved the foremost position amongst the Colonies, and retained that place so long as the powerful attraction of gold continued ; but as the alluring dazzle of the gold-seeker's life was gradually dimmed by privation and frequent disappointment, people turned to safer, if less brilliant, fields of employment. Although the discovery of

Weight and value of gold raised.

Effect of gold discovery in Victoria.

such extraordinary deposits as those of Mount Morgan, in Queensland, may astonish the world, and give princely dividends to shareholders, the thirst for gold—so powerful in the past—cannot now entice any considerable proportion of the population from other pursuits, and this, notwithstanding that only a small portion of the auriferous area of the continent has been explored, and a still smaller portion fully developed.

Progress of  
gold-mining.

The production of gold, which had been declining steadily for many years, reached the lowest point in 1886. Since then there has been a marked revival, owing chiefly to the increased production of Queensland. It will be seen from the following figures, showing the quantity and value of gold obtained in 1889, that Queensland is now the largest gold-producer of the group :—

Australasian production of gold in 1889 :—

Colony.	Weight.	Value.	Proportion raised by each Colony.
	oz.	£	per cent.
New South Wales .....	119,759	434,070	6·63
Victoria .....	614,839	2,459,356	37·58
Queensland .....	739,103	2,586,861	39·53
South Australia .....	20,833	76,780	1·17
Western Australia.....	15,492	58,871	·90
Tasmania.....	32,332	119,703	1·83
New Zealand .. .....	203,211	808,549	12·36
	1,745,569	6,544,190	100·00

Quantity of gold  
per miner.

The average value of gold to each miner is given below, but, as the conditions under which mining is carried on are by no means the same in every Colony, the figures, which vary considerably, may be not a little misleading. In those colonies where a revival of mining has lately been experienced, it is natural to expect a fall in the average yield per miner, for mining, as now carried out, is not an industry from which immediate returns can be expected. But when full allowance is made on this score it will be evident that in some colonies, at least, the search for gold is not a profitable



occupation. The following shows the number of miners at work in 1889, with the quantity and value of gold won per man :—

Colony.	No. of miners.	Amount won per miner.	Value per miner.
		oz.	£ s. d.
New South Wales .....	10,192	11·75	42 11 9
Victoria .. .. .	24,323	25·28	101 2 2
Queensland .....	8,955	82·53	288 16 9
South Australia .....	3,500	5·94	21 18 7
Western Australia .....	1,000	15·49	58 17 5
Tasmania .....	1,128	28·66	106 2 5
New Zealand .....	13,497	15·05	59 18 0
Australasia .....	62,595	27·89	104 11 0

Attempts have been made to ascertain the average yield from quartz, but the number of tests made and the quantity of stone treated are inconsiderable ; furthermore, it has not been found possible to obtain material from all the principal mining centres. The results obtained in 1887, 1888, and 1889, are given below :—

	New South Wales.	Victoria.	Queensland.	Tasmania.
	oz. dwt. grs.	oz. dwt. grs.	oz. dwt. grs.	oz. dwt. grs.
1887	0 9 5	0 9 10	1 15 10	1 5 21
1888	1 0 18	0 9 18	1 14 11	1 5 2
1889	1 0 2	0 9 19	1 17 20	0 17 16

The data on which the estimate for Queensland is based are probably below the mark, as the Mount Morgan returns are not included in the calculations. It is not pretended that the above figures have any great statistical value, but they may, nevertheless, be accepted as giving an approximate idea of the average yield of quartz-reefs. Alluvial deposits are generally richer than those in reefs ; but the precious metal is so unevenly distributed that any attempt to obtain a reliable average would be futile.

Large nuggets.

A notice of gold-mining would be incomplete without some reference to the remarkably large finds made at various times. Information on this point is meagre, and not altogether reliable, as doubtless many nuggets were unearthed the weight and value of which were never published, or, being merely ascertained from report, left a wide margin for exaggeration. Victoria's record is the best, and includes the following nuggets:—

Victorian nuggets.

	lb.	oz.	dwt.
"The Welcome Stranger," found 9th February, 1869...	190	0	0
"The Welcome," found 9th June, 1858 .....	184	9	16
One found at Canadian Gully, 31st January, 1853.....	134	11	0
		98	1 17
		93	1 11
		84	3 15
And others of the following weights .....		69	6 0
		52	1 0
		30	11 8
		30	11 2

Nuggets found in New South Wales.

New South Wales can boast of having produced some splendid specimens. In 1851 a mass of gold was found on the Turon, weighing 106 lb. ; another, from Burrandong, near Orange, produced, when melted at the Sydney Mint, 1,182 oz. 6 dwt. of pure gold ; and a third, the "Brennan," was sold in Sydney, in 1851, for £1,156. During 1880-82 several nuggets were discovered at Temora, weighing from 59 to 1,393 oz., and others, of 357, 347 (the "Jubilee"), 200, 47, and 32 oz. respectively, were found during the year 1887 in various parts of the Colony. Veins of gold of extraordinary richness have been worked in New South Wales. In January, 1873, at Beyers and Holterman's claim, at Hill End, 1·02 cwt. of gold was obtained from 10 tons of quartz, and a mass of ore, weighing 630 lb., and estimated to contain £2,000 worth of gold, was exhibited. The Mint returns during the year 1873, for this mine, were 16,279·63 oz., valued at £63,234 12s., obtained from 415 tons of stone. From Krohman's claim, at Hill End; gold, to the value of £93,616 11s. 9d., was obtained during the same year. The foregoing figures are, however, insignificant when compared with the enormous yield of the Mount Morgan Mine, in Queensland, which has already paid over

The Mount Morgan mine.

£1,000,000 in dividends, and may be designated one of the wonders of the world. It is a huge mound of ore, highly ferruginous, and contains gold to the extent of several ounces to the ton, the peculiar formation, in the opinion of the Government Geologist of Queensland, being due to the action of thermal springs.

The greatest development of quartz-reefing is found in Victoria, some of the mines being of a great depth. Lansell's, at Sandhurst, is down 2,640 feet, the "Magdala-Moonlight," at Stawell, is worked to a depth of 2,409 feet, whilst the "Victorian Quartz Mine," the "Victory and Pandora," and the "New Chum and Victoria" have, respectively, shafts extending 2,302, 2,300, and 2,228 feet below the surface. Deep mines in Victoria.

The gold-mining industry is at present in a vigorous state in Queensland and Victoria, but is in a somewhat languishing condition in the other colonies.

The value of machinery on the gold-fields of those colonies from which Returns were obtainable, was during 1889 :—

Colony.	Value.
New South Wales .....	£ 396,481
Victoria .....	1,845,862
Queensland .....	1,162,591
Tasmania .....	99,975

Platinum and iridosmine, though not specially sought for by miners, have been found in New South Wales and New Zealand, but no effort has been made to ascertain whether either mineral can be extracted with satisfactory commercial results. The same remarks apply to the noble metal tellurium which is found in New Zealand, associated with gold and silver (petzite) and with silver only (hessite). Platinum and Iridosmine.  
Tellurium.

Silver.

Silver has been discovered in all the Colonies, either alone or in the form of sulphides, antimonial, and arsenical ores; chloride, bromide, iodide, and chloro-bromide of silver, or argentiferous lead ores, the largest deposits of the metal being found in the last-mentioned form.

Barrier Ranges  
and Broken Hill  
silver-lead  
mines.

The argentiferous lead ores of the Barrier Ranges and Broken Hill districts of New South Wales have, more than any other, attracted the attention of capitalists. This rich silver-field, which was discovered in 1883 by Charles Rasp, a boundary-rider on Mount Gipps Run, extends over 2,500 square miles of country, and has developed into one of the principal mining centres of the world. It is situated beyond the river Darling, and on the confines of the neighbouring Colony of South Australia. Numerous leases have been taken up, and many ventures floated into public companies, giving rise to a large amount of speculation in shares in the mining exchanges of the capital cities of the Australian colonies, recalling the old days of gold discoveries. In the Barrier Range district the lodes occur in silurian metamorphic micaceous schists, intruded by granite, porphyry, and diorite, and traversed by numerous quartz-reefs, some of which are gold-bearing. The Broken Hill lode is the largest as yet discovered. It varies in width from 10 feet to 200 feet, and may be traced for several miles, the country having been taken up all along the line of the lode, and subdivided into numerous leases, held by mining companies and syndicates.

Broken Hill  
Proprietary  
Company.

The Broken Hill Proprietary Company hold the premier position. They have erected on their lease a complete smelting plant on the latest and most approved principles, and have enlisted the services of competent managers, whose experience has been gained in the celebrated silver-mining centres of the United States. From the commencement of mining operations in 1885 to the beginning of June, 1890, the Company treated 412,316 tons of silver and silver lead ores, producing 16,897,076 oz. of silver and 68,475 tons of lead, valued in the London market at £3,782,964. They

have paid dividends to the amount of £1,624,000, and bonuses amounting to £592,000, besides the nominal value of shares from the several "Blocks," amounting to about £3,960,000, the principal mine still remaining in their hands. At the ruling quotations during December, 1890, the nominal value of the mine was £12,120,000.

The quantity and value of silver and silver lead ore exported to the end of 1889 from New South Wales is shown in the following table :—

Export of silver and silver lead.

Year.	Silver.		Silver lead Ore.			Total Value.
	Quantity.	Value.	Quantity.		Value.	
			Ore.	Metal.		
Up to	oz.	£	Ton . wt.	Tons cwt.	£	£
1881	726,770	178,405	101 13	.....	5,025	188,430
1882	38,618	9,024	11 19	.....	360	9,384
1883	77,065	16,488	136 4	.....	2,075	18,563
1884	93,660	19,780	9,167 11	.....	241,940	261,720
1885	794,174	169,187	2,095 16	190 8	107,628	266,818
1886	1,015,433	197,544	4,802 2	.....	294,485	492,029
1887	177,308	32,458	12,529 3	.....	541,952	574,410
1888	375,064	66,668	11,789 7	18,102 5	1,075,737	1,142,405
1889	416,895	72,001	46,965 9	84,579 17	1,899,197	1,971,198
Total.....	3,714,996	751,555	87,639 4	62,872 10	4,168,397	4,010,952

It will be seen that the production of silver has, during the past few years, considerably increased. Since the important discoveries of silver deposits were made sufficient time has hardly elapsed to enable all the principal mines to be properly developed; and it may be confidently expected that, as new deposits are opened, and the mines first discovered are brought into full working order, the exports of this metal will rapidly increase. The number of miners in New South Wales engaged in silver and lead mines in 1889 was 6,587, including 1,041 smelters, and the average value of mineral won, per miner engaged, amounted to £299 5s. 0d.

Increase in production of silver.

Number of silver miners.

During the same year 248 men were engaged in the silver mines of Queensland. The number so employed in the other colonies cannot be ascertained.

Percentage of silver production to each Colony.

Up to the end of 1889 New South Wales had produced 87·52 per cent. of the total value of silver raised in Australasia, Queensland followed, with 7·47 per cent., the remaining small proportion being distributed among the other Colonies, New Zealand claiming the largest share. The total production of silver in Australasia, up to the end of 1889, was :—

#### Australasian Production of Silver.

Colony.	Value.	Proportion due to each Colony.
	£	Per cent.
New South Wales .....	4,919,952	87·52
Victoria .....	83,729	1·49
Queensland .....	420,072	7·47
Tasmania .....	12,882	·23
South Australia .....	56,276	1·00
New Zealand .....	128,835	2·29
Australasia .....	5,621,746	100·00

Of the total just given the sum of £3,761,045 was the production of the years 1887, 1888, 1889.

#### METALLIC MINERALS.

Lead.

*Lead* is found in all the colonies, but is worked only when found associated with silver. In the colony of Western Australia, however, the quantity of silver mixed with the lead, which occurs in the form of sulphides and carbonates of great richness, is very small. The lodes contain so little gangue that the ore can be very easily dressed to 83 or 84 per cent. The Government offered £10,000 for the first 10,000 tons of lead smelted in the colony. Works were erected, but up to the present with not much success. Western Australia has, since 1845, exported 31,105 tons of lead ore.

*Mercury*, in the form of sulphides or cinnabar, is found in New <sup>Mercury.</sup> South Wales, Queensland, and New Zealand. Few attempts, however, have been made to ascertain whether the deposits are of sufficient value to warrant the expenditure of capital in this direction.

*Copper* is known to exist in all the colonies, but has been mined <sup>Copper.</sup> for most extensively in South Australia, New South Wales, and Queensland. The discovery of copper had a marked effect upon the fortunes of South Australia at a time when the young and struggling colony was surrounded by difficulties. The Kapunda <sup>South Australian copper mines.</sup> mine, opened up in 1842, is the oldest copper-mine in South Australia. Unfortunately information regarding the total quantity of ore raised is not available, but the average yearly output has been estimated at 2,000 tons. Three years later than Kapunda the celebrated Burra Burra mine was discovered. This mine proved to be very rich, and paid about £800,000 in dividends to the original owners. For a number of years the mine has been suffered to remain unworked, partly in consequence of the low price of copper, but principally because the deposits originally worked were found to be exhausted. For many years the average yield was from 10,000 to 13,000 tons of ore, yielding from 22 to 23 per cent. of copper. During the twenty-nine and a half years that the mine was worked, the output of ore amounted to 234,648 tons, equal to 51,622 tons of copper, valued at £4,749,224. The Wallaroo and Moonta mines were discovered in 1860 and 1861. Up to the year 1886 these two mines had put out 927,196 tons of ore, valued at £6,609,240. The yield of copper ranged from 10 to 20 per cent. The Moonta mine at one time employed upwards of 1,600 hands, and still keeps about 1,140 at work.

The principal mines in New South Wales are those of Cobar <sup>Principal copper-mines of New South Wales.</sup> and Nymagee, situated in the Central Division, and within 80 miles of each other. The former employed over 500 men and boys, but is now idle; the deepest shaft is 566 feet, and the width of the lode from 2 to 50 feet. From the date of the com-

mencement of operations in 1876, that company treated 205,005 tons of ore, giving a return equal to 22,943 tons of refined metal, an average production of 11·2 per cent. of copper per ton of ore, and the sum of £154,000 has been paid in dividends to the shareholders. Nymagee employs a complement of 250 persons, and its ores contain an average proportion of copper equal to 11·42 per cent. Since its formation, in 1883, this mine has paid large dividends. The refined Nymagee copper is superior to that of Cobar, and commands a higher price in the market. A depth of 634 feet has been reached in sinking through the lode. The New Mount Hope and the Great Central Copper-mines are also said to be rich in payable ores. The first mentioned employed over 60 hands in 1889, and raised 1,870 tons of ore, equal to 260 tons copper, valued at £10,400; the second employed 90 men, raised 2,000 tons of ore, or 394 tons copper, valued at £15,760. It only requires a small advance in the price of the metal to cause great activity in the copper-mines of New South Wales.

Copper in  
Queensland.

Cupriferous deposits abound in the Colony of Queensland, and at one time there was considerable speculation in copper-mining stock. Peak Downs and Mount Perry acquired great celebrity in the Australian mining market, but afterwards suffered reactionary depression, and were ultimately abandoned, the result, in a large measure, of over speculation. In Northern Queensland copper is found throughout the Cloncurry district, in the upper basin of the Star River, and near the rivers Palmer and Kennedy. The chief mines in this district are the Great Australian and Argylla, which now produce the greater portion of the copper obtained in Queensland. The returns of the copper-fields in this colony are at present small, owing to the lack of suitable fuel for smelting purposes, rendering economic treatment of the ore difficult; but it is expected that these disabilities will be overcome at no distant date, and a revival of the industry is hoped for, as some of the abandoned fields contain very extensive deposits of copper ore.



Copper mining has not attained any great proportions in <sup>Victorian</sup> Victoria, although deposits have been found in several parts of <sup>copper.</sup> the colony, particularly in the Beechworth district, where they have been traced over an area of some 50 square miles.

The metal is sometimes found in the Australasian mines in a <sup>Virgin</sup> virgin state, of which beautiful specimens have been exhibited at different times, but occurs generally in the form of oxidized copper ores, carbonates, sulphates, phosphates, and silicates of copper. The museums of South Australia, Victoria, and New South Wales contain striking samples of azurite and malachite, magnificent blocks of which have been shown from time to time at exhibitions, not only in the colonies, but also in Europe and America.

Copper sulphides and arsenides of copper are generally found <sup>Stannine.</sup> in deep sinkings. The metal has also been found associated with tin in the form of *stannine*.

In Western Australia copper deposits have been worked for <sup>Copper in West-</sup> some years, and form with lead the principal elements of the <sup>ern Australia.</sup> mineral production of that Colony. Very rich lodes of both metals have been found in the Victoria district, from Geraldine on the Lower Murchison River almost to Champion Bay. The export of copper since 1845 has been 8,116½ tons.

The copper deposits of New Zealand have been worked to a <sup>New Zealand</sup> small extent only. <sup>copper.</sup>

The number of men employed in copper-mining in New South <sup>Number of</sup> Wales, during 1889, was 542, including 214 smelters. In Queens- <sup>copper miners.</sup> land 1,162 hands were so engaged. No particulars are to hand respecting copper-miners of the other colonies.

The total value of copper produced in Australasia to the end of the year 1889, and the proportion furnished by each colony are given below :—

Colony.	Total Value.	Percentage of each Colony.
	£	per cent.
New South Wales .....	3,278,621	13·064
Victoria .....	191,107	·783
Queensland .....	1,954,247	7·799
South Australia .....	19,477,551	77·729
Western Australia .....	137,980	·551
Tasmania .....	900	·003
New Zealand .....	17,862	·071
Australia .....	£ 25,058,268	100·000

Tin. *Tin* was known to exist in Australasia almost from the first years of colonization, the earliest mention of the mineral appearing in a report of a discovery by Surgeon Bass on the north coast of Tasmania. In the form of cassiterite (oxide of tin) it occurs in all the colonies, but the richest deposits have been found in Tasmania—the Mount Bischoff being the most celebrated tinmine in Australasia. The wealth of Queensland and the Northern Territory of South Australia in this mineral, according to the reports of Mr. Jack, the Government Geologist of the former colony, and the Rev. Tenison-Woods, appears to be very great.

Tin in New South Wales.

In New South Wales this mineral occurs principally in the granite and basaltic country in the extreme north of the Colony, near Tenterfield and Vegetable Creek, and in other districts of New England. Tin has also been discovered in the Barrier Ranges, at Poolamacca; near Bombala, in the Monaro district, and in the Valley of the Lachlan, but none of these deposits have as yet been worked to any extent. The deposits occur in the shape of stream and lode tin, and are worked by European and Chinese miners. Although this mineral was discovered by the Rev. W. B. Clarke as far back as the year 1853 the opening of the tin-fields of New South Wales only took place in the year 1872, and since that date the output from the mines has been considerable.

Output of tin mines.

The tin-mining industry in Tasmania is yet in its infancy, but <sup>Tasmanian tin.</sup> it is well-known there are extensive fields of a promising character in the north-eastern and western parts of the island. The Mount Bischoff mine produces about half the total yield of the colony. During the working season about 250 tons of dressed ore per month are obtained from this mine.

The most important tin-mines in Queensland are the Stanthorpe <sup>Tin in Queens-</sup> tin-fields, on the border of New South Wales, and the Herberton <sup>land.</sup> mines, south-west of Cairns. These two districts had produced, up to the end of 1887, no less than 59,502 tons of ore, valued at £3,188,771. The only other tin-mines of importance in Queensland are the Annon and the Bloomfield, situated close to Cooktown.

The tin-mining industry has been subject to frequent fluctuations, <sup>Fluctuations in</sup> especially of late years. The value of the metal in the European <sup>the price of tin.</sup> market was £159 per ton in 1872, £52 in 1878—reached as high as £114 in 1880 and 1882, and fell to £72 in 1884. The highest price—£168 per ton—was attained in the year 1887 owing to the operations of French syndicates.

In June, 1890, Australian tin was quoted in the London market at £97 10s. per ton.

The production of tin at the close of 1889 was valued as <sup>Production of</sup> follows :— <sup>tin.</sup>

Colony.	Total Value.	Percentage of each Colony.
	£	per cent.
New South Wales .....	5,362,643	37·24
Victoria .....	670,183	4·66
Queensland .....	3,653,960	25·38
South Australia .....	356	0·00
Western Australia .....	300	0·00
Tasmania .....	4,711,424	32·72
Australasia .....	£ 14,398,866	100·00

## Number of tin-miners.

The number of persons engaged in tin-mining in 1890, was as follows:—In New South Wales, 1,234; Tasmania, 2,227; and Queensland, 1,162. Particulars respecting the other colonies are not available.

## Titanium.

*Titanium*, of the varieties known as octahedrite and brookite, is found in New South Wales, with diamonds, in alluvial deposits.

## Wolfram.

*Wolfram* (tungstate of iron and manganese) occurs in some colonies, notably New South Wales, Victoria, and New Zealand. Scheelite, another variety of tungsten, is also found in the last-mentioned colony. *Molybdenum*, in the form of molybdenite (sulphide of molybdenum), is found in New South Wales and Victoria, associated in the former colony with tin or bismuth in quartz-reefs. The above minerals—titanium, tungsten, and molybdenum—have not been systematically mined for.

## Zinc.

*Zinc* ores, in the several varieties of carbonates, silicates, oxide, sulphide, and sulphate of zinc, have attracted little attention.

## Iron.

*Iron* is distributed throughout Australasia, principally in New South Wales, Victoria, Queensland, and New Zealand.

*Magnetite*, or magnetic iron, the richest of all iron ores, is found in abundance near Wallerawang in New South Wales. The proximity of coal-beds now being worked should accelerate the development of the iron deposits, which contain 41 per cent. of metal.

Works for the treatment of local titanite iron ore were erected some years ago at Taranaki, on the west coast of New Zealand, but it was found that the cost of smelting left no margin for profit, and the works were consequently abandoned.

## Extent of deposits of iron ore.

*Goethite*, *limonite*, and *hematite* are found in New South Wales, at the junction of the Hawkesbury sandstone formation and the Wianamatta shale, near Nattai, and are enhanced in value through being in proximity to coal beds. Near Lithgow extensive deposits of limonite or clay-band ore are interbedded with coal.

Some years ago these deposits were treated by a local company, and, as they contain about 50 per cent. of iron, a successful issue was anticipated, but from causes ascribed to a number of local impediments the works at Eskbank have been closed for some time.

*Siderite* or *spathic* iron (carbonate of iron) and *vivianite* (phosphate of iron) are found in New Zealand. The latter also occurs in New South Wales, intermingled with copper and tin ores.

Sulphuretted iron ores (pyrites) are of little intrinsic value, but are often of considerable worth on account of the other minerals with which they are associated, common pyrites being often auriferous. *Mispickel* differs from other pyrites inasmuch as it contains arsenic, sometimes gold and silver, and is frequently associated with tin and copper ores; but the extraction of gold is rendered difficult on account of the presence of the arsenic. These minerals (pyrites) are common to all the Colonies.

*Nickel*, so abundant in the island of New Caledonia, has, up to the present, been found in only one of the Australasian Colonies—Queensland; but no attempt has been made to prospect systematically for this valuable mineral.

*Cobalt* occurs in New South Wales and Victoria, and efforts have been made in the former Colony to treat the ore, the metal having a high commercial value; but the results have not been of an encouraging nature, and the development of this industry is in abeyance. The manganese ores of the Bathurst district often contain a small percentage of cobalt, sufficient, indeed, to warrant further attempts in this direction.

*Manganese* probably exists in all the Colonies, deposits having been found in New South Wales, Victoria, Queensland, and New Zealand, the richest specimens being in New South Wales and New Zealand. Little, however, has been done to utilise the deposits, the demands of the colonial markets being extremely limited, but in event of the extensive iron ores of New South

Wales being worked on a large scale the manganese, plentiful as it is in that colony, will become of commercial importance. The ore generally occurs in the form of oxides, manganite, and pyrolusite, and contains a high percentage of sesquioxide of manganese.

**Chrome iron.** *Chrome Iron* or chrome ore has been found in New Zealand and Tasmania, but the only attempt to work this mineral in this part of the world is that made at New Caledonia.

**Sulphur.** *Sulphur* exists in large quantities in the volcanic regions of New Zealand, where it will doubtless some day become an article of commerce. Professor Liversidge, in his work on the minerals of New South Wales, states that sulphur occurs in small quantities at Mount Wingen, in the Upper Hunter district of that Colony, and also at Tarcutta, near Wagga Wagga, and on Louisa Creek, near Mudgee.

**Arsenic.** *Arsenic*, in its well known and beautiful forms, orpiment and realgar, is found in New South Wales and Victoria. It usually occurs in association with other minerals, in veins.

**Antimony.** *Antimony* is met with in New South Wales, where it is frequently found in association with gold. It also occurs in Victoria, Queensland, and New Zealand. The value of the antimony, produced in Australasia, by the end of 1889, was:—

Value of Antimony produced in Australasia.

Colony.	Value.	Percentage produced.
	£	
New South Wales .....	73,501	25·00
Victoria .....	169,452	57·64
Queensland .....	25,971	8·83
New Zealand .....	25,069	8·53
Australasia .....	293,993	100·00

The antimony produced by New South Wales in 1889 was valued at £3,344; that produced by New Zealand was worth £5,319; Queensland, £215; and Victoria, £157. The production of antimony in the last-mentioned colony has fallen off so greatly that the industry may be said to have died out.

*Bismuth* is known to exist in all the Australian Colonies, but up Bismuth. to the present time has been mined for in New South Wales alone. It is usually found in association with tin and other minerals, but in one instance a mass of native bismuth, weighing 30 lb., was found in the Colony mentioned. The principal mine is situated at Kingsgate, in the New England District, where it is generally associated with molybdenum and gold. The value of bismuth produced up to the end of 1889, in New South Wales and Queensland, was £35,836, and £16,739 respectively.

Of all the mineral forms of carbon the diamond is the purest, The Diamond. but as it is usual to class this precious substance under the head of gems that custom will be followed in the present instance.

*Graphite*, or plumbago, which stands second to the diamond in Graphite. point of purity, has been discovered in New Zealand, in the form of detached boulders of pure mineral. It also occurs in impure masses where the coal measures come into contact with the graphite. This mineral, up to the present time, has not been found in any of the other colonies except New South Wales, where in 1889 a lode 6 feet wide was discovered near Undercliff, in the New England district.

The Australasian Colonies have been bountifully supplied by Mineral fuel. Nature with mineral fuel. Five distinct varieties of black coal, forming well characterised types, may be distinguished, which form, with the two extremes of brown coal, or lignite, and anthracite, a perfectly continuous series. For statistical purposes, how-

ever, they are all included under the generic name of "coal," and therefore these minerals will be considered here under the three main heads—lignite, coal, and anthracite only.

## Lignite.

*Brown coal or lignite* occurs principally in the Colonies of New Zealand and Victoria. Attempts have frequently been made to use this mineral for ordinary fuel purposes, but its inferior quality has prevented its use extending beyond the mere locality where it is produced. The fields of lignite in New Zealand are roughly estimated to contain about 500,000,000 tons.

## Ordinary coal.

*Black coal* forms one of the principal mineral resources of New South Wales, and in New Zealand the rich deposits of this valuable substance are rapidly being developed. That they will form an important source of commercial prosperity cannot be doubted, as the known areas of the coal-fields of this class have been roughly estimated to contain about 500,000,000 tons of coal in New Zealand, and 78,198 million tons in New South Wales. New Zealand also possesses a superior quality of bituminous coal, which is found on the west coast of the Middle Island. An estimate of the probable contents of these coal-fields is given as 200,000,000 tons. Coal has been discovered in Victoria, and raised in small quantities for some years past; but the industry is still in its experimental stage.

## Tasmanian coal.

Excellent steam coal has been found in Tasmania, and coal-mining in that Colony is becoming a well established industry. From time to time reports have been raised of the discovery of coal in South Australia, but no very definite or satisfactory information on the subject has been brought forward, such as would warrant the employment of capital, except in the direction of prospecting researches. Coal of a very fair description was discovered in the basin of the Irwin River, in Western Australia, as far back as the year 1846. It has been ascertained from recent explorations that the area of carboniferous formation in that Colony extends from the Irwin northwards to the Gas-



coyne River, about 300 miles distant, and probably all the way to the Kimberley District. It is also reported that coal has been discovered on the Fitzgerald or Phillips River, about 100 to 150 miles east of Albany, in the south-western part of the Colony. According to the Rev. J. E. Tenison-Woods the extent of the coal-beds in Queensland is unknown. Mr. Jack, the Government Geologist of that Colony, considers them practically unlimited, and is of opinion that the carboniferous formations extend to a considerable distance under the Great Western Plains. It is roughly estimated that the coal measures at present practically explored extend over an area of about 24,000 square miles. Coal-mining has been an established industry in Queensland for some years, and is progressing satisfactorily.

Coal was first discovered in New South Wales in the year 1797, Discovery of coal. near Mount Keira, by a man named Clark, the supercargo of a vessel called the "Sydney Cove," which had been wrecked in Bass's Straits. Later in the same year Lieutenant Shortland discovered the River Hunter with the coal-beds situated at its mouth. Little or no use, however, was made of the discovery, and in 1826 the Australian Agricultural Company obtained a grant of 1,000,000 acres of land, together with the sole right, conferred upon them by charter, of working the coal-seams that were known to exist in the Hunter River district. Although the Company held this valuable privilege for twenty years, very little enterprise was exhibited by them in the direction of winning coal, and it was not until the year 1847, when the Company's monopoly ceased, and public competition stepped in, that the coal-mining industry began to show signs of progress and prosperity. The total output by the Company in 1847 was 40,732 tons, from which the quantity has increased to 3,655,632 tons raised in 1889, valued at £1,632,849.

The coal-fields of New South Wales are situated in three Coal-fields of New South Wales. distinct regions—the Northern, Southern, and Western districts. The first of these comprises chiefly the mines situated in the

Thickness of  
coal seam at  
Greta.

Production to  
each miner.

Hunter River districts; the second includes the Illawarra district and, generally, the coastal regions to the south of the Metropolis; together with Berrima, on the tableland; the third consists of the mountainous regions on the Great Western Railway, and extends as far as Dubbo. The total area of the carboniferous strata of New South Wales is estimated at 23,950 square miles. The seams vary in thickness. One of the richest has been found at East Greta, in the Hunter River district. It contains an average of 41 feet of clean coal, and the quantity of coal underlying each acre of ground has been computed to be 63,700 tons. The number of coal-mines registered in New South Wales in 1889 was 103, giving employment to 10,277 persons, of whom 8,349 were employed under ground, and 1,928 above ground. The average quantity of coal extracted per miner, calculated upon the basis of the output for the last ten years, is 485 tons, which, at the mean price of coal at the pit's mouth, is equivalent to £216 5s. This amount of production compares favourably with the results attained by miners in the principal coal-raising countries of the world, as the following table, extracted from Mulhall's works, will show:—

Country.	Tons of coal raised per miner.	Value at the pit's mouth per ton.			Total value of coal raised per miner.		
		£	s.	d.	£	s.	d.
New South Wales.....	485	0	8	11	216	5	0
Great Britain .....	303	0	7	0	106	1	0
United States .....	295	0	9	0	132	15	0
Germany .....	270	0	5	0	67	10	0
France .....	190	0	11	0	104	10	0
Belgium .....	168	0	7	8	64	8	0
Austria.....	192	0	6	0	57	12	0

In the absence of information as to the average amount of <sup>Earnings of Miners.</sup> wages paid to coal-miners in other countries an exact comparison is not possible, but it is abundantly clear, that whatever may be the drawbacks to a miner's lot in the Australian Colonies in no other country is it so satisfactory. The foregoing table proves this, for on the improbable supposition that the miner everywhere receives in wages the same proportion of the value of the coal as in New South Wales, that is, about 40 per cent. of the selling price at the pit's mouth, the average earnings in each country would be :—

Country.	Coal per miner.	Wages per ton of coal.	Earnings of miner per annum.
	tons.	£ s. d.	£ s. d.
New South Wales .....	485	0 3 7	86 17 11
Great Britain .....	303	0 2 10	42 18 0
United States.....	295	0 3 7	52 17 0
Germany .....	270	0 2 0	27 0 0
France .....	190	0 4 5	42 0 0
Belgium .....	168	0 3 1	25 18 0
Austria.....	192	0 2 5	23 4 0

New South Wales was its own chief customer during 1889, <sup>Local consumption.</sup> when out of a total production of 3,655,632 tons, the consumption amounted to 1,267,930 tons, or nearly 35 per cent. Victoria came next, with 857,578 tons, or 36 per cent. of a total export of 2,387,702 tons.

The annual consumption per head increased from 15 cwt. in <sup>Consumption per head.</sup> 1876 to 22 cwt. in 1887, and 23 cwt. in 1889. The larger use of steam for railway locomotives, for manufacturing, and other purposes, as well as the multiplication of gas-works, accounts for a great portion of the increase, but it must also be borne in mind that there is a large and increasing demand for bunker coal for ocean-going steamers, which appears not as an export, but as

required for home consumption. The amount of coal taken by the steamers during 1889 was little short of 200,000 tons.

The progress of the export trade, from 1879 to 1889, is shown in the following table, also the direction of the trade at those periods :—

Export of coal  
from New South  
Wales.

Exportation of Coal from New South Wales, 1879 and 1889.

Country.	Quantity.		Value.	
	1879.	1889.	1879.	1889.
	tons.	tons.	£	£
United Kingdom .....	.....	480	.....	264
Victoria .....	299,987	857,578	204,717	488,344
Queensland .....	13,079	7,311	8,169	3,932
South Australia .....	101,468	190,412	64,107	92,756
Western Australia .....	1,946	15,180	1,293	8,428
Tasmania .....	26,907	65,251	18,881	31,913
New Zealand .....	177,700	160,637	124,031	85,347
Total, Australasian Colonies ...	621,087	1,296,369	421,198	710,720
Ceylon .....	13,642	3,938	9,793	2,121
Fiji .....	818	13,859	573	7,480
Hong Kong .....	39,492	102,702	28,185	56,248
India .....	62,351	67,266	44,906	37,207
Mauritius .....	11,558	15,497	8,510	8,393
Natal .....	2,420	487	1,694	268
Straits Settlements .....	8,266	68,994	6,015	38,985
Total, Other British Possessions	138,547	272,743	99,676	150,702
Chili .....	3,362	153,183	2,360	85,585
China .....	39,685	19,505	28,821	10,285
Japan .....	16,094	1,003	11,592	552
Java and Eastern Archipelago ...	29,869	95,246	21,984	54,460
New Caledonia .....	7,826	14,428	5,031	8,470
Peru .....	6,969	25,263	4,901	14,153
Philippine Islands .....	22,055	49,426	16,075	27,675
Sandwich Islands .....	3,588	28,096	2,511	15,518
South Sea Islands .....	2,138	7,369	1,648	4,232
United States .....	99,178	407,601	73,713	226,956
Other Foreign Countries .....	7,651	16,990	5,197	9,699
Total, Foreign Countries .....	238,415	818,110	173,833	457,585
General Total .....	998,049	2,387,702	694,707	1,319,271

New Zealand is the only colony besides New South Wales capable of exporting coal to any large extent. The export trade of that colony for 1879 and 1889 was as follows:—

## Exportation of Coal from New Zealand, 1879 and 1889.

Country.	Quantity.		Value.	
	1879.	1889.	1879.	1889.
United Kingdom .....	tons. .....	tons. 47,100	£ .....	£ 50,432
New South Wales.....	3,100	9,115	3,100	7,399
Victoria .....	3,904	2,184	2,987	1,995
South Australia.....	.....	7,737	.....	5,237
Western Australia .....	.....	695	.....	730
Total Australasian Colonies .....	7,004	19,731	6,087	15,361
Fiji .....	.....	4,204	.....	2,924
Hongkong .....	.....	3,787	.....	3,409
Norfolk Island .....	.....	17	.....	23
Total other British possessions.....	.....	8,008	.....	6,356
China .....	.....	165	.....	104
Java.....	.....	2,447	.....	2,447
South Sea Islands .....	140	2,039	100	1,528
Total Foreign Countries... ..	140	4,651	100	4,079
General Total.....	7,144	79,490	6,187	76,228

The exports to the United Kingdom, both from New South Wales, and from New Zealand, in all probability consisted of bunker coal, for the steamers.

Most of the coal-beds of New Zealand are on the West Coast of the Middle Island. The chief mines are at Westport, Greymouth, and Otago. The total quantity of coal produced in 1889 was 586,445 tons, for the whole colony, of which Westport contributed 167,033 tons, Greymouth 137,904 tons, and Otago 150,461 tons. The only important coal measures of the North Island are those of the Waikato, which produced 51,940 tons.

Coal produced  
in New Zealand.

Coal in Queensland. The total production of coal in Queensland for 1889, was, 265,607 tons, most of which came from the mines at Ipswich and at Burrum, in the Maryborough district. Queensland exported in 1879, 1,677 tons, valued at £1,096; and in 1889, 20,109 tons, valued at £11,906.

Tasmanian coal. Tasmania produced, in 1889, 40,300 tons, of which 8,455 tons, valued at £8,455, were exported to Victoria. The most important of the Tasmanian coal seams are situated in the Fingal Basin, near the eastern coast of the island.

Value of coal production. The total value of coal produced in the Australasian Colonies up to the end of 1889 is shown in the following table:—

Colony.	Total value.	Percentage of each Colony to total.
	£	
New South Wales .....	22,787,156	84·36
Victoria .....	29,706	·11
Queensland .....	1,056,283	3·91
Tasmania .....	141,416	·52
New Zealand .....	2,998,185	11·10
Australasia.....£	27,012,746	100·00

The quantity of coal extracted annually in these Colonies has now reached nearly 4,600,000 tons, valued at £2,108,943. The proportion due to each Colony for the year 1889 was as follows:—

Colony.	Quantity.	Value.
	Tons.	£
New South Wales .....	3,655,632	1,632,849
Victoria .....	14,596	10,991
Queensland .....	265,507	121,118
Tasmania .....	40,300	14,280
New Zealand .....	580,445	329,705
Australasia .....	4,562,480	2,108,943

During the year 1889 this industry gave direct employment, in and about the mines, to the following number of persons in the several Colonies in which the returns were available:—

	Persons.
New South Wales .....	10,277
Queensland .....	2,415
Tasmania .....	134
New Zealand (Approximate) .....	1,800
Australasia .....	14,626

Number of miners employed.

The average price of coal per ton varies in the Colonies very considerably. In New South Wales, from 1846 to 1889, the average price obtained was 9s. 8<sup>s</sup>5d., but the mean of the last ten years is a little below these figures. In 1889 the average price per ton of coal delivered at the mines in the Australasian Colonies was as follows:—

	£	s.	d.
New South Wales .....	0	8	11
Victoria .....	0	15	1
Queensland .....	0	9	1
Tasmania .....	0	7	1
New Zealand .....	0	11	3
Australasia .....	0	9	3

Anthracite.

*Anthracite* is found on the island of Tasmania. It is a hard and heavy mineral, burning with difficulty, and it possesses very little economical value in countries where a superior description of fuel abounds.

The following table shows the coal annual production by the principal countries of the world to the latest date obtainable:—

Coal production of the principal countries of the world in 1888 or 1889.

Country.	Quantity.
	Tons.
Great Britain .....	176,917,000
United States .....	126,819,406
Germany .....	67,341,000
France .....	24,589,000
Belgium .....	19,810,000
Canada .....	2,658,134
Australasia .....	4,562,480

**Kerosene shale.** *Kerosene Shale* (torbanite) is found in several parts of the Colony of New South Wales. It is a species of cannel coal, somewhat similar to the Boghead mineral of Scotland, but it yields a much larger percentage of volatile hydrocarbons than can be obtained from the Scottish mineral. The richest quality of Australian kerosene shale yields upwards of 150 gallons of crude oil per ton, or 18,000 cubic feet of gas, with an illuminating power of 38 or 40 sperm candles. The New South Wales Oil and Mineral Company, at Joadja Creek, not only raise kerosene shale for export, but also manufacture from it petroleum oil and other products. Since the year 1865, when the mines were first opened, the quantity of the kerosene shale raised amounts to 556,682 tons, worth £1,234,453. The average price realised during that interval was £2 4s. 5d. per ton. The prices ruling in 1889, when 40,561 tons were extracted, averaged £1 18s. 4d. per ton, representing a total value of £77,667, for the production of that year. The export of shale from New South Wales for 1889 was:—

Country.	Quantity.	Value.
	£	£
Victoria .....	4,567	12,595
Holland .....	7,551	21,562
Peru .....	2,025	4,826
Spain .....	2,203	6,000
United States .....	2,900	8,795
Other Countries .....	2,140	6,057
Total .....	£ 21,386	59,835



The net import of kerosene into each of the Colonies in 1889 was :—

Colony.	Quantity.	Value.
	gallons.	£
New South Wales .....	1,110,882	56,137
Victoria .....	1,117,588	52,443
Queensland .....	946,086	45,346
South Australia .....	646,395	19,521
Tasmania .....	145,363	7,834
New Zealand .....	1,279,876	52,545
Australasia .....	5,246,190	233,826

*Ozokerite*, or mineral wax, is reported to have been found at *Ozokerite*. Coolah, in New South Wales.

*Elaterite*, mineral caoutchouc, or elastic bitumen, is said to have *Elaterite*. been discovered in New South Wales and South Australia. In the last-named Colony a substance very similar to elaterite has been discovered in the Coorong Lagoons, and it has received the name of Coorongite. Up to the present time neither the extent of these finds nor their commercial value has been ascertained.

*Bitumen*, is known to exist in Victoria, and it is reported to *Bitumen*. have been found near the township of Coonabarabran, in New South Wales.

*Kauri Gum*, a resinous substance somewhat resembling amber in *Kauri Gum*. appearance, and like that production an exudation from trees, is found only in New Zealand, where it is included under the head of minerals, although more logically entitled to be considered as a vegetable product. In that Colony kauri gum forms the object of an extensive and lucrative commerce. It is computed that the total value of this product obtained from 1853 to the end of 1889, was £5,016,124. In the year 1889 the quantity obtained represented a value of £329,590.

## SALTS.

- Rock Salt.** Common *Rock Salt* has been found in New South Wales in rock crevices in several parts of the Colony, but it is not known to exist in large deposits so as to be of commercial importance.
- Natron.** *Natron* is said to occur in the neighbourhood of the Namoi River, in New South Wales. It appears as a deposit from the mud-wells of that region.
- Epsom Salt.** *Epsomite*, or epsom salt (sulphate of magnesia), is seen as an efflorescence in caves and overhanging rocks of the Hawkesbury sandstone formation, and is found in various parts of New South Wales.
- Alum Stone.** *Alunite*, or alum stone, is also found in New South Wales. Large deposits are said to occur near Bullah Delah, in the neighbourhood of Gloucester. Fluor spar has been found in New South Wales.

## EARTHY MINERALS.

- Marble.** *Marble* is found in many parts of New South Wales, South Australia, New Zealand, and Tasmania. In New South Wales marble quarries have been opened in several districts, and some very fine specimens of the stone have been obtained.
- Lithographic Stone and Omaru Stone.** *Lithographic stone* has been found in New Zealand, where another beautiful species of limestone known as the *Omaru stone* is also procured. This stone has a fine, smooth grain, and is of a beautiful creamy tint. It is in great demand for public buildings, not only in the Colony where it is found, but in the great cities of continental Australia, which import large quantities of this stone for the embellishment of their public edifices.

*Gypsum* is found crystallised in clay-beds in New South Wales, Gypsum. and in isolated crystals in the Salt Lakes of South Australia, where a small proportion of sulphate of lime is present in the water. It is also found in portions of Victoria. This mineral is of commercial value for the manufacture of cement and plaster of Paris. It is found in the form of an insoluble salt in New South Wales, Victoria, and New Zealand.

*Apatite*, another mineral of considerable commercial importance, Apatite. and very valuable as a manure, occurs in several districts of New South Wales, principally on the Lachlan River, at the head of the Abercrombie, and in the Clarence River district.

### QUARTZ AND SILICA.

*Quartz* is of common occurrence in all parts of Australasia. Quartz. Rock crystal, white, tinted, and smoky quartz are frequently met with, as well as varieties of crystalline quartz, such as amethyst, jasper, and agate, which possess some commercial value.

Common *Opals* are frequently found in the basaltic formations Opals. of Australasia. The precious, or noble opal, which might be included under the head of precious stones, comes chiefly from Queensland and the northern portions of New South Wales.

*Chalcedony*, *carnelian*, *onyx*, and *cat's eye*, are found in New Chalcedony,  
carnelian, &c. South Wales; probably also in the other colonies, particularly Queensland.

*Tripoli*, or rotten stone, an infusorial earth, consisting of Tripoli. hydrous silica, which has some value for commercial purposes, has been found in New South Wales, Victoria, and New Zealand.

*Meerschaum* is reported to have been discovered near Tamworth, Meerschaum. in New South Wales.

*Mica* is also found in granitic country, chiefly in the New Mica. England and Barrier districts.

## CLAYS.

Kaolin and other  
clays.

*Kaolin*, *fire-clays*, and *brick-clays* are common to all the colonies. Except in the vicinity of cities and townships, however, little use has been made of the abundant deposits of clay. Kaolin, or porcelain clay, although capable of being used for commercial purposes, has not as yet been utilised to any extent.

## GEMS AND GEMSTONES.

Diamonds.

Many descriptions of gems and gemstones have been discovered in various parts of the Australasian Colonies, but no systematic search has been made for any but the diamond.

Diamonds are found in New South Wales, Victoria, and Queensland, but only in the first-named Colony have any attempts been made to work the diamond drifts. The principal diamond-fields are situated at Bingera, near Inverell, in the New England district. The Government of New South Wales has, on various occasions, obtained the services of experts to report upon the fields, as well as the gems which have been from time to time extracted from them, and these reports have generally been of an encouraging nature.

The number of diamonds found in the Colony to the end of 1887 is estimated at 75,000, the largest one being of  $5\frac{5}{8}$  carats, or 16.2 grains. The diamonds occur in old tertiary river drifts, and in the more recent drifts derived from them. The deposits are extensive, and have not yet been thoroughly prospected. The New South Wales diamonds are harder and much whiter than the South African diamonds, and are classified on a par with the best Brazilian gems. During the year 1887 the diamond companies at Cope's Creek, near Bingera, produced about 23,000 diamonds, weighing 5,151 carats; but in 1888, owing to the severe drought which occurred, the search for diamonds had to be temporarily abandoned. In 1889 finds are reported to the extent

of 2,196 carats, valued at £878 ; the number of stones found is not returned. With efficient methods of working this industry bids fair to become a profitable one.

Under the generic name of *Corundum* are included the most Corundum. valuable gems known to commerce, next to the diamond. The sapphire, which is the most common of these gems, is found in all the Colonies, principally in the neighbourhood of Beechworth, Victoria.

Oriental emeralds are found in New South Wales, and in Gippsland in Victoria.

The yellow corundum, or Oriental topaz, has been found in New South Wales. Oriental amethysts also have been found in that Colony, and the red corundum, or ruby, the most valuable of all these gems, has been found in Queensland, as well as in New South Wales.

According to an authority on the subject of gem-stones, rubies, Miscellaneous gems. Oriental amethysts, emeralds, and topaz have been chiefly obtained from alluvial deposits, but have rarely been met with in a matrix from which it would pay to extract them.

Chrysoberyls have been found in New South Wales ; spinel rubies, in New South Wales and Victoria ; white topaz, in all the Colonies ; and yellow topaz, in Tasmania. Zircon, tourmaline, garnet, and other gem-stones of little commercial value, are found in all the Colonies.

In South Australia some very fine specimens of garnet were found, which caused some excitement at the time, as the gems were mistaken for rubies. The stones were submitted to the examination of experts, whose reports disclosed the true nature of the gems, and dispelled the hopes of those who had invested in the supposed ruby-mines of South Australia.

## MINERAL WEALTH OF AUSTRALASIA.

Summary of the mineral resources of Australasia.

Australasia possesses invaluable mineral resources, and though enormous quantities of minerals of all kinds have been won since their first discovery, the deposits, with the exception, perhaps, of gold, have only reached the first period of their exploitation. Vast beds of silver, tin, copper, and coal are known to exist, the development of which must be left to future generations, and the value of which is absolutely beyond computation.

Value of minerals raised in 1889.

In the year 1889 the total value of minerals raised, and the proportion due to each Colony, were :—

Colony.	Total production.	Percentage each Colony.
New South Wales .....	4,470,338	36·86
Victoria .. .....	2,472,962	20·39
Queensland .....	2,743,267	22·62
South Australia .....	426,210	3·52
West Australia .....	63,575	0·52
Tasmania .....	458,471	3·78
New Zealand .....	1,493,167	12·31
<b>Australasia .....</b>	<b>12,127,990</b>	<b>100·00</b>

The total value of minerals raised in 1889 exceeds by about £1,200,000 the average annual amount since 1852. It will, however, be easily understood that the proportion of mineral wealth extracted per head of the population is much less than it was during the prevalence of the gold fever. In comparison with that of the years 1851 to 1871 the production of the precious metals is considerably reduced. Nevertheless the search for gold led to the expansion of the mining industry into other channels, and although the gold-mining population has decreased, the number of miners engaged in the extraction of other minerals has largely increased, and it is a question whether the total number

of persons who gain their livelihood by mining pursuits at the present time is not equal to the number who were so engaged at the time when gold and coal alone were the great elements of the mineral wealth of the Australasian colonies. The resources known to exist, and yet to be developed in these colonies, are likely to maintain, for many generations to come, a large and prosperous mining population.

Comparing the value of mineral production with the population the largest share is obtained by Queensland, with £6 18s. 2d. per inhabitant, the mean for Australasia being £3 5s. The following are the values for 1889 for each Colony :—

Mineral Production per head of population, 1889.

Colony.	Per head of population.
	£ s. d.
New South Wales .....	4 0 1
Victoria .....	2 4 9
Queensland .....	6 18 2
South Australia .....	1 6 6
Western Australia .....	1 9 7
Tasmania .....	3 1 7
New Zealand .....	2 8 8
Australasia .....	3 5 0

The following table shows approximately the value of the minerals raised in Australasia, and although the data in a few of the Colonies are somewhat defective, making it impossible to arrive at the correct amounts to be placed in the column headed "Other minerals," the defect is not of material consequence, and will not affect the gross total. The figures represent the production from the first discovery of the several deposits, to the close of the year 1889; but if the value of the coal raised prior to 1852—£279,923—be deducted from the total amount, the sum will represent the value of minerals won from 1852 to 1889. This amounts to £415,299,519, or an average of £10,936,300 for the thirty-eight years.

Value of total  
Australasian  
mineral produc-  
tion.

## Total value of Minerals raised up to the end of 1889.

Colony.	Gold.	Silver and Silver Lead.	Copper.	Tin.	Coal.	Kerosene Shale.	Other Minerals.	Total.
	£	£	£	£	£	-£	£	£
New South Wales ...	37,614,887	4,919,952	3,278,621	5,362,643	22,787,156	1,234,453	427,607	75,625,319
Victoria ..	225,003,192	83,729	191,107	670,183	29,706	.....	.....	225,977,917
Queensland .....	23,897,608	420,072	1,954,247	3,653,960	1,056,283	.....	25,971	31,008,141
South Australia .....	1,068,191	56,276	19,477,551	356	.....	.....	366,126	20,968,500
Western Australia ...	518,871	.....	*137,980	300	.....	.....	*318,910	976,061
Tasmania .....	2,151,071	12,882	900	4,711,424	141,416	.....	.....	7,017,693
New Zealand... ..	45,652,191	128,835	17,862	.....	2,998,185	.....	5,208,736	54,005,809
Australasia.....	335,906,011	5,621,746	25,058,268	14,398,866	27,012,746	1,234,453	6,347,350	415,579,440

\* So far as can be ascertained.



## GENERAL PRODUCTION.

TO obtain a fair approximation of the number of persons engaged in various walks of life in Australasia is at the present time impossible, the information which might serve as a basis for a calculation of this kind being of a very meagre and incomplete description. In 1881, when a census was taken in all the colonies of the group, the occupations of the persons enumerated were made a feature of the inquiry ; but in every instance the classification was unsatisfactory, and it is only possible to make a comparison between the different provinces by a subdivision into very comprehensive classes.

Avocations of  
the people.

The classes, however, are not scientific. In none of the colonies was the strong necessity recognized by the compilers of the Census of 1881, of distinguishing the maker from the dealer, the industrial workers from those employed in commercial pursuits. Hence it is quite impossible to define with exactness each class. To avoid a repetition of this error it was determined at the recent Australasian Census Conference held in Hobart, to adopt a method of classification under which the population will be separated into two great divisions—workers and dependants. The workers are arranged in the natural classes of primary producers and distributors, and these again into their various orders and sub-orders. By this arrangement it is hoped that the forthcoming Census will afford valuable material for the elucidation of problems which now perplex the economist and the statesman, and will serve for a basis by which the future progress of Australasia may be gauged. The figures given in the following tables roughly represent the numbers engaged in the principal pursuits so far as the same can be classified, but must, however, be used with caution, owing to the defective principle on which they were originally classified.

Classification  
unsatisfactory.

## Occupations at Census of 1881.

Occupations.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	New Zealand.	Tasmania.
Engaged in—							
Government service .....	5,787	4,494	1,426	2,129	483	2,963	661
Learned professions .....	10,184	13,950	2,899	3,895	482	7,263	1,659
Mercantile pursuits .....	22,901	17,616	3,836	5,569	472	9,677	1,555
Agricultural „ .....	89,682	108,919	22,004	30,330	3,336	42,722	17,748
Pastoral „ .....	23,110	15,283	11,263	4,490	1,427	11,725	1,660
Mining „ .....	17,709	36,066	11,439	2,196	102	14,273	3,090
Maritime „ .....	5,501	3,363	1,911	2,530	431	4,518	969
Artificers and labourers .....	113,568	124,337	27,211	43,488	3,616	67,705	15,878
Women, children, and domestic servants ..	427,247	504,321	122,438	175,036	17,790	316,550	68,962
Persons of independent means .....	5,294	1,979	116	729	96	399	559
Supported by the community .....	7,825	9,901	2,151	1,923	779	3,470	621
Otherwise engaged and unspecified.....	22,660	22,117	6,831	7,550	694	8,668	2,343
Total population .....	751,468	862,346	213,525	279,865	29,708	489,933	115,705

It would be useless to attempt to make any comparisons or deductions from the foregoing tables, for, since the Census of 1881, very material changes have taken place in several of the Colonies, which would invalidate conclusions drawn from perfect data, and it must also be confessed that the figures just given are far from perfect. Unfortunately, little later information is available. With the exception of New South Wales, none of the Colonies publish statistics in regard to employment in agriculture; in the Colony named the number of persons so employed during the season which ended with March, 1890, was 80,037, and of those regularly employed in pastoral pursuits 26,189.

In regard to mining there is more information. The following were the numbers, so far as can be ascertained, for the year 1889 :—

New South Wales .....	28,970 hands.
Victoria .....	24,541 „
Queensland .....	11,370 „
South Australia .....	3,694 „
New Zealand* .....	23,858 „

\* Census of 1886.

Concerning five Colonies only is there information in regard to employment in pursuits which are classed under the vague category of works and manufactories.

The particulars for these Colonies are as follows :—

New South Wales .. .....	47,610 hands.
Victoria .....	59,181 „
South Australia .....	11,964 „
Tasmania .....	2,179 „
New Zealand .....	22,095 „

In the table just given the returns from each Colony are put on the same basis.

The horse-power and value of plant is known only in the case of three colonies, viz. :—New South Wales: horse-power of plant, 25,790; value, £5,411,478; Victoria: horse-power, 28,547; value, £5,939,970; and New Zealand; horse-power, 19,315; value £2,108,025.

Manufactures  
yet undeveloped

Taking Australasia as a whole, it may be said that manufacturing, properly so called, is in its infancy; most of the hands are employed in works depending on the natural production of the country, or in what may be termed domestic industries, that is, furnishing the supply of goods which must of necessity be produced on the spot. The Colony of Victoria is perhaps of all the colonies the possessor of the most varied classes of industries, but the signs are not wanting that other colonies will soon seek in manufacturing industries outlets for capital which they have hitherto found in other channels.

Value of articles  
produced.

No reliable figures are available of the value of articles produced in the manufactories of the various colonies during 1889. Regarding other forms of industry full particulars are given in previous pages. The value of the labor of primary producers, that is to say, of those mainly engaged in the cultivation or acquisition of food products, and in obtaining other raw materials from natural sources, was, for the year 1889, £83,049,700.

The share of each Colony and the value per head was :—

Colony.	Total Primary Production.	Total Production per Head of Population.
		£ s. d.
New South Wales .....	26,868,900	23 18 8
Victoria .....	17,024,900	15 4 7
Queensland .....	11,734,800	28 17 2
South Australia .....	8,253,100	25 8 8
Western Australia .....	1,316,100	30 1 11
Tasmania .....	2,854,300	18 16 10
New Zealand .....	14,997,600	24 3 7
Australasia .....	83,049,700	21 18 8

The total production of the Colonies from the primary industries, distributed under the various branches, is as follows :—

Primary Industries of Australasia.

Colony.	Agriculture.	Pastoral Industries.	Dairy Farming.	Mineral Production.	Forestry and Fisheries.	Total Production.
	£	£	£	£	£	£
New South Wales ..	4,931,600	14,725,300	1,652,000	4,470,000	1,090,000	26,868,900
Victoria .....	6,945,400	4,920,500	2,188,000	2,473,000	498,000	17,024,900
Queensland .....	1,855,000	5,678,900	765,000	2,743,000	692,000	11,734,800
South Australia ....	4,730,500	2,054,600	726,000	426,000	266,000	8,253,100
Western Australia ..	298,300	585,800	91,000	64,000	277,000	1,316,100
Tasmania .....	1,254,900	561,400	260,000	459,000	319,000	2,854,300
New Zealand .....	4,739,800	6,215,800	1,608,000	1,493,000	938,000	14,997,600
Australasia .....	24,806,400	34,745,300	7,290,000	12,128,000	4,080,000	83,049,700

Compared with the older countries of the world, the amounts stated above are by no means insignificant, and as regards production per head, Australia exceeds any other country of which the records are available. Although the data are incomplete on which an exact statement can be founded, there is sufficient information to warrant the assertion that from primary industries alone, Australasia produces more per inhabitant than the combined industries of any other country, and a consideration of this fact will perhaps explain the general prosperity which these Colonies have enjoyed, and the ease with which they bear their apparently great indebtedness.

Comparison with older countries.

Primary Industries of the World.

Country.	Total.	Per head of Population.
	£	£ s. d.
United Kingdom .....	349,600,000	9 18 5
France .....	461,480,000	12 5 0
Germany .....	475,400,000	10 10 2
Holland and Belgium .....	116,700,000	12 12 10
Austria-Hungary .....	330,150,000	8 14 4
Roumania .....	67,000,000	12 13 6
Russia .....	521,200,000	5 19 8
Italy .....	181,000,000	6 7 2
Spain .....	142,500,000	8 7 9
United States .....	681,950,000	13 10 1
Canada .....	60,450,000	13 19 7
Australasia ..	83,049,700	21 18 8

Aggregate production of New South Wales.

Production per inhabitant.

Production compared with area.

Judged by the aggregate production, New South Wales stands far above the other Colonies, a position which it owes to the largeness of its interests in pastoral pursuits. The value of the return from this industry was £14,725,300, a sum little short of the total production of Victoria and New Zealand from all primary industries, and in excess of the production of the other Colonies from the same sources. As regards the average production per inhabitant, Western Australia stands first and Queensland second, while Victoria is lowest, having less than half the production per head of the first-named colony. Such a condition of things is only what might be anticipated from the circumstances of the Colonies. But a comparison of the production of the Colonies from primary industries per head of population is liable to give a fallacious importance to the Colonies with large territories and scanty population, for it is but a natural expectation that where the population of a country is dense, a large proportion of them will be engaged in other than primary industries. If the production be compared with the extent of territory enjoyed by each Colony it will be found that the positions of several of the Colonies are reversed. Thus Victoria occupies first position with an average production of £193 14s. 5d. per square mile, while Western Australia has the lowest return of £1 4s. 10d. The following, as well as the preceding table, bear testimony to the great natural resources of New Zealand, which has an average production per head of £24 3s. 7d. and per square mile of £143 11s. 2d. :—

Colony.	Total production per square mile.		
	£	s.	d.
New South Wales .....	86	9	7
Victoria .....	193	14	5
Queensland ..	17	11	1
South Australia ..	9	2	8
Western Australia .....	1	4	10
Tasmania .....	109	3	5
New Zealand.....	143	11	2
Australasia .....	26	5	5

## FOOD SUPPLY AND COST OF LIVING.

CONSIDERING the comparatively high rate of wages which prevails, food of all kinds is fairly cheap, and articles of diet which in other countries are almost within the category of luxuries, are largely used, even by the poorer classes. The average quantities of the principal articles of common diet annually consumed in the various Colonies of Australasia are given below :—

Average consumption of food in Australasia.

Consumption of Foods, &amp;c., in Australasia.

Article.	New South Wales.	Victoria.	South Australia.	Queensland.	Tasmania.	New Zealand.	Australasia.
Wheat .....	390	377	390	365	402	454	395
Rice .....	12.5	15	4.5	24	9	8.5	13
Potatoes .....	215	282	195	250	389	412	279
Sugar .....	94	100	87	59	86	78	89
Tea .....	8.2	7.2	6.4	8.7	6.4	6.7	7.5
Coffee .....	13	17	21	14	8	10	14
Cheese .....	6	...	...	...	...	4.5	5.4
Butter .....	16	...	...	...	...	16	16
Salt .....	38	...	...	43	20	29	35
Meat—Beef .....	168	155	...	280	60	90	163
Mutton .....	81	98	...	90	150	110	101
Pork, &c. ....	12	12	...	...	...	...	12
Tobacco and Cigars.....	3.4	2.7	2.1	3.5	1.8	2.0	2.8

It will be seen that the consumption of wheat varies from 365 lb. in Queensland to 454 lb. in New Zealand, the average consumption being 395 lb. per head. Rice, which is almost entirely imported, varies greatly in the quantity used, only 4.5 lb. being the consumption of South Australia, as against 24 lb. in Queensland. The use of tea is universal in Australia, the consumption being largest in New South Wales and Queensland—with 131 oz. and 139 oz. respectively. The consumption of this beverage in

Large consumption of Tea.

England amounts to 73 oz. per head, in the United States to 21 oz., while on the continent of Europe the quantity does not exceed 1 oz. Sugar also enters largely into consumption, the average being 100 lb. per head in Victoria and 94 lbs. in New South Wales. Coffee is not such a favourite beverage in Australasia, the consumption being scarcely more than one-ninth that of tea. It is used most largely in South Australia, where the annual quantity amounts to 21 oz.

Consumption of Meat.

The consumption of meat has been determined with exactness for only three colonies, but these may be taken as fairly representing the whole group. The average quantity of beef consumed in the year amounts to 175 lb. per head, that of mutton to 89 lb., and of pork 12 lb.; in all, 276 lb. It would appear that each inhabitant of these colonies requires daily about three-quarters of a pound of meat, and that during the year two sheep are killed for each member of the community, and one bullock to every four persons. It is obvious, therefore, that much meat must be wasted.

Consumption of food in Australasia as compared with other countries

Judged by the standard of the food consumed, the population of Australasia must appear remarkably prosperous, compared with that of other countries. This will more clearly be seen from the following table, the particulars given in which, with the exception of those referring to Australasia, have been taken from Mulhall's History of Prices :—

Consumption of Foods.

Articles of Consumption.	Australasia.	Great Britain.	France.	Germany.	United States.
	lb.	lb.	lb.	lb.	lb.
Grain .....	395	330	455	166	305
Meat .....	276	105	74	69	120
Sugar .....	89	72	21	21	23
Salt.....	35	40	30	25	39
Butter .....	16	26	7	12	18
Potatoes.....	279	315	550	1,060	150
		oz.	oz.	oz.	oz.
Tea .....	120	73	1	1	21
Coffee.....	14	15	52	83	115



Taking only the principal articles of the foregoing list, namely, grain, meat, sugar, butter, and potatoes, and reducing them to a common basis of comparison, it will be found that the amount of thermo-dynamic power, capable of being generated by the food consumed is largely in favour of Australia. For purpose of comparison the figures of Dr. Edward Smith, F.R.S., in his well-known work on Foods, have been used, the heat developed being reduced to the equivalent weight lifted 1 foot high:—

## Thermo-dynamic effect of Foods per day.

	Tons lifted 1 foot high.
Australasia .....	3,254
New South Wales .....	3,122
Great Britain .....	3,213
France .....	1,947
Germany .....	2,797
United States .....	1,931

The substances included in this table are largely supplemented both in America and Europe by other foods, but not more largely than in these colonies; and in the table just given will probably be found a just view of the comparative quantity and food-value of the articles of consumption in each of the countries mentioned. The comparison will appear much more in favour of Australasia when we take into consideration the average amount of work which each individual in the community is called upon to perform. In Australasia, too, the proportion of women and children engaged in laborious occupations is far less than in Europe or America, and the hours of labor of all persons are lighter, so that the amount of food energy required is not nearly so great.

The most remarkable feature of the diet of the Australasian people is the large quantity of meat they use. The consumption per inhabitant in Germany is 69 lb., in Australia it is four times that quantity, while in the United States, a meat exporting

Comparative  
thermo-dynamic  
effect of food.

Meat con-  
sumption of  
Australasia.

country, the consumption is considerably less than half that of Australasia. The following table shows the meat consumption per head for the principal countries of the world :—

## Average Consumption of Meat.

	lb. per inhabitant.
Great Britain.....	105
France .....	74
Germany .....	69
Russia.....	48
Austria .....	64
Italy ..	23
Spain .....	49
Belgium and Holland .....	69
Scandinavia .....	67
United States .....	120
Australasia.....	276

It therefore becomes a question of importance as to whether so large a consumption of meat can be maintained. Under the most favourable conditions, that is, if there were no losses from failure of water or grass, the increase of both sheep and cattle would be about 23·5 per cent. The ordinary requirements of food supply, excluding exports, absorb 6·8 per cent. of the sheep, and 9·4 per cent. of cattle; and if to these figures be added 5 per cent. for deaths from ordinary causes, there would remain a possible net surplus of 11·7 and 9·1 per cent. respectively. Unfortunately, conditions are not always favorable, nor droughts infrequent, so that the actual increase of sheep is scarcely more than 30 per cent. of what is possible, and that of cattle scarcely more than 11 per cent. Although it is improbable that these Colonies could under any circumstances find sustenance for a continued increase of stock at the maximum given above, there is still an ample margin between the rates of increase which are possible and those now obtained, in saving a portion of which capital might be profitably invested.

If it were possible by water and food conservation to save one-fourth of the natural increase of the stock, the lavish use of meat which now obtains could be continued, while any increase above that named would be available for export. Unless, however, steps are taken to mitigate the effects of the frequent droughts which afflict the country, and to save part of the astonishing and unnecessary waste of animal life, the demand for beef will eventually exceed the supply. But even in such a contingency it will always be possible to again overtake the demand, if measures be taken to minimize the disastrous effects with which a failure of the season is now attended. With regard to sheep the case is different, the supply is never likely to be seriously trenched upon, and a very large surplus will always be available for meeting the requirements of markets outside Australia.

In the table at the commencement of this chapter the consumption of tobacco is shown as well as that of food. The use of tobacco appears to be more prevalent in Queensland and New South Wales than in any of the other Colonies, while the smallest consumption is in Tasmania. Compared with other parts of the world the average consumption of Australasia will not appear excessive. The following figures are from the "Dictionary of Statistics":—

Annual consumption of Tobacco per inhabitant.

	oz.		oz.
United Kingdom .....	23	Spain and Portugal .....	32
France .....	29	Switzerland .....	82
Germany .....	72	United States .....	59
Russia.....	24	India .....	30
Austria .....	80	Japan .....	39
Italy .....	22	Brazil .....	70
Holland and Belgium ...	84		
Turkey ... ..	70	Australasia. ....	45

Consumption of Alcohol.

Taking Australasia as a whole it compares very favourably with most of the European countries in regard to the quantity of intoxicants annually consumed by each inhabitant, as the following statement shows. The figures would look even more favourable to Australasia were the fact of the large preponderance of males over females in these colonies made a feature in the comparison :—

Consumption of Alcohol in various countries—in Proof Gallons.

Country.	Consumption.	Country.	Consumption.
	gallons		gallons.
United Kingdom .....	3·57	Portugal.....	3·00
France .....	5·10	Holland .....	4·00
Germany .....	3·08	Belgium .....	4·00
Russia .....	2·02	Denmark .....	5·00
Austria .....	2·80	Scandinavia .....	4·36
Italy .....	3·40	United States .....	2·65
Spain.....	2·85	Australasia .....	2·82

Consumption of Alcohol in each Colony.

The following figures show the consumption for all the colonies during the year 1889 :—

Consumption of Intoxicants in the Australasian Colonies.

Colony.	Spirits.		Wine.		Beer, &c.		Equivalent in Alcohol (proof) per inhabitant.
	Total.	Per inhabitant.	Total.	Per inhabitant.	Total.	Per inhabitant.	
New South Wales .....	1,159,380	1·05	916,630	0·82	12,029,000	10·89	2·71
Victoria .....	1,104,074	1·00	1,216,024	1·11	21,261,964	19·25	3·82
Queensland .....	462,944	1·16	225,807	0·57	3,911,531	9·85	2·60
South Australia .....	185,172	0·57	307,600	0·96	4,261,711	13·26	2·58
Western Australia .....	53,059	1·23	146,335	3·41	562,226	13·10	3·95
Tasmania .....	81,609	0·55	39,607	0·27	1,449,234	9·74	1·88
New Zealand .....	370,383	0·60	107,818	0·17	4,676,553	7·62	1·64
Total and Means .....	3,416,621	0·91	2,959,821	0·79	48,152,219	12·90	2·82

The largest consumption of spirits per inhabitant is in Western Australia, Queensland being second. With regard to the consumption of wine, Western Australia is a long way ahead, Victoria being second. Beer is most largely consumed in Victoria, her proportion being  $19\frac{1}{4}$  gallons per head of the population; South Australia being second, with  $13\frac{1}{4}$  gallons, the quantity for Western Australia being only a trifle less. The average consumption of alcohol for Australasia amounts to 2.82 gallons of proof spirit per inhabitant; ranging from 3.95 gallons in Western Australia to 1.64 gallons in New Zealand. New South Wales, with 2.71 gallons per head, is a trifle below the average; Victoria, with 3.82 gallons, shows a slight falling-off from the previous average of that colony; Tasmania, with 1.88 gallons, is a very little above the average of New Zealand.

It is popularly supposed that Australian wines and beers are not heavily charged with spirit as compared with the imported articles; this belief is erroneous. Several descriptions of Australian wines have a natural strength of 30 per cent. of proof spirit, while from analyses recently made it would appear that the strength of these wines offered for sale varies from 24 to 37 per cent. of spirit. On the same authority it was stated that imported beers ranged from 13.88 to 15.42 per cent. in the case of English, and from 9.58 to 11.76 per cent. of proof spirit in Lager, while the local manufacture varied according to the make from 11.21 to 15.12, the average being 13.75 per cent. It is generally understood, however, that since the imposition of excise duties on colonial beer in 1887, the strength of the article has been somewhat reduced, and does not average more than 13 per cent. of proof spirit.

Sufficient data are not available to enable a calculation to be made of the cost of living in all the Colonies, but with the materials to hand an estimate can be arrived at for New South Wales. The conditions of life and style of living are much the same in the Colony named as in the other Colonies of the group, and the following figures may be taken as fairly indicative of the state of things obtaining in Australasia generally.

Strength of  
Australian  
Wines and Beers

Cost of living in  
the Australasian  
Colonies.

Cost of living in  
New South  
Wales.

It appears that out of £63,000,000, the total income of persons living or holding property in New South Wales, about £52,000,000 were absorbed in meeting the actual expenses of living, leaving a balance of £11,000,000, which represents the increment of wealth and the income drawn from the Colony by persons whose property is in New South Wales, but who reside abroad.

The revenue derived from New South Wales by persons residing abroad, may be set down at  $3\frac{1}{2}$  millions, so that the increment of wealth was  $7\frac{1}{2}$  millions. This increment may be divided into realized—that is to say the money income which is saved—and the unrealized income, the chief portion of which arises out of the natural increase in the number of the flocks and herds of the country. To these some would add as a third source of income the increment to land values which arises without the expenditure of labor, owing to the mere expansion of population. No account of this has been taken in the figures just given, for though such income is very considerable, it does not arise from production, and is of necessity counterbalanced by the lessened income of those who use the land.

Grouped under comprehensive heads the expenditure of the people of New South Wales may be set down as follows:—

Expenditure of the People in New South Wales.

	£
Food and non-alcoholic beverages.....	17,130,000
Fermented and spirituous liquors.....	4,830,000
Tobacco.....	1,020,000
Clothing and drapery.....	7,990,000
Furniture.....	1,810,000
Rent or value of buildings used as dwellings.....	6,410,000
Locomotion.....	1,790,000
Fuel and light.....	1,670,000
Personal attendance and service.....	2,440,000
Medical attendance, medicine, and nursing.....	1,230,000
Religion, charities, education (not including State expenditure)	740,000
Art and amusement.....	830,000
Books, newspapers, &c.....	850,000
State services, postage, telegrams, succession dues.....	690,000
Household expenses not included elsewhere.....	1,700,000
Miscellaneous expenses.....	870,000

Total Expenditure..... £52,000,000

The expenditure thus amounted to £47 3s. 0d. per annum, or 2s. 7d. per day for each individual, which may be thus distributed :—

## Daily Individual Expenditure.

	Pence per day.	Proportion of Expenditure per cent.
Food .....	10·2	32·9
Clothing .....	4·8	15·4
Stimulants .....	3·5	11·3
Rent .....	3·8	12·3
Sundries .....	8·7	28·1
Total Expenditure.....	31·0	100·0

According to Mulhall the expenditure per head in the leading countries of Europe and in the United States is :—

## Daily Expenditure per head in various countries.

Countries.	Expenditure per head.
	pence.
United Kingdom.....	20·8
France .....	15·4
Germany .....	12·8
Russia .....	6·6
Austria .....	10·1
Italy .....	7·6
Spain .....	8·4
Belgium and Holland.....	13·8
Scandinavia .....	11·1
United States .....	15·6
New South Wales .....	31·0

The table just given affords but a partial view of the question of the cost of living; for if the total earnings of the countries above enumerated be considered as an element of comparison, it will be found that few countries approach Australasia in the small proportion of income absorbed in providing food for the people. The following table, given on the same authority as the preceding, shows that, while the actual cost of food and drink is £19 18s. in

the Colony of New South Wales, as against £13 9s. in Great Britain and £6 3s. in Russia, the earnings required to pay for this food are not larger proportionately than in the United States or Great Britain, the countries which show most favourably in the table. The number of working days in the year is assumed to be 300, allowing for thirteen days' sickness and fifty-two Sundays :—

## Comparative Cost of Food and Beverage.

Country.	Average cost per inhabitant yearly.	Ratio of Food to earnings per cent.	Days of Work equal to Food.
	£ s. d.		
United Kingdom .....	13 9 0	37·8	113
France .....	10 8 0	40·6	122
Germany .....	9 5 0	51·8	155
Russia .....	6 3 0	60·2	180
Austria.....	8 8 0	53·1	159
Italy .....	6 6 0	53·3	160
Spain .....	7 11 0	56·4	169
Belgium and Holland .....	10 14 0	45·5	136
Denmark .....	11 8 0	50·6	152
Scandinavia .....	8 6 0	50·0	150
United States.....	10 9 0	37·0	111
Australasia (New South Wales) .....	19 18 0	37·0	111



## FINANCE AND PUBLIC WEALTH.

THE first century of Australasian history closed on the 26th <sup>Australasian</sup> January, 1888. It is impossible to trace step by step the <sup>wealth.</sup> progress made during that period, as the data for the purpose are for the most part wanting. Sufficient material is, however, available, from which a comparative statement of the wealth of the colonies at different periods may be deduced. In the following figures the private wealth of the people has alone been considered, the value of the unsold lands of the State, as well as the value of public works, having been omitted. The subjoined table shows the wealth of the whole of Australasia and the increase thereof at intervals of twenty-five years from the date when this territory was first colonized :—

January.	Australasia.	
	Amount of Wealth.	Increase during 25 years.
	£	£
1788	—	Country first colonized.
1813	1,000,000	1,000,000
1838	26,000,000	25,000,000
1863	181,000,000	155,000,000
1888	1,015,000,000	834,000,000

The progress exhibited in this table is marvellous, and as <sup>Marvellous</sup> regards ratio quite unprecedented. Though Australasia has but <sup>increase.</sup> the population of a province of one of the great European powers, in the wealth and earnings of its people it stands before most of the secondary States, and as regards wealth and income per head of population far before any other country. The following figures are designed to illustrate this truth. Those relating to the United

States of America are computed from data derived from the last census of that country; the other figures are given upon the authority of Mr. M. G. Mulhall.

Value of Public Works.

The figures in regard to the wealth of Australasia do not include the value of State property, which in these colonies consists, besides unsold land, chiefly of railways, telegraphs, water and other works, more or less reproductive. If the value of public works were included, the wealth of Australasia would be 1,296 millions, against which the gross public debt is 174 millions, or 13·4 per centum :—

Wealth of Principal Countries.

Country.	Private Wealth.	Wealth per head.	Public Income per head.	Private Income per head.	Ratio of Public Debt to Wealth.
	Millions.	£	£ s. d.	£ s. d.	℥ cent.
Australasia (1889) .....	1,148	308	7 13 11	41 14 0	15·20
United Kingdom .....	8,720	249	2 9 0	35 4 0	8·75
France .....	8,060	218	4 3 0	25 14 0	11·30
Germany .....	6,323	140	0 15 0	18 14 0	3·63
Russia .....	4,343	53	0 16 0	9 18 0	12·70
Austria .....	3,613	95	1 19 0	16 6 0	11·64
Italy .....	2,351	82	2 7 0	12 0 0	22·22
Spain .....	1,593	93	2 2 0	13 16 0	24·53
Belgium .....	806	145	2 13 0	22 2 0	7·70
Holland .....	987	240	2 6 0	26 0 0	8·08
United States .....	9,495	180	2 2 0	40 0 0	3·49
Canada .....	650	148	1 8 0	26 18 0	6·15
Argentine Republic.....	332	146	2 16 0	.....	.....

Details from which the aggregate wealth can be computed are wanting for some of the colonies, but an estimate has been made which is believed to be fairly exact. In the following table will be found the estimated private wealth of each colony, the average per inhabitant, and the ratio which the public debt bears to the private wealth :—

Private Wealth.—Total and per Inhabitant in each Colony of Australasia for 1889.

Colony.	Private Wealth.		Ratio of Public Debt to Private Wealth.
	Total.	Per Inhabitant.	
	Million £	£	Per cent.
New South Wales .....	404	366	11·5
Victoria .....	386	349	9·7
Queensland .....	106	267	24·4
South Australia .....	70	218	29·2
Tasmania .....	31	208	16·2
New Zealand .....	145	236	25·6
West Australia .....	6	140	22·9
Total, Australasia .....	1,148	308	15·2

It will be seen that the ratio of the public indebtedness to private wealth in some of the colonies reaches an extraordinary figure, though in the aggregate this ratio compares very favourably with that of most countries enumerated in the preceding table.

The approximate wealth of Australasia is given in the previous table as 1,148 millions, or £308 per inhabitant. Assuming that the amount of money left by persons who have died, compared with the number of deaths, corresponds with the money possessed by the living, compared with the total population, the sum stated may be roughly verified. Thus, during the five years which ended

## PROPORTION OF PROPERTY-OWNERS.

with 1889, the total number of deaths in all the colonies, except New Zealand and Western Australia, was 211,890, and the value of the estates of the persons who died was £64,178,540, so that the average per head was £303—a sum almost identical with that found by a careful valuation of the elements of wealth of each colony which is given above. That the figures coincide so closely is in some degree accidental, as the probate returns of individual colonies show great variation from year to year.

Distribution of property.

If the number of those who leave property at death compared with the total number of deaths in any year, and the value of the estates of such persons, be taken as indicative of the distribution of wealth throughout the rest of the community, it would appear that 12·5 per cent. of the inhabitants of Australasia have property, which is a much wider distribution than obtains elsewhere. The distribution appears most general in South Australia and Victoria. The average value of estates is greatest in Victoria, and least in Tasmania, as the following table shows. The value of estates, however, is not a point upon which much stress can be placed. The occurrence at irregular intervals of the deaths of very wealthy persons tends to give undue importance to the colony affected; for in a population numerically small the average may possibly be affected by one such death:—

Per centage of Persons leaving Property, and Average Value of Estates, 1885–89.

Colony.	Per centage of persons dying who left property to total deaths.	Average Value of deceased Estates.
New South Wales .....	11·64	£ 2,745
Victoria .....	14·32	2,786
Queensland .....	8·16	1,680
South Australia .....	15·29	1,174
Western Australia .....	10·70	.....
Tasmania .....	11·48	1,091
Average .....	12·49	2,419*

\* Western Australia not included.

The total income of the Australasian Governments for the year 1889 amounted to £28,738,025, and their expenditure to £28,126,353, leaving a surplus of £611,672. New South Wales, South Australia, and Tasmania show a slight deficit, while all the other colonies exhibit a surplus on the year's transactions. As regards New South Wales the deficiency was due to charges accruing in former years, and defrayed in 1889, and not to the failure of the year's revenue to meet the expenditure :—

## Revenue and Expenditure, 1889.

Colony.	Revenue.	Expenditure.
	£	£
New South Wales .....	9,063,397	9,250,271
Victoria .....	8,675,990	7,919,902
Queensland .....	3,614,652	3,550,858
South Australia .....	2,270,433	2,355,927
West Australia .....	442,725	386,000
Tasmania .....	678,909	681,674
New Zealand .....	3,991,919	3,981,721
Australasia.....	28,738,025	28,126,353

The revenue is mainly derived from taxation, which produced £11,575,411, and from public services, such as railways, post and telegraphs, which yielded £11,069,375; in all £22,644,786, or nearly 79 per cent. of the total revenue. The following table shows the revenue of each Colony, arranged under the various heads :—

Sources of  
revenue.

## REVENUE PER HEAD.

## Public Revenue, 1889.

Colony.	Taxation.	Land.	Public Services.	Other Sources.	Total.
	£	£	£	£	£
New South Wales	2,677,169	2,137,563	3,473,123	775,542	9,063,397
Victoria .....	3,749,670	616,028	3,909,323	400,969	8,675,990
Queensland .....	1,734,351	656,945	1,029,163	194,193	3,614,652
South Australia...	711,248	174,246	1,118,679	266,260	2,270,433
Western Australia	194,248	87,016	66,997	94,464	442,725
Tasmania .....	422,644	70,891	131,796	53,578	678,909
New Zealand.....	2,086,081	319,809	1,340,294	245,735	3,991,919
Total, Australasia	11,575,411	4,062,498	11,069,375	2,030,741	28,738,025

Revenue per head.

The revenue per head averaged £7 13s. 11d., varying from £4 11s. 2d. for Tasmania, to £10 6s. 4d. for Western Australia. The rate for each Colony, subdivided into the classification adopted in the previous table, was as follows:—

## Revenue per head of Population, 1889.

Colony.	Revenue derived from				Total Revenue.
	Taxation.	Land.	Public Services.	Other Sources.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
New South Wales	2 8 6	1 18 9	3 2 11	0 14 0	8 4 2
Victoria .....	3 7 11	0 11 2	3 10 9	0 7 3	7 17 1
Queensland .....	4 7 4	1 13 1	2 11 10	0 9 9	9 2 0
South Australia...	2 4 3	0 10 10	3 9 7	0 16 7	7 1 3
Western Australia	4 10 6	2 0 7	1 11 3	2 4 0	10 6 4
Tasmania .....	2 16 10	0 9 6	0 17 9	0 7 2	4 11 2
New Zealand .....	3 8 0	0 10 5	2 3 8	0 8 0	6 10 1
Australasia .....	3 2 0	1 1 9	2 19 4	0 10 11	7 13 11

The Colonies differ considerably in respect to the proportion of revenue raised by taxation. Tasmania obtained 62·25 per cent. of its revenue from this source, while New South Wales raised only 29·54 per cent. through taxation. Taking Australasia as a whole, the proportion of revenue derived from taxation has increased from 33·65 to 40·28 per cent. since 1881. The proportion has advanced in all the Colonies, but most especially in New Zealand, Queensland, and Tasmania. In 1881 New Zealand raised 39·26 per cent. of its revenue by taxation, and 53·28 per cent. in 1889; while in Queensland the proportion increased from 37·13 to 47·98 per cent. during the same period.

The proportion of total revenue raised by taxation for each Colony in 1881 and 1889 was :—

Proportion of Revenue derived from Taxation.

Colony.	1881.	1889.
	Per cent.	Per cent.
New South Wales .....	26·37	29·54
Victoria .....	39·17	43·22
Queensland .....	37·13	47·98
South Australia .....	24·98	31·32
Western Australia.....	42·46	43·87
Tasmania .....	53·34	62·25
New Zealand .....	39·26	53·28
Australasia .....	33·65	40·28

The following table shows the proportion raised by taxation to total revenue in some of the principal countries. With the exception of India and Germany, Australasia raises less by this method of collecting revenue than any of the countries enumerated. The figures, however, prove very little, because in Australasia the railways and telegraphs are State property, which is not the case in most of the countries appearing in the list :—

## Percentage of Revenue derived from Taxation to Total Revenue.

	Per cent.
United Kingdom.....	82·33
France .....	75·96
Germany (five principal States) ..	30·00
Austria .....	72·85
Russia .....	69·19
Belgium .....	51·16
Holland .....	79·33
Italy .....	70·36
Spain.....	70·75
United States .....	91·64
Canada .....	41·42
Cape Colony.....	42·55
India .....	37·58
Australasia .....	40·28

Taxation per head.

The amount raised in Australasia by taxation, per head of population, in 1881, was £2 9s. 4d., increasing to £3 2s. in 1889. The Colony with the highest burthen of taxation is Western Australia, New South Wales, and South Australia being the most lightly taxed, as the following figures show :—

## Taxation per head.

Colony.	1881.	1889.
	£ s. d.	£ s. d.
New South Wales .....	2 6 7	2 8 6
Victoria .....	2 6 1	3 7 11
Queensland .....	2 19 2	4 7 4
South Australia .....	1 19 2	2 4 3
Western Australia .....	3 13 1	4 10 6
Tasmania .....	2 6 1	2 16 10
New Zealand .....	2 19 10	3 8 0
Australasia .....	2 9 4	3 2 0

Revenue from sale of lands.

The practice of treating money derived from the sale and occupation of Crown lands as revenue obtains in all the Colonies, and the money so raised forms one of the largest items of their annual income. The revenue from this source has considerably



fallen off in most Colonies of late years, and must continue to do so as the alienation of the public estate progresses. The proportion of revenue raised from land is highest for New South Wales and lowest for Victoria; but compared with population it is greatest in Western Australia and New South Wales, and least in Tasmania.

## Proportion of Revenue derived from Land.

Colony.	1881.	1889.
New South Wales .....	42·01	23·58
Victoria .....	16·35	7·10
Queensland .....	35·15	18·17
South Australia .....	30·01	7·67
Western Australia .....	15·90	19·65
Tasmania .....	4·90	10·44
New Zealand .....	6·88	8·01
Australasia .....	25·90	14·13

## Revenue from Land per Head of Population.

Colony.	1881.	1889.
	£ s. d.	£ s. d.
New South Wales .....	3 14 2	1 18 9
Victoria .....	0 19 3	0 11 2
Queensland .....	2 16 0	1 13 1
South Australia .....	2 2 8	0 10 10
Western Australia .....	1 7 5	2 0 7
Tasmania .....	0 4 3	0 9 6
New Zealand .....	0 10 6	0 10 5
Australasia .....	1 17 11	1 1 9

The expenditure of the Government of New South Wales is far larger than that of any other Colony of the group; it exceeds that of Victoria by one and a quarter million, and that of New Zealand by more than five and a quarter, and amounted to £9,250,271, out of a total of £28,126,353.

Large expenditure of New South Wales.

The total expenditure for each Colony, distributed under various heads, was :—

## Public Expenditure, 1889.

Colony.	Railways and Tramways.	Other Public Works.	Interest on Debt, &c.	Other Services.	Total.
	£	£	£	£	£
New South Wales	1,782,530	1,687,716	1,805,770	3,974,255	9,250,271
Victoria .....	1,923,997	1,499,862	1,459,242	3,036,801	7,919,902
Queensland .....	581,175	432,136	1,059,768	1,477,779	3,550,858
South Australia...	534,331	218,763	798,991	803,842	2,355,927
Western Australia	63,938	33,702	68,170	220,190	386,000
Tasmania .....	88,568	148,855	209,736	234,515	681,674
New Zealand.....	626,939	452,978	1,616,501	1,285,303	3,981,721
Australasia... £	5,601,478	4,474,012	7,018,178	11,032,685	28,126,353

Details of expenditure.

It will be seen from the foregoing statement that 19·92 per cent. of the whole expenditure is for working the railways and tramways of the colonies, a service not usually undertaken by the State. The ordinary expenses of civil government amount to 39·22 per cent. of the expenditure; public works, post and telegraphs, absorb 15·91 per cent., and the interest on the public debt 24·95 per cent. The rates of expenditure per head of population were as follow :—

Expenditure per inhabitant.

	£	s.	d.
Railway and Tramways .....	1	10	0
Other Public Works—Post and Telegraphs.....	1	3	11
Interest on public debt.....	1	17	7
Other Services—Civil Government.....	2	19	1
Total.....	£7	10	7

The details for each Colony are shown in the following statement :—

Expenditure per head of Population, 1889.

Colony.	Expenditure on account of				Total Expenditure.
	Railways and Tramways.	Other Public Works.	Interest on Debt, &c.	Other Services.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
New South Wales	1 12 3	1 10 7	1 12 9	3 12 0	8 7 7
Victoria .....	1 14 10	1 7 2	1 6 5	2 15 0	7 3 5
Queensland .....	1 9 3	1 1 9	2 13 5	3 14 5	8 18 10
South Australia..	1 13 3	0 13 7	2 9 9	2 10 0	7 6 7
Western Australia	1 9 9	0 15 8	1 11 10	5 2 7	8 19 10
Tasmania .....	0 11 11	1 0 0	1 8 2	1 11 6	4 11 7
New Zealand.....	1 0 5	0 14 9	2 12 8	2 1 10	6 9 8
Australasia...	1 10 0	1 3 11	1 17 7	2 19 1	7 10 7

The most remarkable feature in the general expenditure is the largeness of the amount required to pay interest on the public debt, both in regard to the rate per head and the proportion of total revenue thus hypothecated. The proportion for all colonies is slightly less than one-fourth of the total expenditure, and £1 17s. 7d. per head of population, while the proportion of expenditure for each colony was—

	Per cent.
New South Wales .....	19·52
Victoria.....	18·43
Queensland .....	29·84
South Australia .....	33·91
Western Australia .....	17·66
Tasmania .....	30·77
New Zealand .....	40·59
Australasia .....	24·95

A casual glance at the figures quoted will lend colour to the suggestion sometimes hazarded that the colonies are too rapidly mortgaging their resources, and that the expense of the public debt will prove a greater burthen than can easily be borne.

However true this may be as far as any individual colony is concerned, it is certainly erroneous as regards the whole of Australasia. Out of the sum required to pay interest, viz., £7,018,178, about £3,160,000 is directly recouped by the profit on public railways, while a further amount is yielded by water supply, sewerage, and other works. Besides this, there is a large indirect revenue obtained by each colony from the opening up of its public lands, and from the construction of break-waters, light-houses, bridges, and other works of public utility.

Interest on  
Public Debt of  
other countries.

The subjoined table shows the proportion of total expenditure required to pay interest on the public debt in the countries mentioned :—

Per-centage of Interest on Public Debt to total Expenditure,  
1889.

United Kingdom ... ..	29·65
France .....	34·82
Germany .....	11·21
Austria .....	29·49
Russia .....	33·25
Belgium.....	30·88
Holland.....	27·97
Italy .....	30·79
Spain .....	35·22
United States .....	12·12
Canada .....	17·79
Cape Colony.....	33·13
India .....	5·75
Australasia .....	24·95

If Australasia is taken as a whole, the proportion required to pay interest on the Public Debt is not large compared with other countries, and, with the exception of India, Germany, Canada, and the United States, the colonies enjoy a more favourable position in this respect than any other of the countries enumerated in the foregoing table.

The following table shows the purposes for which loan money has been raised :—

Purposes for which loans raised.

Colony.	Railways.	Water Supply and Sewerage.	Immigration.	Other Services.	Total.
	£	£		£	£
New South Wales	31,380,504	4,122,823	569,930	10,573,192	46,646,449
Victoria .....	29,282,228	5,638,628	.....	2,706,526	37,627,382
Queensland .....	15,374,419	221,170	2,621,727	7,623,634	25,840,950
South Australia...	11,374,903	3,321,300	.....	5,739,297	20,435,500
Western Australia	824,845	5,310	.....	541,826	1,371,981
Tasmania .....	173,548	.....	235,714	4,609,788	5,019,050
New Zealand.....	13,924,072	560,280	2,143,327	20,535,212	37,162,891
Australasia....	102,334,519	13,869,511	5,570,698	52,329,475	174,104,203

The unexpended balance of loans included in the foregoing table under the heading of "Other Services" is shown below :—

Unexpended balances of Loans.

Balance of Loans unexpended at the end of 1889 :—

Colony.	£
New South Wales .....	2,314,352
Victoria .....	1,443,411
Queensland .....	1,835,249
South Australia .....	1,766,815
West Australia .....	30,525
Tasmania .....	497,692
New Zealand .....	961,300

The expenditure from loans for all the colonies amounted to £45 19s. 6d. per head, the rate for New Zealand, Queensland, and South Australia being from about £14 to £17 10s. above the average. Of the leading colonies Victoria stands lowest on the list with an expenditure of £33 13s. 1d. New South Wales compares very favourably with most of the colonies, and having regard to her great natural and acquired wealth the debt per head

Public Debt per head of population.

is by no means large, especially as the charge amounts to only 19·52 per cent. of the general expenditure :—

Proportion per head of the Population.

Colony.	Railways.	Water Supply.	Immigration.	Other Services.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
New South Wales	27 19 3	3 13 6	0 10 2	9 8 5	41 11 4
Victoria.....	26 3 10	5 0 10	.....	2 8 5	33 13 1
Queensland .....	37 16 2	0 10 11	6 8 11	18 14 11	63 10 11
South Australia...	35 1 1	10 4 9	.....	17 13 9	62 19 6
Western Australia	18 17 6	0 2 5	.....	12 8 0	31 7 11
Tasmania .....	1 2 11	.....	1 11 1	30 8 8	33 2 8
New Zealand.....	22 8 11	0 18 1	3 9 1	33 2 2	59 18 3
Australasia...	27 0 6	3 13 3	1 9 5	13 16 4	45 19 6

The relative burthen of the public debt for each Colony is not to be determined by comparing the gross amount with the population, unless the rate of interest payable is also taken into consideration. Thus the general average interest payable by New South Wales is 3·9 per cent., while New Zealand pays 4·76 per cent., so that a debt of £100 in the former is not more burthen-some than £82 in the latter Colony. To afford an exact basis of comparison, the debt of each Colony is shown in the following statement, as it would be if the interest payable were uniformly 5 per cent. :—

Public Debt of Australasia reduced to a 5 per cent. basis.

Colony.	Total Debt.	Debt per inhabitant.
	£	£ s. d.
New South Wales .....	36,384,230	32 8 5
Victoria .....	31,230,072	27 18 7
Queensland .....	21,189,579	52 2 1
South Australia .....	16,757,110	51 12 9
Western Australia.....	1,155,208	26 8 8
Tasmania .....	4,216,002	27 12 7
New Zealand .....	35,379,072	57 0 8
Australasia .. .....	146,311,273	38 12 4

As shown by the following table the loan expenditure of Australasia for 1889 was over nine millions. Victoria expended about three and one-half millions—a sum more than twice the loan expenditure of any other Colony. Against this, however, it may be urged that in previous years the Victorian expenditure has been very moderate. Compared with population several Colonies ranked higher than Victoria, notably Queensland, with £4 2s. 8d. per head. The expenditure for each Colony was :—

## Loan Expenditure, 1889.

Colony.	Expenditure.	Expenditure per head of mean population.
	£	£ s. d.
New South Wales .....	1,464,900	1 6 6
Victoria .....	3,626,501	3 5 8
Queensland .....	1,641,704	4 2 8
South Australia .....	1,259,012	3 18 4
Western Australia .....	135,112	3 2 11
Tasmania .....	367,039	2 9 4
New Zealand .....	515,058	0 16 10
Australasia .....	9,009,326	2 8 3

The public debt of Australasia in 1861 was £12,388,201, while in 1889 it stood at £174,104,203; the increase therefore was at the rate of nearly 10 per cent. per annum—a much greater ratio of increase than that of the population. The growth of the debt from 1861 is shown in the following table :—

## Growth of Public Debt, 1861–1889.

Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales ...	4,017,630	10,614,330	16,924,019	46,646,449
Victoria .....	6,345,060	11,994,800	22,426,502	37,627,382
Queensland.....	70,000	4,047,850	13,245,150	25,840,950
South Australia.....	866,500	2,167,700	11,196,800	20,435,500
Western Australia..	1,750	Nil.	511,000	1,371,981
Tasmania .....	*486,500	1,315,200	2,003,000	5,019,050
New Zealand .....	600,761	8,041,913	27,455,218	37,162,891
Australasia.....	12,388,201	38,181,793	93,761,689	174,104,203

\* In 1862.

Interest on loans.

In 1884 the nominal rate of interest on New South Wales loans was fixed at  $3\frac{1}{2}$  per cent. It was not until 1888, however, that any of the other Colonies followed the example thus set them. In the year named Queensland floated a loan of £2,500,000 at an average price of £95 2s. 9d. per cent., and in 1889 Victoria raised £3,000,000 at  $3\frac{1}{2}$  per cent., the average realised being £103 6s. Since then all the other colonies, except Western Australia, have been successful in floating their loans at the reduced nominal rate, although in some cases at a discount. It is probable the rate will be further lowered to 3 per cent., for Canada and Ceylon have already raised loans at the latter figure. Since 1883 five  $3\frac{1}{2}$  per cent. loans, making a total of £23,500,000, have been floated by the New South Wales Government. That placed on the market in April, 1888, was the most successful floated by the Colony; the average rate, after all incidental charges were paid, was £102 1s. 10d. A similar loan was floated in June, 1889, realising £100 15s. 10d. The 1888 loan carried six months' interest; that of 1889, three months' interest; reducing the former to £100 6s. 10d., and the latter to £99 18s. 4d.

New South  
Wales  $3\frac{1}{2}$  per  
cent. loans.

Victorian  $3\frac{1}{2}$  per  
cent. loans.

The  $3\frac{1}{2}$  per cent. loan floated by Victoria in 1889 brought an average price of £103 6s. per cent., and after interest and expenses were deducted, the net sum realised was £101 12s. per cent., which is the best price yet obtained for Australasian stock. If the loan be compared with the 1889 loan of New South Wales, just alluded to, there is a difference in its favor of £1 13s. 8d. per cent., the Victorian loan having a currency of 35, and the New South Wales loan 30, years.

Rates of Austra-  
lasian loans.

The following statement shows the terms on which the principal colonies were able to borrow in the London market during the past two years. The computations allow for the repayment of the various loans at par on maturity. It will be seen that Victoria is paying the smallest interest to the investors, and New Zealand the highest :—



Australasian Loans, 1889 and 1890, shewing Net Interest to Investors.

Colony.	Date of Negotiation.	Nominal rate of Interest.	Amount.	Currency of Loan.	Average rate per cent. at which sold.	Net amount <i>ex</i> accrued Interest.	Net Interest per cent. to Investors
	1889.	per cent.	£	years.	£ s. d.	£ s. d.	£ s. d.
New South Wales..	July ..	3½	3,500,000	30	102 8 0½	101 10 6½	3 8 4
Victoria .....	Jan. ..	3½	3,000,000	35	103 5 11½	102 14 10	3 7 7
South Australia..	Jan. ..	3½	1,317,800	40	100 1 10	99 4 0	3 10 9
Western Australia	July ..	4	100,000	45	103 15 3	103 1 11	3 12 9
Tasmania .....	April ..	3½	1,000,000	30 to 50	98 5 8½	97 13 6	3 12 6
New Zealand .....	October 1890.	3½	2,700,000	50	95 16 8	95 10 2	3 14 1
Queensland .....	March..	3½	2,264,734	34½	97 16 7	96 7 4	3 13 9
Victoria .....	April..	3½	4,000,000	34	101 10 4½	100 2 4	3 9 10½

The following table shows the actual interest paid by the Governments of New South Wales, Victoria, and Tasmania, on the last three loans raised by them. Unfortunately the data to compute the interest for the other colonies are not available. It will be seen that New South Wales paid for its most favourable loan, £3 9s. 9d., Victoria only £3 8s. 5d., and Tasmania, £3 12s. 7d. per £100. The details are :—

Australasian Loans, showing actual Interest per cent. payable by the Governments.

Colony.	Date of Loan.	Nominal Rate per cent.	Amount of Loan.	Average Amount per cent. realised, less Charges and accrued Interest.	Actual Interest paid by the Governments.
			£	£ s. d.	£ s. d.
New South Wales	1886	3½	5,500,000	92 16 2	3 15 1
"	1888	3½	5,500,000	100 6 10	3 9 9
"	1889	3½	3,500,000	99 18 3½	3 10 1
Victoria "	1888	4	1,500,000	106 18 0½	3 12 9
"	1889	3½	3,000,000	101 11 11½	3 8 5
"	1890	3½	4,000,000	98 19 6	3 11 1
Tasmania .....	1884	4	800,000	97 12 9	4 2 0
"	1886	4	1,000,000	98 8 5	4 1 2
"	1889	3½	1,000,000	96 8 8	3 12 7

The expense of floating the last three loans on the London market for each of the colonies is shown in the following table, Expense of floating loans.

## ACTUAL CREDIT OF THE COLONIES.

from which it appears that the charges for New South Wales are higher than those of the other Colonies :—

## Expenses of Floating Loans on Capital Value.

Colony.	Date of Loan.	Nominal Rate per cent.	Amount of Loan.	Expenses per £100 Stock.
			£	£ s. d.
New South Wales.....	1886	3½	5,500,000	1 13 0
„ .....	1888	3½	5,500,000	1 11 5
„ .....	1889	3½	3,500,000	1 13 0
Victoria .....	1888	4	1,500,000	1 3 1
„ .....	1889	3½	3,000,000	1 2 11
„ .....	1890	3½	4,000,000	1 2 10
Tasmania .....	1884	4	800,000	0 18 3
„ .....	1886	4	1,000,000	0 18 0
„ .....	1889	3½	1,000,000	1 4 10

The selling price of a loan is not perhaps the most exact test which may be applied to ascertain the credit of a country in the London markets. There are many causes which may combine to influence adversely the price obtained by tender. A truer gauge of credit will be found in the selling price and interest yielded to investors by representative stock at a given date. The following table shows the interest returned by the stock of different colonies in June, 1890, due allowance being made in each case for accrued interest, and for repayment of loans at par at maturity. Similar figures for the same month of 1868 and 1878 have been added :—

Selling price of Colonial stock.

Country.	1868.	1878.	1890.
	£ s. d.	£ s. d.	£ s. d.
Canada .....	5 12 6	4 9 0	3 6 0
New South Wales .....	5 0 0	3 16 3	3 8 0
Victoria .....	4 17 6	4 2 6	3 8 4
New Zealand .....	5 1 3	4 15 0	3 16 7
Queensland .....	5 6 3	4 5 0	3 11 6
South Australia .....	5 2 6	4 2 6	3 13 11
Tasmania .....	5 8 9	4 12 6	3 13 2
Cape of Good Hope .....	5 1 3	4 11 3	3 14 0
Natal .....	5 11 3	4 11 3	3 14 7
Mauritius.....	5 5 0	4 8 9	3 16 10
India.....	3 13 9	3 10 6	3 2 9

The improvement in the credit of all the colonies is obvious, and at the rates given New South Wales could borrow £100 to-day at the same cost as £68 could be obtained twenty-two years previously; and Victoria in like manner could borrow £100 now for what she would have had to pay for £70 in 1868. In June, 1890, British consols were selling at a rate which would yield £2 11s. 3d. per cent. interest; Canadian and Indian stock were also selling at slightly better rates than New South Wales. This is certainly anomalous, as there is nothing in the history of these last mentioned countries, or in the nature of their resources, to warrant even the slight preference shown to their stock above that of the more important colonies of Australasia.

Improvement of Colonial credit.

Systems of local government are in force in all the Colonies, but the extent to which the power of self-taxation for local purposes has been availed of is very different in the several Colonies. Thus the whole area of Victoria is practically included within municipalities and shires, and a similar state of things exists in most of the other colonies; but in Western Australia the total number of municipalities in 1889 was only twelve, and in the same year the area under municipal government in New South Wales was not more than 2,166 square miles. In addition to their income from rates, municipalities in all the Colonies receive certain endowments from Government, and their revenues from these two sources are shown in the following table:—

Taxation for local government.

Local Revenue, 1889.

Colony.	Revenue collected locally.	Endowment from Government.	Total Revenue.
	£	£	£
New South Wales .....	637,354	136,466	773,820
Victoria .....	1,182,291	433,198	1,615,489
Queensland .....	108,310	187,916	296,226
South Australia .....	224,210	90,947	315,157
Tasmania .....	150,632	9,011	159,643
New Zealand .....	681,468	101,694	783,162
<b>Australasia .....</b>	<b>2,984,265</b>	<b>959,232</b>	<b>3,943,497</b>

## REVENUE PER HEAD OF POPULATION.

Local and  
General  
Revenue..

The revenue, both general and local, during 1889, is shown below, the Government endowment of municipalities being omitted in the column showing local revenue, while revenue from local loans is included :—

## Local and General Revenue.

Colony.	General.	Local.	Total.
	£	£	£
New South Wales .....	9,063,397	637,354	9,700,751
Victoria .....	8,675,990	1,182,291	9,858,281
Queensland .....	3,614,652	108,310	3,722,962
South Australia .....	2,270,433	224,210	2,494,643
Western Australia.....	442,725	.....*	442,725
Tasmania.....	678,909	150,632	829,541
New Zealand .....	3,991,919	681,468	4,673,387
Australasia .....	28,738,025	2,984,265	31,722,290

\* No returns.

The next table shows the same items per head of population :—  
Revenue per head of population :—

Colony.	General.	Local.	Total.
	£ s. d.	£ s. d.	£ s. d.
New South Wales .....	8 4 2	0 11 7	8 15 9
Victoria .....	7 17 1	1 1 5	8 18 6
Queensland .....	9 2 0	0 5 5	9 7 5
South Australia .....	7 1 3	0 13 11	7 15 2
Western Australia.....	10 6 4	.....*	10 6 4
Tasmania.....	4 11 2	1 0 3	5 11 5
New Zealand .....	6 10 1	1 2 2	7 12 3
Australasia .....	7 13 11	0 16 0	8 9 11

\* No returns.

Expenditure  
during 1889.

The general and local expenditure during 1889 will be seen from the figures given herewith. The Government endowment has been deducted from the local expenditure as it is already included in the general expenditure. Expenditure from loans raised by the municipalities is, however, included :—

## General and Local Expenditure.

Colony.	General.	Local.	Total.
	£	£	£
New South Wales .....	9,250,271	866,616	10,116,887
Victoria .....	7,919,902	1,834,071	9,753,973
Queensland .....	3,550,858	287,097	3,837,955
South Australia .....	2,355,927	305,157	2,661,084
Western Australia .....	386,000	.....*	386,000
Tasmania .....	681,674	138,195	819,869
New Zealand .....	3,981,721	799,626	4,781,347
Australasia .....	28,126,353	4,230,762	32,357,115

\* No returns.

The general and local expenditure per head of the population for 1889 will be found set forth in the figures subjoined. It is remarkable how closely the general totals of all the Colonies approximate, with the exception of Tasmania, the figures for which are below the rest. It should be remembered, however, that the main railway line had not been taken over by the Government in 1889, but was still in the hands of a company :—

## Expenditure per Head of Population.

Colony.	General.	Local.	Total.
	£ s. d.	£ s. d.	£ s. d.
New South Wales .....	8 7 7	0 15 8	9 3 3
Victoria .....	7 3 5	1 13 4	8 16 9
Queensland .....	8 18 10	0 14 6	9 13 4
South Australia .....	7 6 7	0 19 0	8 5 7
Western Australia .....	8 19 10	.....*	8 19 10
Tasmania .....	4 11 7	0 18 7	5 10 2
New Zealand .....	6 9 8	1 6 1	7 15 9
Australasia .....	7 10 8	1 2 8	8 13 4

\* No returns.

## TOTAL REVENUE AND EXPENDITURE.

Total Revenue  
and Expendi-  
ture.

The following tables embody the data given in the previous figures relating to revenue and expenditure for the year 1889, and shows the total amount of public money collected and spent in each Colony for general and local purposes. The items of revenue were :—

## Total Revenue, 1889.

Colony.	General Revenue.	Local Revenue.	Total Revenue.	Total Revenue per head of Population.
	£	£	£	£ s. d.
New South Wales...	9,063,397	637,354	9,700,751	8 15 9
Victoria .....	8,675,990	1,182,291	9,858,281	8 18 6
Queensland .....	3,614,652	108,310	3,722,962	9 7 5
South Australia.....	2,270,433	224,210	2,494,643	7 15 2
Western Australia..	442,725	.....*	442,725	10 6 4
Tasmania .....	678,909	150,632	829,541	5 11 5
New Zealand .....	3,991,919	681,468	4,673,387	7 12 3
Australasia .....	28,738,025	2,984,265	31,722,290	8 9 11

\* No returns.

The expenditure out of general and municipal revenue and loans was :—

## Total Expenditure, 1889.

Colony.	General.	Local.	From Loans.	Total.	Total per head of Population.
	£	£	£	£	£ s. d.
New South Wales.	9,250,271	866,616	1,464,900	11,581,787	10 9 9
Victoria .....	7,919,902	1,834,071	3,626,501	13,380,474	12 2 5
Queensland .....	3,550,858	287,097	1,641,704	5,479,659	13 16 0
South Australia ...	2,355,927	305,157	1,259,012	3,920,096	12 3 11
Western Australia	386,000	.....*	135,112	521,112	12 2 9
Tasmania .....	681,674	138,195	367,039	1,186,908	7 19 6
New Zealand .....	3,981,721	799,626	515,058	5,296,405	8 12 7
Australasia .....	28,126,353	4,230,762	9,009,326	41,366,441	11 1 7

\* No returns.

CURRENCY.

The coins circulating in Australasia are those of the United Kingdom. Gold is the standard, the silver and copper current are more properly tokens than coins. Gold coins are legal tender to any amount, silver for an amount not exceeding forty shillings, and bronze for one shilling. The standard weight and fineness of each coin are given below. The least current weight of a sovereign is 122·5 Imperial grains, and a half-sovereign 61·125 grains :—

Coins of United Kingdom current.

Standard weight of coins.

Coins in circulation.

Denomination of Coin.		Standard Weight.	Standard Fineness.
		Imperial grains.	
Gold .....	{ Sovereign .....	123·27447	{ Eleven-twelfths fine gold, one-twelfth alloy, or decimal fineness ·91666.
	{ Half-sovereign	61·63723	
Silver .....	{ Crown .....	436·36363	{ Thirty-seven-fortieths fine silver, three-fortieths alloy, or decimal fineness ·925.
	{ Double Florin..	349·09090	
	{ Half-crown .....	218·18181	
	{ Florin .....	174·54545	
	{ Shilling .....	87·27272	
	{ Sixpence .....	43·63636	
	{ Threepence .....	21·81818	
Bronze ...	{ Penny .....	145·83333	{ Mixed metal, copper, tin, and zinc.
	{ Halfpenny .....	87·50000	

The only coins struck at the Sydney and Melbourne Mints are of gold, though silver and bronze of English coinage are also issued. The Sydney Branch of the Royal Mint was opened on the 14th May, 1855, and that in Melbourne on the 12th June, 1872. The amount of gold received for coinage up to the end of 1889 was :—

Coinage of Australian Mints.

Gold received for coinage at the Sydney and Melbourne Mints.

Mint.	Weight.	Value.
Sydney .....	oz. 17,113,910	£ 64,576,152
Melbourne ..	11,268,118	45,127,202

Gold minted at  
Sydney and  
Melbourne.

Of the total quantity given above as received into the Sydney Mint only 7,296,781 oz. were the produce of New South Wales, and of the total received into the Melbourne Mint 8,928,404 oz. were raised in Victoria. The following table shows the quantity of gold received from each of the colonies and passed into the two Mints :—

Gold received at the Sydney and Melbourne Mints.

Colony in which the Gold was raised.	Sydney Mint.	Melbourne Mint.	Total.
	oz.	oz.	oz.
New South Wales .....	7,296,781	9,744	7,306,525
Victoria .....	1,440,969	8,928,404	10,369,373
Queensland .....	5,945,229	8,603	5,953,832
South Australia .....	54,063	214,986	269,049
Tasmania .....	11,805	460,068	471,873
New Zealand .....	2,121,361	1,548,045	3,669,406
Other Countries .....	16,726	18,299	35,025
Old Coin, &c. ....	226,976	79,969	306,945
	17,113,910	11,268,118	28,382,028

Total value of  
Australasian  
gold.

The total value of gold raised in Australasia to the end of 1889 was £335,906,011, of which amount 32·62 per cent. passed through the Mints. The following shows the issue of coined gold and bullion during the same period :—

Gold Coin and Bullion issued by the Mints.

Mint.	Sovereigns.	Half-sovereigns.	Bullion.	Total Value of Coin and Bullion issued.
Sydney .....	59,297,500	2,420,500	2,733,568	£ 63,241,318
Melbourne .....	40,403,650	555,500	4,448,875	45,130,275
Total .....	99,701,150	2,976,000	7,182,443	108,371,593

Gold minted in  
1889.

The quantity of gold received into the Sydney Mint in 1889 was 900,475 oz., valued at £3,340,473, of which only one-eighth was the produce of New South Wales. Queensland contributed four-fifths of the whole, the remainder being chiefly old coin for reminting.



The amount of gold received into the Melbourne Mint for the same year was 761,616 oz., valued at £3,029,731, of which more than three-fourths was the produce of Victoria. The gold coin issued in 1889 from the Sydney Mint was 3,262,000 sovereigns, and 32,000 half-sovereigns. The Melbourne Mint issued 2,732,000 sovereigns during the year. The value of the coinage from the Sydney, Melbourne, and London Mints for 1889 was :—

Gold issued from the Mints.

Gold Coin issued by the Sydney, Melbourne, and London Mints, 1889.

Mint.	Value of Coinage.
Sydney .....	£ 3,294,000
Melbourne.....	2,732,000
London .....	7,500,700

BANKING.

The form in which the returns of the various Colonies are prepared does not admit of an exact estimation of the assets of the banks being obtained. Thus, the liabilities of all banks in Australasia at the close of 1889, as ascertained by the returns, was £112,810,466, and the assets £163,913,199, showing an ostensible surplus of £51,102,733 provided by the banks out of their own resources. The amount of capital and reserved profits was £25,925,244, so that it was impossible the larger sum could have been provided by the banks. The probable explanation of the anomaly is that the advances made by the principal office of a bank in one colony to the branches in another are estimated both as debts due to the bank making the advance and also when advanced by the branch bank to its customers. The liabilities of banks trading in Australasia during the last quarter of 1889 was as follows :—

Banking business.

## Australasian Bank Liabilities.

Colony.	Notes in Circulation.	Bills in Circulation.	Balance due to other Banks.	Deposits Bearing Interest.	Total Deposits.	Total Liabilities.
	£	£	£	£	£	£
New South Wales .....	1,516,047	120,498	258,103	23,951,948	33,777,143	35,671,791
Victoria .....	1,657,082	115,532	269,220	28,654,782	38,768,936	40,810,770
Queensland .....	665,436	30,634	87,686	7,025,862	10,182,388	10,966,144
South Australia .....	449,229	11,029	85,768	4,990,183	6,822,502	7,368,528
Western Australia .....	49,730	5,158	5,397	467,500	837,695	897,980
Tasmania .....	155,936	61,774	5,575	.....	4,309,610	4,532,895
New Zealand.....	883,114	52,516	32,124	8,432,241	11,594,604	12,562,358
<b>Total, Australasia .....</b>	<b>5,376,574</b>	<b>397,141</b>	<b>743,873</b>	<b>*73,522,516</b>	<b>106,292,878</b>	<b>112,810,466</b>

\* Tasmania not included.

There were deposited during the last quarter of 1889, with the various banks trading in Australasia, £106,292,878; of the sum named £73,522,516—not including deposits in Tasmania—bore interest. The banks of Victoria held £38,768,936, or 36·47 per cent. of the total deposits; those of New South Wales, £33,777,143, or 31·78 per cent. The figures are for the last quarter, and not the average of the year:—

Total Deposits with Banks of Issue during last quarter of 1889.

Colony.	Deposits bearing Interest.	Deposits not bearing Interest.	Total Deposits.
	£	£	£
New South Wales .....	23,951,948	9,825,195	33,777,143
Victoria .....	28,654,782	10,114,154	38,768,936
Queensland .....	7,025,862	3,156,526	10,182,388
South Australia .....	4,990,183	1,832,319	6,822,502
Western Australia .....	467,500	370,195	837,695
Tasmania .....	.....	.....	4,309,610
New Zealand .....	8,432,241	3,162,363	11,594,604
Total .....	£ *73,522,516	*28,460,752	106,292,878

\* Tasmania not included.

Fully two-thirds of the deposits for Australasia bear interest, and the proportion holds good for each of the Colonies, except Western Australia. Tasmania is not given, as most of the returns for that colony do not distinguish the interest-bearing deposits from those non-bearing. The following table shows the reserve of coin and bullion as compared with total liabilities. The proportion varies considerably in the different Colonies, ranging from 31·52 per cent. in Western Australia to 12·76 per

## CASH RESERVES AND LIABILITIES.

cent. in Tasmania. New South Wales holds the weakest position amongst the largest Colonies, with a reserve of 14·21 per cent., against 16·41 per cent., the average of Australasia :—

Proportion of Coin and Bullion to Liabilities of Banks.  
(Last Quarter, 1889.)

Colony.	Liabilities.	Coin and Bullion.	Per-centage of Cash Reserve to Liabilities.
	£	£	
New South Wales .....	35,671,791	5,067,578	14·21
Victoria .....	40,810,770	6,533,037	16·00
Queensland .....	10,966,144	2,191,893	19·98
South Australia .....	7,368,528	1,591,381	21·59
Western Australia .....	897,980	283,071	31·52
Tasmania .....	4,532,895	578,820	12·76
New Zealand .....	12,562,358	2,275,169	18·11
Australasia .....	112,810,466	18,520,949	16·41

Cash reserves and liabilities at Call.

The subjoined table shows the percentages of cash reserves to the liabilities at call. The highest reserve is found in South Australia, and the lowest in New South Wales, the average of the last-named Colony considerably affecting the total for the whole group :—

The Cash Reserve held by Banks as against Liabilities at Call  
(last quarter, 1889).

Colony.	Deposits at Call and Circulation.	Coin and Bullion.	Percentage Reserve to Liabilities at Call.
	£	£	
New South Wales .....	11,461,740	5,067,578	44·21
Victoria .....	11,886,768	6,533,037	54·96
Queensland .....	3,852,596	2,191,893	56·89
South Australia .....	2,292,577	1,591,381	69·41
Western Australia .....	425,083	283,071	66·59
Tasmania .....	*217,710	578,820	.....
New Zealand .....	4,097,993	2,275,169	55·52
Australasia .....	34,234,467	18,520,949	54·10

\* Deposits not bearing interest not included.

Considering the population of these colonies the banking operations of Australasia have attained enormous development. The following table from Mulhall's Dictionary shows the capital employed in banking, and the amount of deposits in some of the principal countries. The figures regarding Australasia are brought down to the latest date:—

Capital and Deposits in the Banks of Various Countries.

Country.	Million £.			Amount per Inhabitant.
	Capital.	Deposits.	Total.	
United Kingdom .....	270	570	840	£ 25
France .....	55	150	205	6
Germany .....	85	200	285	6
Russia .....	45	110	155	2
Austria .....	36	130	166	5
Italy .....	31	60	91	3
Spain and Portugal .....	12	10	22	1
Belgium .....	7	20	27	5
Holland .....	6	20	26	7
Scandinavia .....	11	24	35	4
Europe.....	558	1,294	1,852	.....
United States.....	145	386	531	10
Canada.....	17	18	35	8
Australasia.....	51	106	157	41

In all the Colonies savings banks are provided by the State to enable the working classes to securely invest their surplus earnings. These banks have been developed to a larger extent in Victoria than any other province, and from the number of deposits it would appear that twenty-four persons out of every hundred in

Savings Banks.

that Colony have accounts standing in their names in the Savings Banks. The highest average amount per depositor is in Queensland, while the amount of deposits as compared with population is greatest in South Australia :—

## Savings and Post Office Banks, 1889.

Colony.	No. of Depositors.	Amount of Deposits.	Average amount per Depositor.	Average amount per head of Population.	Depositors per 100 of Population.
		£	£ s. d.	£ s. d.	
New South Wales ...	134,914	4,280,083	31 14 4	3 16 3	12·02
Victoria .....	268,462	4,971,933	18 10 4	4 8 11	24·01
Queensland .....	43,875	1,597,784	36 8 4	3 18 7	10·79
South Australia .....	65,815	1,905,632	28 19 1	5 17 5	20·28
Western Australia ...	2,965	31,062	10 9 6	0 14 3	6·78
Tasmania .....	24,397	497,492	20 7 10	3 5 8	16·10
New Zealand .....	90,745	2,191,451	24 3 0	3 10 8	14·63
Australasia ...	631,173	15,475,437	24 10 4	4 1 9	16·66

Savings Banks  
in other  
countries.

The following table shows the like information for some of the principal countries of the world, and is given on the authority of "The Year Book of Commerce" for 1890-91 :—

Country.	No. of Depositors.	Amount of Deposits in Savings Bank.	Average Amount per Depositor.
		£	£ s. d.
United Kingdom .....	5,800,473	108,127,440	18 13 0
Sweden .....	1,010,794	13,659,000	13 10 3
Norway .....	452,736	10,364,000	22 18 0
Holland .....	499,445	5,980,000	12 0 0
Prussia .....	5,029,174	144,462,000	28 14 6
Belgium .....	598,675	10,409,000	17 7 9
Switzerland.....	802,697	23,749,000	29 11 11
Italy .....	3,508,565	69,188,851	19 14 5
France .....	5,097,000	92,557,000	18 4 0
United States.....	4,021,523	296,920,000	73 16 7
Australasia .....	631,173	15,475,437	24 10 4

Total deposits.

If to the amounts deposited in Savings Banks as shown above be added the deposits in Chartered Banks it will be seen that the total sum on deposit in these institutions is equal to over £32 for

each inhabitant of Australasia. The largest amount on deposit as compared with population is found in Victoria with £39 2s. 5d., or nearly £7 above the average of all the colonies. The particulars for each will be found below :—

## Total Deposits in Banks of Australasia, 1889.

Colony.	Deposits in Banks. (Averages for the last quarter).	Deposits in Savings Banks.	Total Deposits.	Amount of Deposits per head of Population.
	£	£	£	£ s. d.
New South Wales.....	33,777,143	4,280,083	38,057,226	33 18 3
Victoria .....	38,768,936	4,971,933	43,740,869	39 2 5
Queensland.....	10,182,388	1,597,784	11,780,172	28 19 4
South Australia.....	6,822,502	1,905,632	8,728,134	26 17 11
Western Australia ...	837,695	31,062	868,757	19 17 7
Tasmania .....	4,309,610	497,492	4,807,102	31 14 8
New Zealand.....	11,594,604	2,191,451	13,786,055	22 3 1
Australasia.....	106,292,878	15,475,437	121,768,315	32 3 1

## LIFE ASSURANCE.

The law does not provide for the publishing of sworn returns by Life Assurance Companies, and although valuable and interesting reports are made annually by some companies, it has been found quite impossible to distinguish the progress of assurance in New South Wales, as distinct from the other Colonies. Most of the companies have extended their business beyond the Colony in which their chief office is established; the following figures therefore refer to Australasia generally, though only to those offices

Law relating to Assurance.

whose head-quarters are in the Colonies. The assets of the twelve societies amount to £14,742,940, of which £7,756,329 are invested in mortgage, £2,396,281 in loans on policies and personal security, £1,249,599 in Government securities, £123,478 in shares, £1,696,014 in freehold and leasehold property, and cash, principally at fixed deposit, £1,023,093, and sundry debts, £498,146. The interest earned during the year amounted to £786,514, being at the rate of 5·95 per cent. ; the total increase in the accumulated funds was £1,444,657, and the net increase £1,401,932.

Analysis of  
assurance  
business.

New policies.

On analysing the accounts of these Societies, as published, it is seen that the total number of outstanding policies, and the amount they represent, are not given. With regard to new business it will be found that in 1889 there were 30,497 policies issued, to the value of £8,690,542, or an average amount upon each policy of £285. This means an increase of 70 policies, amounting to £101,594, over the transactions of the previous year, and an advance in the average value of the policies by £3—the highest average for the last nine years. Since the end of the year 1880 the Societies in question issued altogether no less than 268,172 new policies, representing an assurance of £73,975,803, but there is nothing in the published accounts to show how many of these policies have lapsed, and how many still remain in force. The new annual premiums, which amount to £277,456, bear an average rate of £3·194 per cent. to the total amount of new assurance—the lowest average for the last nine years.

Premiums  
received.

The amount of premiums received in 1889 was £2,149,085, of which sum £257,531 was income from new premiums, and £1,891,554 was for renewals. The amount just given was £162,702 in excess of the income of the previous year. The total receipts, obtained by adding to the premium income the items "consideration for annuities granted," "interest," and other receipts, came to £2,966,917, as against the sum of £2,781,127 in



the year 1888, being an increase of £185,790. The average rate of interest realised by all the offices, as already stated, was 5·95 per cent., an improvement of 0·04 per cent. upon the previous year. The purely mutual offices, however, realised 6·01 per cent.

Claims and surrenders during the year amounted to £992,141, of which sum £658,663 was for claims with bonus additions, £97,625 for endowments and endowment assurances matured, and £235,853 for surrenders, &c. The total amount paid to policyholders in 1889 was £1,060,495, as against £956,689 in 1888. The expenses of the year exceeded those of the previous year by £460,364, but this increase is not nearly so large, relatively, as the increase in the income, the difference being 0·85 per cent. on the premium income, and 0·56 per cent. on the gross income.

Claims and surrenders.

The following figures, showing the existing condition of ordinary life assurance in Australia as compared with other parts of the world, are given by Mr. D. M. Luckie, the Government Insurance Commissioner of New Zealand, in his annual report for 1888 :—

Country.	Average Amount of Insurance per head of population.	Average number of Policies per 1000 of population.	Average amount insured per Policy.
	£		£
Australasia .....	19	65	300
Canada .....	9	24	376
United Kingdom .....	12	26	487
United States .....	8	15	554

It would therefore seem that the practice of insuring life is much more prevalent in Australia than in any of the other countries named; and although the average sum assured by each policy is less than elsewhere, the number of policies is so much greater as

Prevalence of Life Assurance.

compared with population that the total amount assured, if divided by the number of inhabitants, is considerably higher than is the case in any other country shown in the table.

Money Order  
business.

The business transacted in the various Postal Departments under the system of money orders has grown to very large dimensions. This increase is due mainly to the greater facilities now afforded for the transmission of money by this method, though it is also to some extent attributable to the more general appreciation of the system by the working classes. The following is a statement of the business transacted :—

Colony.	Orders issued.		Orders paid.		Total Orders.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.
		£		£		£
N. S. Wales ...	400,487	1,188,227	390,414	1,108,086	790,901	2,296,313
Victoria .....	251,245	780,590	226,279	705,653	477,524	1,486,243
Queensland ...	110,108	382,343	75,961	263,851	186,069	646,194
South Aus- tralia .....	69,897	208,060	64,546	201,503	134,443	409,563
Tasmania .....	64,679	157,963	55,776	130,681	120,455	288,644
New Zealand..	172,076	589,546	150,500	540,891	322,576	1,130,437
Australasia..	1,068,492	3,306,729	963,476	2,950,665	2,031,968	6,257,394

The average amount of each money order was £3 1s. 7d., and the business done by New South Wales greatly exceeded that of any other member of the group. The average value of money orders issued in Great Britain is £2 11s. 8d.

Insolvencies.

During 1889 the largest number of insolvencies took place in New South Wales, the total number for the whole of Australasia

being 3,088, with liabilities amounting to £4,845,952, and assets, as shown in the insolvents' schedules, valued at £4,377,951, leaving a deficiency of £468,001 or £156 for each insolvent; no great reliance can, however, be placed upon the statement either of liabilities or assets, especially of the latter.

Assets and  
Liabilities of  
insolvents.

Colony.	Number of Insolvents.	As shown in Insolvents' Schedules.		
		Liabilities.	Assets.	Deficiency.
		£	£	£
New South Wales .....	1,101	794,603	396,723	397,880
Victoria .....	697	2,389,731	2,627,182	237,451*
Queensland .....	364	328,175	213,475	114,700
South Australia .....	190	57,707	31,423	26,284
Tasmania .....	12	19,993	13,564	6,429
New Zealand .....	724	1,255,743	1,095,584	160,159
Australasia .....	3,088	4,845,952	4,377,951	468,001

\* Surplus.

In the case of South Australia 95 private arrangements under the Insolvency Act are included in this total, but the liabilities and assets of such are not shown. The total number of cases dealt with by the Courts was therefore only 2,993, the average being as shown above.

## DEFENCE.

Military and Defence Forces of Australasia.

IN all the Colonies small permanent military forces are maintained, consisting for the most part of artillery and submarine miners. The greater portion of the Colonial forces is, however, maintained by a system of partial payment, which affords a cheap and effective defence force without the disadvantages and expense of a standing army. Under this system the men receive a fixed amount of pay, which compensates them for loss of wages during the time they are away from their employment for the purposes of military instruction. In New South Wales and Victoria the remuneration amounts to £12 per annum to each man, and in Queensland and South Australia to about half that sum. It is computed on the basis of a certain number of whole or half-day parades or night drills at the rate of 10s. per day in the first two Colonies named, 6s. a day in Queensland, and 5s. a day in South Australia. In addition to the remuneration the partially-paid, in common with all the other military forces, receive free rations when in camp or on active service. There has been a marked tendency in all the Colonies to discourage the services of volunteers, as the system was found to work unsatisfactorily, especially in the country districts. In New Zealand alone is the volunteer system the mainstay of defence. The following is the strength of the forces maintained by each province :—

Purely volunteer system unsatisfactory.

	Total Forces.	Paid.	Partially Paid.	Unpaid.
New South Wales .....	8,134	578	4,164	3,392
Victoria* .....	5,856	326	3,625	1,905
Queensland .....	3,939	130	2,667	1,142
South Australia.....	2,671	57	1,573	1,041
Western Australia .....	603	2	601	.....
Tasmania .....	1,883	35	473	1,375
New Zealand .....	6,538	137	.....	6,401
Total, Australasia.. .....	29,624	1,265	13,103	15,256

\* 30th June, 1890.

Among the Volunteers in New South Wales, Queensland, <sup>Rifle clubs.</sup> South Australia, and Tasmania are included the rifle clubs or companies of a strength of 3,516, 1,142, 607, and 1,375 men respectively. By means of a liberal extension of these clubs it is expected that there will be a large number of men, trained to the use of the rifle and not unaccustomed to drill, who in time of need may be available to fill the ranks of the regular forces.

The relative strength of the various arms in the Colonies may <sup>Total military strength.</sup> be summarized as follows:—

Staff, Medical Staff, Instructors, Ambulance Corps, &c.....	570
Artillery (Garrison, field and horse).....	4,281
Engineers .....	749
Cavalry .....	1,133
Mounted Infantry and Mounted Rifles .....	3,329
Infantry and Regimental Bands .....	12,922
Rifle Companies .....	6,640

or, a total strength of 29,624 men.

In addition to the forces enumerated above, all the Colonies, <sup>Marine Forces.</sup> with the exception of Western Australia, have small corps of Naval Volunteer Artillery, or a partially paid force of a similar character, capable of being employed either as a light artillery land force, or to serve on board the local war vessels. In Victoria there is a permanent naval force of 235 men. The marine forces are as follow:—

Colony.	Strength.
New South Wales .....	633
Victoria .....	617
Queensland .....	365
South Australia .....	170
Tasmania.....	65
New Zealand .....	1,372
<b>Total .....</b>	<b>3,222</b>

Thus the combined forces of all the Australasian Colonies on <sup>Combined Australasian Defence Forces.</sup> their present footing are 32,846 strong; and of these 22,000 could be mobilised in either of the Colonies of Queensland, New South Wales, Victoria, or South Australia.

Imperial navy  
on the Aus-  
tralian station.

No Colony with the exception of Victoria has any navy of its own, the defence of the coast being in the hands of the British ships on the Australian Station. Sydney, the head quarters of the fleet, ranks as a first class naval station ; and extensive repairing yards and store-houses have been provided for the accommodation of the ships of war. There are stationed in the Australasian waters eleven vessels whose armament &c., are as follows :—

Name.	Class.	Displacement.	Speed.	Guns.
		Tons.	Knots.	
Orlando .....	Twin-screw cruiser, 1st class, armoured.	5,600	18·5	2 9·2-in. 22-ton B.L.R. 10 6-in. 5-ton B.L.R. 16 Q.F. Hotchkiss 7 M., 3 L.
Curacoa .....	Screw cruiser, 3rd class.	2,380	13·0	4 6-in. 5-ton B.L.R. 8 5-in. 2 ton B.L.R. 1 Q.F. Hotchkiss 9 M., 2 L.
Cordelia .....	Screw cruiser, 3rd class.	2,380	13·0	10 6-in. 4½-ton B.L.R. 10 M., 2 L.
Rapid .....	Screw cruiser, 3rd class.	1,420	13·1	2 6-in. 4-ton B.L.R. 10 5-in. 38 cwt. B.L.R. 4 M., 1 L.
Royalist ...	Screw cruiser, 3rd class.	1,420	13·1	2 6-in. 4-ton B.L.R. 10 5-in. 38 cwt. B.L.R. 4 M., 1 L.
Lizard .....	Screw gunboat, 1st class.	715	12·7	6 4-in. 25 cwt. B.L.R. 4 M.
Goldfinch ...	Screw gunboat, 1st class.	805	13·0	6 4-in. 26-cwt. B.L.R. 2 Q.F. Hotchkiss, 2 M.
Ringdove ...	Screw gunboat, 1st class.	805	13·0	6 4-in. 26-cwt. B.L.R. 2 Q.F. Hotchkiss, 2 M.
Swinger* ...	Screw gunboat, 2nd class.	430	10·4	2 64-pdr. 64-cwt. M.L.R., 2 20-pdr. B.L.R., 2 M.
Penguin† ...	Screw sloop .....	1,130	11·5	2 64-pdr. 64-cwt. M.L.R., 1 L., 2 M.
Dart† .....	Screw yacht .....	470	8·8	2 L.

\* Relieved by H.M.S. Ringdove, and to be sold. † Surveying Service. M.L.R., muzzle-loading rifled guns ; Q.F., quick-firing guns ; L., light guns under 15 cwt. ; B.L.R., breech-loading rifle guns.

Australasian  
naval station.

The boundaries of the Australian Naval Station have been defined as follows :—From 95° E. long. by the parallel of 10° S. lat. to 130° E. long. ; thence north to 12° N. lat., and along that

parallel to 160° W. long, and on the south by the Antarctic Circle, including the numerous groups of islands situated within those limits.

An undertaking has been entered into by all the Colonies, with the exception of Queensland, for the payment of a *pro rata* subsidy for the maintenance of an auxiliary fleet. The total subvention to be paid by all the Colonies amounts to £91,000 per annum, the contributions of each being determined on the basis of population. The fleet will comprise five fast cruisers, and two torpedo gunboats as represented by the "Archer" (improved type) and "Rattlesnake" classes of the British Navy; of these three cruisers and one gunboat will be continuously kept in commission, the remainder being held in reserve in Australasian ports, but ready for commission whenever circumstances may require their use. The agreement is to be for a period of ten years, and shall then, or at the end of any subsequent year, be terminable, provided two years' notice has been given. The vessels will be built by the British Government, but the Australasian Colonies will pay the interest on their prime cost at the rate of 5 per cent., provided such payment does not exceed £35,000. The colonies are also to pay the actual charge for maintenance as mentioned above. On the termination of the agreement these vessels will remain the property of the Imperial Government. The strength of the fleet already in Australian waters will be maintained. The vessels specified in the agreement between Great Britain and the colonies are to be in addition to these. The Australasian squadron will be commanded by the Admiral on the Australian Station, whose headquarters are in Sydney, where a residence is provided for him by the Colony. Some of these vessels have already been launched, and the construction of the others is nearing completion.

New South Wales has no navy of its own, with the exception of the corvette "Wolverene," sixteen 64-pounder M.L. rifled guns, and two small torpedo steam-launches, the "Acheron" and the "Avernus," the defence of its coast being in the hands of the British ships on the Australian station.

Victorian navy. Victoria has a navy of her own for harbour defence, consisting of the following vessels:—

Name.	Class.	Displacement.	Armament.
Nelson .....	Wooden frigate..	Tons. 2,730	27-in. M.L.R., 20 64-pdrs., 2 Gatlings.
Cerberus.....	Armoured turret ship.	3,413	4 10-in. M.L.R., 4 1-in. Nordenfeldts, 4 barrels.
Victoria .....	Steel gunboat ...	530	1 10-in. R.B.L., 1 6-in. R.B.L., 2 13-pdr. R.B.L., 2 1-in. Nordenfeldts, 4 barrels.
Albert.....	do ...	350	1 8-in. R.B.L., 1 6-in. R.B.L., 2 1-in. Norden- feldts, 4 barrels.
Childers .....	First-class steel torpedo boat.	63	2 37-M.M. Hotchkiss guns, 4 13-in. Fiume, 4 14-in. Fiume torpedoes.
Nepean ...	Second-class steel torpedo boat.	12	5 14-in. R.L., also fitted for spar torpedoes.
Lonsdale.....	do .....	12	do do
Gordon .....	Wooden torpedo boat "Turn- about."	12	1 1-in. Nordenfeldt, 2 bar- rels, 5 14-in. Fiume.
Batman .....	Armed steamer..	387	1 6-in. R.B.L., 2 1-in. Nor- denfeldts, 2 barrels.
Fawkner .....	do ...	387	1 6-in. R.B.L., 2 Gatlings.
Gannet .....	do ...	347	1 6-in. R.B.L., 2 1-in. Nor- denfeldts, 2 barrels.
Lady Loch .....	Customs steamer (steel).	300	do do
Commissioner..	Wooden steam launch.	40	4 14-in. Fiume, also fitted for spar torpedoes.
Customs No. 1	do ...	30	do do

The two dredges (Batman and Fawkner) and the tug (Gannet) mentioned in the table quoted have been specially built to carry heavy guns, and provision is also made by which some of the fast steamers belonging to the port could be fitted as cruisers at very short notice. Guns are kept in readiness in Melbourne in case it should be deemed necessary to put these vessels into commission.

Queensland  
naval defence.

Queensland has also two gunboats, one of which, the "Palumah," is employed on survey service at the joint expense of the Queensland and Imperial Governments. The following



are the particulars of the vessels available for the defence of Queensland ports:—

Name.	Class.	Displacement.	Armament.
Gayundah . . . .	Steel gunboat (twin screw).	Tons. 360	1 8-in. B.L. Armstrong, 1 6-in. B.L. Armstrong, 4 M.
Palumah . . . . .	do . . . . .	360	1 8-in. B.L. Armstrong, 1 6-in. B.L. Armstrong, 2 M.
Otter . . . . .	Tender (twin screw).	120	2 guns.
Bonito . . . . .	Barge (twin screw).	450	1 gun.
Stingaree . . . . .	do . . . . .	450	1 gun.

There is also one torpedo boat at Brisbane, and South Australia maintains one twin-screw steel cruiser, the "Protector," of 920 tons. Her armament consists of 1 8-in. 11½ ton B.L., 5 6-in. 4 ton B.L., and 5 machine guns. Tasmania owns one torpedo boat, and Western Australia one schooner, the "Meda," of 150 tons, employed on survey service at the joint expense of the Imperial and Colonial Governments.

Most of the Colonies have spent considerable sums in works of defence, and most of the principal ports are well protected by extensive fortifications, erected by the various Governments at great cost. The total expenditure for defence purposes during 1889 was as follows:—

Expenditure of the Australasian colonies for defence purposes.

Colony.	Total.	Per head of Population.
	£	s. d.
New South Wales . . . . .	207,175	3 9
Victoria . . . . .	346,623	6 3
South Australia . . . . .	41,122	2 7
Queensland . . . . .	36,982	1 10
Western Australia . . . . .	3,697	1 9
Tasmania . . . . .	15,340	2 1
New Zealand . . . . .	57,521	1 10

Or a total expenditure for Australasia of £708,460, at the rate of 3s. 9d. for each inhabitant.

Expenditure  
from loans for  
defence  
purposes.

In all the colonies with the exception of Western Australia a certain amount of money has been spent out of loans on works of defence. The amounts thus spent during 1889 were as follows:—

	£
New South Wales .....	56,440
South Australia .....	6,520
Queensland .....	11,558
Tasmania .....	7,980
New Zealand .....	15,752
Total.....	£98,250

Debt for defence  
purposes.

The total debt incurred by each colony for defence purposes to the end of 1889 was as follows:—

	Total.	Per head of Population.
	£	s. d.
New South Wales .....	*775,191	13 10
Victoria .....	100,000	1 9
South Australia .....	193,740	11 11
Queensland .....	160,235	7 11
Tasmania .....	111,391	14 8
New Zealand .....	461,395	14 11
Australasia .....	1,801,952	9 8

\* Inclusive of £117,587 for naval station, Port Jackson.

This does not represent the whole cost of the fortifications, as large sums have from time to time been expended from the general revenues of the colonies in the construction of works of defence; the amount of such payments, however, it is now impossible to determine.

Military Defence  
Commission.

A military commission has recently been appointed by the Imperial and the different Colonial Governments, to take evidence and report on the fortification of King George's Sound, Hobart, Thursday Island, and Port Darwin; at the joint expense of the various Governments, and it is anticipated that before long these four important strategical points will no longer be left at the mercy of any hostile cruiser that might choose to make a descent upon them.

## RAILWAYS.

AS an indication of progressive wealth, as well as a means for its greater production, the history of railway construction in these Colonies is highly instructive. The earliest railways were begun almost at the same time in New South Wales and Victoria. The works were, indeed, actually first commenced in New South Wales, but the first railway line opened for traffic was the Melbourne and Hobson's Bay line in 1854. It was originally intended in both Colonies that the lines should be constructed by private enterprise; but as soon as the vast utility of the system became evident it was also apparent that only the Government could hope to keep pace with the needs of the country in this direction. The private works already begun in New South Wales were, therefore, bought up by the Government in 1854, and all private lines fell into Government hands in Victoria one year later, except the Hobson's Bay railway, which was not acquired till 1878.

From 1855 the Governments of the two Colonies undertook and carried on the work of railway extension. The first Government railway-works were undertaken in South Australia in 1857; they were begun in New Zealand in 1863; in Queensland in 1864; in Tasmania in 1868; and in Western Australia in 1874.

It has been an unfortunate circumstance that no agreement was arrived at between the Colonies as to the adoption of an uniform gauge. The Government of New South Wales constructed all their lines upon the English standard gauge of 4 ft. 8½ in., while the Victorian Government adopted the 5ft. 3 in. gauge. Until the lines of the two Colonies met on the boundary no discomfort was of course experienced; but since then the break of gauge,

Evils of diversity  
of gauge.

and the consequent transshipment, has been a source of irritation and inconvenience. The South Australian Government adopted at the outset the 5 ft. 3 in. gauge of Victoria; but finding that the construction of lines of this gauge involved a heavy expense, the more recent lines in the outlying districts were built on a gauge of 3 ft. 6 in. The line joining Adelaide with the Victorian border was, however, constructed on the wider gauge, so that the line from Melbourne to Adelaide should be uniform. The private line, which prolongs the South Australian system into New South Wales as far as Silverton, is on the 3 ft. 6 in. gauge. All the Queensland lines are built on the gauge of 3 ft. 6 in., so that transshipment is necessary on the boundary between that Colony and New South Wales. The difficulty caused by this diversity of gauge is already found to be troublesome. It is admitted on all hands that the trouble can be got over only by establishing uniformity of gauge, and every year in which action is delayed will make the establishment of that uniformity more costly. Tasmania, Western Australia, and New Zealand have adopted the 3 ft. 6 in. gauge. The first line laid down in Tasmania was on the 5 ft. 3 in. gauge, but it was soon altered to 3 ft. 6 in. By the purchase of the Main Line Company's property the Tasmanian Government now controls a system of 374 miles of railway open for traffic, together with a further 67 miles in course of construction.

Progress of  
railway con-  
struction.

The progress of railway construction was anything but rapid during the earlier years, except, perhaps, in the case of Victoria. This was in a great measure owing to the sparseness of the population, and the natural fear that the income would not justify the expense of widely extended lines. It was also due in some degree to the low estimation in which Australasian securities were held in London, and the consequent high rate of interest at which money for railway construction had to be borrowed. The initial difficulties attendant on railway construction may be said to have ended about 1871, since when progress has been made by all the colonies, as the following figures show :—

## Miles of Railway open for Traffic.

Colony.	1861.	1871.	1881.	1889.
New South Wales.....	73	358	*1,041	\$2,263
Victoria .....	214	329	1,247	‡2,198
Queensland.....	.....	218	800	2,064
South Australia.....	56	132	832	1,774
Western Australia.....	.....	.....	92	499
Tasmania .....	.....	45	+167	374
New Zealand .....	.....	145	1,333	1,912
Australasia.....	343	1,227	5,512	‡11,084

\* Includes 45 miles private lines. † Includes 122 miles private lines. ‡ Includes 667 miles private lines. § To 30 June, 1890. ¶ To 30 June, 1889.

The following table shows the total expenditure incurred on construction of Government lines only, for 1889 :—

Expenditure on construction.

Colony.	Length of lines open.			Gauge.	Government lines open for traffic to the close of 1889.	
	Government.	Private.	Total.		Total cost of construction.	Average cost per mile.
New South Wales ...	miles. *2,182	miles. 81	miles. 2,263	ft. in. 4 8½	£ 30,555,123	£ 14,003
Victoria .....	†2,198	...	2,198	5 3	29,125,280	13,245
Queensland .....	2,064	...	2,064	3 6	13,332,046	6,460
South Australia .....	1,756	18	1,774	{ 5 3 } { 3 6 }	10,976,376	6,251
Western Australia...	204	295	499	3 6	871,377	4,271
Tasmania .....	204	170	374	3 6	1,549,848	7,597
New Zealand .....	1,809	103	1,912	3 6	13,899,955	7,684
Australasia.....	10,417	667	11,084	.....	100,310,005	9,629

\* To 30 June, 1890. † To 30 June, 1889.

Every Colony except Western Australia shows a surplus of revenue and revenue over working expenditure, notwithstanding that the expenditure.

avowed object of railway construction, in some of the colonies, has been to promote settlement, apart from considerations of profitably working the lines. The particulars of traffic receipts for 1889 were :—

Colony.]	Receipts.	Working Expenses.	Net Earnings.
	£	£	£
New South Wales .....	2,633,086	1,665,835	967,251
Victoria .....	3,110,140	1,945,837	1,164,303
Queensland .....	796,344	594,649	201,695
South Australia.....	927,812	519,978	407,834
Western Australia.....	40,849	54,339	- 13,490
Tasmania .....	75,925	57,831	18,094
New Zealand .....	1,095,569	682,787	412,782
Australasia .....	8,679,725	5,521,256	3,158,469

(-) Minus denotes excess of working expenses over receipts.

Cost of construction.

It would hardly be fair to institute comparisons between the cost of construction per mile in Australasia and in the densely populated countries of Europe, for while in Europe the resumption of valuable ground is, perhaps, the heaviest expense in connection with the building of railways, in the colonies this item of expenditure is not of leading importance. The cost per mile is given for

India.....	£13,202
Canada.....	11,551
Cape Colony .....	9,217

while for Australasia it is £9,629.

The average interest payable on all Australasian loans is 4·20 per cent., and the returns yielded by the railways is 3·17 per cent., showing a loss in working of 1·03 per cent., equivalent to £1,033,193. It is to be understood that the following figures are to be taken as approximate only :—

Colony.	Interest returned on Capital.	Average interest payable on Loan Expenditure.
	per cent.	per cent.
New South Wales .....	3·17	3·90
Victoria .....	4·00	4·15
Queensland .....	1·51	4·76
South Australia .....	3·71	4·17
Western Australia .....	1·55*	4·10
Tasmania .....	1·17	4·10
New Zealand .....	2·97	4·21
Australasia .....	3·17	4·20

\* Represents loss.

The population and area of territory per mile of line open varies considerably. As regards population per mile of line open, Western Australia and South Australia—the most extensive Colonies—show most favourably; but, in comparison to the area of the territory, Victoria and New Zealand take the lead. The annexed table shows the relation of the railway mileage to population and to the area of each Colony at the close of 1889 :—

Proportion of miles of line to population and area.

Colony.	Population per mile of line open.	Square miles of territory per mile of line open.
New South Wales .....	496	137
Victoria .....	508	40
Queensland .....	196	324
South Australia .....	183	509
Western Australia .....	90	2,185
Tasmania .....	405	70
New Zealand .....	325	55
Australasia .....	342	285

Proportion in other countries.

In the following table are shown the population and area of territory per mile of line open in other countries. Of course a fair comparison can only be made between Australasia and other young countries in process of development :—

Country.	Population per mile of line open.	Area in square miles of territory per mile of line open.
Argentine Republic .....	844	243
Brazil .....	2,267	577
Canada .....	357	273
Chili .....	151	173
India .....	16,860	57
United Kingdom .....	1,908	6
France .....	1,745	7
Germany .....	1,845	8
Italy .....	3,866	14
Spain .....	3,003	34
Russia (in Europe) .....	4,542	105
Netherlands .....	2,717	8
Scandinavia .....	1,171	52
United States .....	350	22
Australasia .....	342	285

Earnings per mile.

The gross and net earnings of Australasian railways per mile of line open are shown in the following table :—

Colony.	Earnings per mile open 1889.	
	Gross.	Net.
	£	£
New South Wales .....	1,206·73	443·28
Victoria .....	1,414·98	529·71
Queensland .....	385·82	97·72
South Australia .....	528·36	252·25
Western Australia .....	214·99	—71·00
Tasmania .....	272·18	88·69
New Zealand .....	605·62	227·78
Australasia .....	884·34	303·61

— Indicates loss.

Earnings per mile in other countries.

Taking into consideration the sparse population of Australasia, these figures do not compare unfavourably with those of Europe,



where the gross earnings per mile of line open are stated to be as follows :—

United Kingdom.....	£3,624
France .. .. .	2,459
Russia .. .. .	2,327
Germany .. .. .	2,056
Austria Hungary .. .. .	1,890
Italy .. .. .	1,320
Australasia .. .. .	884

The following table shows the number of passengers carried on the Government lines of the colonies in 1881 and 1889. It must be borne in mind, however, that the large increase in the numbers for New South Wales and Victoria—especially in regard to the latter—arises from the extension of suburban lines :—

Colony.	Passengers carried.	
	1881.	1889.
	Number.	Number.
New South Wales .....	6,907,312	17,071,945
Victoria .....	5,365,672	31,098,750
Queensland .....	247,284	1,829,126
South Australia .....	3,032,714	4,484,795
Western Australia .....	67,144	.....
Tasmania .....	102,495	316,498
New Zealand .....	3,362,266*	3,376,459
Australasia .....	19,084,887	58,177,573†

\* 1885-6. The New Zealand returns do not include passengers with season tickets.  
 † Exclusive of Western Australia.

The amount of goods tonnage is shown in the subjoined table. In the period from 1881 to 1889 there was an increase of about 140 per cent., varying from less than 50 per cent. in South Australia to 420 per cent. in Queensland :—

Colony.	1881.	1889.
	Tons.	Tons.
New South Wales .....	2,033,850	3,788,950
Victoria .....	1,249,049	3,372,158
Queensland .....	161,009	835,139
South Australia .....	646,625	962,803
Tasmania .....	44,396	110,949
New Zealand .....	523,099	1,954,126
Total .....	4,658,028	11,024,125

Proportion of goods traffic.

Receipts from  
passenger  
traffic.

The percentage of receipts from coaching traffic to the total receipts is about the same in the Australasian Colonies as in Europe. The proportion in the United Kingdom for 1889 was 44 per cent. for coaching traffic, to 56 per cent. for goods traffic. The figures for the various colonies are given below, with the exception of Western Australia, whence returns have not been received. The position of Victoria is specially remarkable; in no country of the world is there greater passenger traffic than in Victoria:—

Colony.	Coaching Traffic.	Goods Traffic.
	Per cent.	Per cent.
New South Wales .....	40·25	59·75
Victoria .....	46·82	53·18
Queensland .....	29·97	70·03
South Australia .....	30·77	69·23
Tasmania ..	44·86	55·14
New Zealand.....	32·42	67·58
Total .....	39·79	60·21

Quantity of  
rolling stock.

The following table gives the different classes of rolling stock in the possession of the Australasian Governments; and, considerable as are the numbers of each class, they could with advantage be largely increased:—

#### Rolling Stock.

Colony.	Locomotives.	Passenger Carriages.	Goods Waggon.
New South Wales .....	439	1,064	9,304
Victoria .....	461	875	8,616
Queensland .....	219	276	3,614
South Australia .....	318	295	2,848
Tasmania* .....	42	106	774
New Zealand .....	272	512	8,156

\* Including private lines.

## POST AND TELEGRAPHS.

### POSTAL SERVICE.

**T**HE first post-office was established by Governor Macquarie in First post-office. the year 1810, Mr. Isaac Nichols being appointed Postmaster. The office was in High-street (now known as George-street), at the residence of Mr. Nichols, who was, "in consideration of the trouble and expense attendant upon this duty," allowed to charge on delivery to parties addressed, 8d. for every English or foreign letter of whatever weight, and for every parcel weighing not more than 20 lb., 1s. 6d.; but exceeding that weight, 3s. The charge on Colonial letters was 4d., irrespective of weight; and soldiers' letters, or those addressed to their wives, were charged 1d. Very little improvement in regard to postal matters took place for some years. In 1825 an Act was passed by Sir Thomas First Postal Act. Brisbane, with the advice of the Council, "to regulate the postage of letters in New South Wales," giving power for the establishment of post-offices, and to fix the rates of postage.

It was, however, not until 1828 that the provisions of the Act were put into full force. The rates of postage appear to have Early postage rates. depended upon the distance and the difficulty of transmission. The lowest single inland rate was 3d., and the highest 12d., the postage on a letter increasing according to its weight, which was fixed for a single letter at  $\frac{1}{4}$ -ounce. Letters between New South Wales and Van Diemen's Land were charged 3d. each (ship rate), and newspapers 1d. Other ship letters were charged 4d. single rate, and 6d. for any weight in excess. The privilege of franking Franking. was allowed to the Governor and a number of the chief public officials, and letters to and from convicts passed free under certain regulations.

Sir Richard  
Bourke's Postal  
Act.

In 1831 a two-penny post was established in Sydney, and in 1835, under Sir Richard Bourke, the Act of 1825 was repealed and another Act was passed, which fixed the charge on a single letter at 4d. for 15 miles, 5d. for 20 miles, 6d. for 30 miles, and so on up to 1s. for 300 miles. In 1837 a post-office was established in Melbourne, which was then of course a part of New South Wales. Stamps were introduced in the same year in the shape of stamped covers or envelopes, which are believed to have been the first postage stamps ever issued.

Stamped covers.

First mail  
steamer.

Regular steam mail communication with England was first established in 1852 ; prior to that time the Colony had to depend upon the irregular arrival and despatch of sailing vessels, but in that year the steamships "Australia," "Chusan," and "Great Britain" were despatched from England, making the voyage in 60 days, causing a strong desire in the minds of the Colonists for a more frequent and steady system of communication with the Old World. The outbreak of the Crimean War in 1854 hindered for a while the accomplishment of this object, but in 1856 a line of steamers was again laid on, and the service was carried on by the Peninsular and Oriental Company, and the Royal Mail Company for some years, without giving so much satisfaction to the public as might have been expected.

The Panama line.

As far back as 1854 a proposal was made for the establishment of a line of mail packets *via* Panama, and negotiations on the subject were carried on for several years between the Government of the United Kingdom and those of New South Wales and New Zealand. The result was that in 1866 the line was started, and continued in operation until the end of 1868, when it was terminated through the failure of the company by which it had been carried out. In the following year New South Wales, in conjunction with New Zealand, inaugurated a mail service *via* San Francisco, which, with a few interruptions and under various

San Francisco  
route.

conditions, has been continued up to the present time. The contract expired in November, 1890, but the service is continued by the New Zealand Government, and the steamers still make Sydney their terminus.

The establishment of a mail route *via* America had the effect of stimulating the steamship owners who were engaged in the service *via* Suez, and from that time there was a marked improvement in the steamers employed, as well as in the punctuality and speed with which the mails were delivered. The Peninsular and Oriental Company have carried mails for the colonies almost from the inception of the ocean steam service until now, with very few interruptions. Towards the end of 1878 the Orient Company commenced carrying mails between Australia and the United Kingdom, and has continued to do so ever since. In the year 1883 the fine steamers of the Messageries Maritimes of France entered the service, to be followed in 1887, by the North German Lloyd's, so that there are now one or two mails received and despatched every week, and a voyage to Europe, which was formerly a formidable undertaking, involving great loss of time and much discomfort, is regarded as a mere pleasure trip to fill up a holiday.

The following table gives the number of letters and newspapers passing, in 1861, through the post offices of the various Colonies:—

Colony.	No. of Post Offices.	Letters.	Newspapers.
New South Wales .....	340	4,369,463	3,384,245
Victoria .. .....	369	6,109,929	4,277,179
Queensland .....	24	515,211	427,489
South Australia .....	160	1,540,472	1,089,424
Western Australia .....	...	193,317	137,476
Tasmania.....	100	835,873	895,656
New Zealand .....	...	1,236,768	1,428,351
Australasia .....	...	14,801,033	11,639,820

Mail service *via* Suez.

French and German steamers.

Letters and papers carried.

Postal business

The following shows the postal business of each of the colonies during 1889 :—

Colony.	Number of Post Offices.	Number of Letters and Post Cards received and despatched.	Number of Books, and Parcels, and Packages received and despatched.	Number of Newspapers received and despatched.	Amount of Revenue received during the year.	Amount of Expenditure during the year.
New South Wales....	1,261	53,071,300	7,869,400	36,530,800	£ 395,584	£ 393,606
Victoria .....	1,600	48,097,268	6,810,288	20,632,732	*370,000	.....
Queensland .....	834	13,070,083	1,914,495	10,937,330	133,469	209,404
South Australia .....	593	16,338,607	913,122	9,085,714	107,560	177,987
Western Australia .....	186	2,737,034	247,681	1,392,825	13,367	†33,702
Tasmania .....	293	4,814,239	651,706	5,424,657	39,536	44,283
New Zealand .....	1,139	22,075,696	2,690,746	8,360,508	197,311	154,101
Australasia.....	5,956	161,154,227	21,097,438	92,394,575	1,250,827	.....

\* Approximate.

† Includes Telegraphs.

Carriage of letters, &amp;c., per head.

The postal returns of New South Wales, as illustrated in the above table, largely exceed those of the other colonies, Victoria being next in order. In New South Wales, Queensland, and Tasmania newspapers are carried free, a fact which, no doubt, largely extends their circulation through the post. In all the other colonies a small fee is charged. The following table shows the number of letters and post-cards, books, &c., and newspapers per head during 1889. Western Australia and South Australia take the lead in regard to letters, but Tasmania and New South Wales stand foremost as regards newspapers. The returns for 1889 show the following results :—

Letters, &c., Books, &c., and Newspapers per head.

Colony.	Number per Inhabitant.		
	Letters, &c.	Books, Parcels, &c.	Newspapers.
New South Wales.....	49	7	33
Victoria .....	43	6	19
Queensland .....	33	5	27
South Australia .....	51	3	28
Western Australia.....	64	6	32
Tasmania .....	32	4	36
New Zealand .....	36	4	14
Australasia.....	43	5	25

The following table shows the number of letters and post-cards per head in some of the principal countries of the world. With the exception of the United Kingdom the extent of the correspondence in Australasia largely exceeds that of any of the countries named :—

Postal business in other countries.

Country.	Number of Letters and Post-cards per head of Population.
Canada .....	16·1
Cape Colony, White population .....	20·1
United Kingdom.....	49·3
France .....	15·1
Germany .....	21·4
Italy .....	6·6
Austro-Hungary .....	13·1
Netherlands .....	18·1
Belgium .....	16·1
Australasia .....	42·6

The following table illustrates the extent of the postal facilities in regard to the number of inhabitants, and the square miles of territory to each post-office. It will be seen that Western Australia has one office to every 235 persons, while New South Wales, with the largest postal business of the colonies, has the least number of offices compared with population; Western Australia, the least when compared with territory :—

Postal facilities in Australasia.

Colony.	Number of Inhabitants to each Post Office.	Number of Square Miles of Territory to each Office.
	Number.	Square Miles.
New South Wales .....	890	246
Victoria .....	699	54
Queensland .....	487	801
South Australia .....	547	1,523
Western Australia.....	235	5,698
Tasmania .....	517	89
New Zealand .....	522	87
Australasia .....	636	530

Ocean mail services.

All the colonies, with the exception of New Zealand, have, in conjunction with the Imperial Government, entered into an agreement with the Peninsular and Oriental, and the Orient Steam Navigation Companies. Under this contract the two Companies have undertaken a weekly mail service for a yearly subsidy of £170,000. This subsidy is made up by a contribution of £95,000 from the Imperial Government, and of £75,000 from the six contracting colonies, distributed on the basis of population as follows :—

Colony.	Amount of Subsidy, 1889.	
	£	s. d.
New South Wales .....	27,637	3 10
Victoria .....	27,568	0 0
Queensland (from 1 April).....	7,095	0 2
South Australia .....	7,973	4 5
Tasmania .....	3,658	7 1
Western Australia .....	1,068	4 6
Total .....	75,000	0 0

The estimated net cost to be made good from revenue in New South Wales was only £2,599 3s. 10d. A return of deficiency in postal revenue for the other Colonies is unfortunately not available. The mail service has been performed with great regularity and expedition. The average time of both services in 1889 was :—

Time of service via Suez.

	Days.
London to Sydney .....	35 $\frac{6}{24}$
Sydney to London .....	36 $\frac{14}{24}$

Mail service via San Francisco.

In addition to the federal ocean mail service *via* Suez, New South Wales and New Zealand, until November, 1890, subsidised the Union Steamship Company for a four-weekly service, *via* San Francisco, to the amount of £37,000, of which New South Wales paid £25,750, and New Zealand £11,250. The net cost to New South Wales in 1889 for this service was estimated at



£4,397, the balance being made good by postages. The average time during the same year by this route was :—

	Days.
London to Sydney .....	40 $\frac{2}{3}$
Sydney to London .....	40 $\frac{1}{3}$

Time by the American service.

The British India Steam Navigation Company, sailing from Brisbane, *via* Torres Straits, carry mails under contract with the Queensland Government. This route is slightly longer than those previously mentioned, letters occupying 46 days in transit.

Torres Straits Route.

Besides those mentioned the other steamship companies trading with the Australasian Colonies carry mails, notably the Messageries Maritimes Company and the North German Lloyd, sailing from Sydney, the British India Steam Navigation Company, sailing from Brisbane, *via* Torres Straits, and the Shaw, Saville, and Albion Company, sailing from Lyttelton, *via* Magellan Straits. The companies are paid by the Colonies in proportion to the weight of mail matter carried, but the Messageries Maritimes Company and the North German Lloyd are in receipt of large subsidies from the French and German Governments respectively. The postage to the United Kingdom was reduced in January, 1891, from 6d. per  $\frac{1}{2}$  oz. *via* Italy, and 4d. *via* the long sea route, to the uniform rate of 2 $\frac{1}{2}$ d.; and the foreign postal returns for January, 1891, of all the Colonies affected show already a large increase in the mails carried over the corresponding month of 1890. It may be expected that the Postal Conference, which will assemble in Sydney in March, 1891, and the Conference of the Universal Postal Union, which is to assemble in Vienna a month or two later, where the Australasian Colonies will be for the first time represented, will result in a similar reduction of the postage to all foreign countries.

French and German mail steamers.

Postal Conferences.

### TELEGRAPHS.

In no country in the world has the development of telegraphic communication been so rapid as in Australasia, and in none has it been taken advantage of by the public to anything like the

Telegraphic communication in Australasia.

same extent. Taking Australasia as a whole, there are only three countries in the world that possess a greater extent of telegraph lines, and only four in which a larger number of messages are actually sent. In no other country, however, does the number of messages bear anything approaching the same ratio to the population. The following table illustrates these remarks:—

Number of  
messages sent.

Country.	Length of telegraph lines (poles).	Messages.	Messages per head of population.
	Miles.	No.	No.
Canada* .....	2,440	5,032,866	0·99
Cape Colony (white population)...	4,339	1,063,949	2·67
United Kingdom .....	30,720	57,765,000	1·50
France .....	54,677	30,917,225	0·80
Germany .....	58,201	29,406,601	0·62
Italy .....	20,736	8,139,500	0·26
Austria-Hungary .....	27,846	10,989,000	0·28
Netherlands .....	3,094	4,060,000	0·90
Belgium .....	3,976	4,954,000	0·80
United States.....	178,719	80,000,000	1·21
Australasia .....	39,480	10,912,731	2·88

\* Government lines only.

Number of mes-  
sages per head.

The return for the United States includes only the lines of the Western Union Company, who own the principal part of the United States telegraph system. From the above table it appears that the population of Australasia sent nearly three messages through the telegraph in the year for each inhabitant. In the United Kingdom the number was about one and a-half to each inhabitant; in the United States of America about one and a-quarter messages for every inhabitant; in France and Germany one message and a-half, and one and a-quarter, respectively, for every two persons; in Austria-Hungary, and Italy one message for every four persons. In Canada about one message is sent for every inhabitant in each year, and in Cape Colony about two and three-quarters.

First Telegraph  
Lines.

The electric telegraph was introduced into these Colonies almost at the time of the earliest railway construction. The first telegraph

messages were sent in New South Wales in 1851. In Victoria the telegraph line from Melbourne to Williamstown was opened in 1854. The first line in South Australia, from Adelaide to Port Adelaide, was opened in 1856; and the first Tasmanian line was completed in 1857. In New Zealand the first telegraph office was opened in 1862; and the line from Brisbane to Rockhampton, the first in Queensland, was opened in 1864. Telegraphic communication was established between Sydney, Melbourne, and Adelaide in 1858. The first telegraph in Western Australia was opened in 1869, and communication between that Colony and all the others of the group was completed in 1877.

Australasia is connected with Europe and the rest of the world <sup>Cables.</sup> by means of cables connecting with the various Asiatic continental lines. There are two cables—the older one opened in July, 1872—joining Port Darwin to Banjowangie in Java, whence communication is provided with Europe by way of Batavia, Singapore, Madras, and Bombay. The length of line between Adelaide and London is 12,570 miles—9,146 cable, and 3,424 miles overland wire. Of the land portion 1,971 miles are between Adelaide and Port Darwin. A second cable was laid in 1888 from Frome, on Roebuck Bay, in Western Australia, connecting with South Australia on one side, and Banjowangie on the other. The cable joining Tasmania to the continent of Australia was laid in 1869, the length being about 170 miles. It starts from the township of Flinders, near Cape Schanck, in Victoria, and terminates at Low Head, at the mouth of the Tamar, in Tasmania. New Zealand was joined to the continent by a cable laid in 1876, the length being about 1,191 miles. It has its Australian terminus within sight of the spot where Captain Cook landed on the shores of Botany Bay, and within a stone's throw of the monument of La Perouse. The New Zealand terminus of the cable is at Nelson, on the middle or south island, whence another cable is laid to Wanganui, in the North island, with an alternate line from Picton to Wellington.

All the Colonies show very rapid progress in the period from 1871 to 1881. In the case of Queensland this increase is largely due to the construction of the line to the Gulf of Carpentaria; and in the case of South Australia, to the construction of the lines to Port Darwin and to Eucla, on the boundary of Western Australia.

Length of  
Telegraph poles.

The following table shows the increase in the number of telegraphic lines for each colony at intervals of ten years, as far as the returns are available :—

Miles of Telegraph (Poles).

Colony.	1861.	1871.	1881.	1889.
New South Wales.....	1,616	*4,674	8,515	10,732
Victoria.....		*2,295	3,350	3,967
Queensland.....	169	2,525	6,280	9,456
South Australia.....	597	1,183	4,946	5,511
Western Australia.....		*750	1,585	2,961
Tasmania.....		*291	928	1,979
New Zealand.....		2,015	3,824	4,874
Australasia.....	.....	13,733	29,428	39,480

\* In 1873.

Length of  
Telegraph wires.

The next table gives similar particulars, only the amounts are expressed as miles of wire instead of length in poles :—

Miles of Telegraph (Wires).

Colony.	1861.	1871.	1881.	1889.
New South Wales.....	1,981	5,579	14,278	22,606
Victoria.....		3,472	6,626	13,554
Queensland.....	169	2,614	8,585	16,981
South Australia.....	915	1,718	7,228	11,677
Western Australia.....		*750	1,593	3,330
Tasmania.....		241	1,157	2,936
New Zealand.....		3,287	9,653	13,489
Australasia.....	.....	17,661	49,120	†84,573

\* In 1873.

† Includes telephone wires.

The number of telegrams passing through the wires of each Colony, and the revenue received by the respective telegraph departments for the year 1889, were as follows :—

Business done by Telegraphs during the year 1889.

Colony.	Number of Telegrams.	Revenue Received.
New South Wales .....	3,433,562	£ 186,862
Victoria .....	2,885,919	127,720
Queensland .....	1,568,872	93,297
South Australia .....	984,180	100,558
Western Australia .....	197,587	10,036
Tasmania .....	280,559	26,414
New Zealand .....	1,802,987	106,463
<b>Australasia .....</b>	<b>11,153,666</b>	<b>651,350</b>

## RELIGION.

## THE DENOMINATIONS.

**T**HE progress of all matters relating to Denominational Religion since the early years of Australasian settlement has been steady and remarkable. For the first fifteen years after the foundation of the Colony of New South Wales only a single denomination was recognized by Government, or possessed either minister or organization—the Established Church of England. In those days the whole of Australasia was ecclesiastically within the Diocese of the Bishop of Calcutta, of which it formed an Archdeaconry; this continued until 1836, when the Bishopric of Australia was constituted, and the Rev. William Grant Broughton, D.D. (formerly Archdeacon), was consecrated the first Bishop. There are now nineteen Bishoprics throughout the Colonies (six being in New South Wales), and to this day one of the titles of the Bishop of Sydney is “Primate of Australia and Tasmania.” The Synodical system of Church Government, by means of a legislative body consisting of the clergy and representatives of the laity, prevails throughout Australasia.

Church of  
England.

Church of Rome

In 1803 a grudging recognition was extended to Roman Catholics, one of whose chaplains was then placed on the Government establishment; but it was not until 1820 that any regular provision was made for an adequate staff of clergy. Until 1834 the Roman Catholics of Australia and Tasmania were under the jurisdiction of the Bishop of Mauritius, but in that year Sydney was constituted a see, and the Rev. John Bede Polding, D.D., was consecrated Bishop, with jurisdiction over the whole of the Continent, and Tasmania. Some eight years later this Episcopate was raised to the rank of an Archiepiscopal See. There are now in Australasia six Archbishops and sixteen Bishops of the Church of Rome.

Amongst the earliest free colonists who settled in the Hawkesbury district was a small party of Presbyterians, and one of the first places of worship erected in the Colony was put up in 1810 by their voluntary exertions. Services were conducted there for years before any ordained minister of the denomination reached New South Wales; indeed it was not until 1823 that the Rev. Dr. Lang, the first Presbyterian minister in Australia, arrived in Sydney. The first Wesleyan minister came to New South Wales in 1815, but it was not until 1821 that a Wesleyan place of worship was erected in Sydney, and it was even later before the denomination was allowed to share in the Government provision for religion.

No other denominations beyond these four were ever officially recognized, nor was any State contribution ever made towards the support of any other. This was no doubt owing to the fact that the greater portion of the inhabitants belonged to these persuasions. Nor has the enormous increase of population since then in any considerable degree altered this condition of things, though in different Colonies different bodies of Christians have represented a larger proportion of the people than in others. Thus, in New South Wales, Queensland, and Victoria the proportion of Roman Catholics has been, and still is, larger than in the other Colonies, while in New Zealand it has been much smaller. Presbyterians bear a greater proportion to the population in New Zealand than in any other Colony; while Wesleyans and Lutherans are more numerous in South Australia than elsewhere. The adherents of the Church of England predominate numerically in all the Colonies.

To obtain anything like a comprehensive view of the numerical relations of religious denominations in all the Colonies of Australasia reference must be made to the census. A comparison of the numbers shown by the Census of 1881 gives the following result.

## Australasia—Religions, 1881.

Colony.	Church of England.	Roman Catholic.	Presbyterian.	Wesleyan and Primitive Methodist.	Congregational.	Baptist.	Lutheran	Unitarian.	Hebrews.	Pagans.	Others and unspecified.	Total.
New South Wales..	342,359	207,606	72,545	64,352	14,328	7,307	4,836	828	3,266	9,345	24,696	751,468
Victoria .....	311,291	203,583	132,591	108,393	19,878	20,373	11,149	942	4,330	11,270	38,546	862,346
Queensland .....	73,920	54,376	22,609	14,351	4,764	5,583	16,889	...	457	16,871	3,705	213,525
South Australia ....	75,812	42,628	17,917	52,788	9,908	13,979	19,617	747	762	4,151	41,556	279,865
Western Australia..	16,263	8,413	1,004	2,084	1,262	.....	.....	...	.....	145	537	29,708
Tasmania* .....	47,208	29,644	14,486	12,230	2,442	1,932	1,122	127	544	844	5,126	115,705
New Zealand.....	203,333	68,984	113,108	46,657	6,699	11,476	5,773	489	1,536	4,936	26,942	489,933
Total .....	1,070,186	615,234	374,260	300,855	59,281	60,650	59,386	3,133	10,895	47,562	141,108	2,742,550
Per cent. ....	39·02	22·43	13·65	10·97	2·16	2·21	2·17	·11	·40	1·73	5·15	100·00

\* Estimated ; the religions are not enumerated in the Tasmanian census.



Thus, in 1881 it appears that 86 per cent. of the population of all the Colonies was attached to the Church of England, Roman Catholic, Presbyterian, and Wesleyan denominations. Next to these, although at a great distance, came Baptists, Congregationalists, and Lutherans, the numbers of each being about the same. With the exception of Pagans (under which term the Chinese have for the most part been erroneously classed), no other persuasion held adherents amounting to 1 per cent. of the population.

Predominant denominations.

Between April, 1881, and December, 1889, the total addition to the population in the Colonies of Australasia has amounted to 1,044,277 persons, representing an increase of more than one-third in the eight years. The following table shows an estimate of the comparative progress of the various denominations during this period; and from this it will be seen that the Salvation Army is a new element which does not appear in the Census of 1881; any adherents of this denomination that then existed being grouped with "Other Persuasions." Considerable progress has been made by the Army of late years in various parts of the world, and it is probable that the ranks are largely recruited from the different Protestant denominations. It will be observed that the proportion of the four leading denominations to the whole population remains as before at 86 per cent., while their relative proportions exhibit scarcely any perceptible change. During the eight years the Church of England has increased its numbers in New South Wales by 168,000, and in Queensland by 73,000, while in each of the other colonies the increase has been comparatively small. The Roman Catholics have added 102,000 to their numbers in New South Wales, and 60,000 in Victoria. The Presbyterian body have gained 36,000 in New South Wales, 40,000 in Victoria, while in Queensland they have made an advance of 26,000, and 27,000 in New Zealand. The Wesleyan increase in New South Wales was 32,000, and about the same in Victoria.

Salvation Army.

Numerical increase.

Approximate Number of Adherents of various Religious Denominations, 1889.

Colony.	Church of England.	Roman Catholic.	Presbyterian.	Wesleyan and Primitive Methodist.	Congregational.	Baptist.	Lutheran.	Unitarian.	Hebrews.	Salvation Army.	Pagans.	Others and Unspecified.	Total.
New South Wales ..	510,600	310,000	108,400	96,300	21,400	11,000	7,300	1,400	4,950	4,150	17,000	29,700	1,122,200
Victoria . . . . .	402,500	263,850	172,200	139,750	25,700	26,250	14,550	1,250	5,600	6,150	14,400	45,823	1,118,023
Queensland . . . . .	146,700	109,450	49,050	35,150	10,000	12,950	23,450	350	850	800	3,150	9,758	406,658
South Australia ....	85,000	49,300	20,750	61,000	11,350	16,200	22,700	850	900	3,600	4,800	48,034	324,484
Western Australia ..	23,900	12,350	1,500	3,050	1,850	....	....	....	....	....	200	848	43,698
Tasmania . . . . .	59,200	34,350	20,400	16,300	3,250	3,300	3,150	150	450	650	2,850	7,430	151,480
New Zealand . . . . .	249,150	87,100	140,100	59,250	8,350	15,400	6,350	500	1,650	5,650	4,800	41,979	620,279
Total . . . . .	1,477,050	866,400	512,400	410,800	81,900	85,100	82,500	4,500	14,400	21,000	47,200	183,577	3,736,827

## EDUCATION.

IT would have been indeed strange if communities so prosperous as the Australasian Colonies had neglected the important matter of Education, and in every province of the group it will be found that the State has taken the subject in hand—to an extent, in some instances, far beyond what has been done in most of the countries of the old world. In each colony provision is made for primary education, and in all of them there are grammar and high schools, by means of which those who have the desire may qualify themselves for the higher studies of the University. So bountiful has been provision made by the State that in most cases the cost of education is merely nominal, and the poverty of the parents ceases to be an excuse for the ignorance of the children. No doubt in the very early days of colonization there was but little attention paid to education; but as soon as the sharp struggle for bare existence was over, attempts were made to provide in some degree the means of instruction for the rising generation, and the foundations were laid of an educational system that is in the highest degree creditable to these young communities. The denominations were naturally the first to build schools and provide teachers, but there was always a large proportion of persons who objected to denominationalism, especially those who belonged to denominations not subsidized by the State; and hence there arose a National or non-sectarian system, which has in the course of time almost monopolized the educational field.

Progress of Education.

Denominational Schools.

In all the Australasian Colonies the State system of education is secular, and Western Australia is the only one where denominational education is at all subsidised. Education is compulsory in all the colonies, except Queensland. It is entirely free in

Primary Education.

Victoria, Queensland, and New Zealand, while small fees are charged in the other colonies, but not enforced where the parents can reasonably plead poverty.

The statutory school age of each colony is as follows :—

New South Wales .....	6 to 14 years.
Victoria .....	6 to 13 "
Queensland .....	6 to 12 "
South Australia ..	7 to 13 "
Western Australia ..	6 to 14 "
Tasmania .....	7 to 14 "
New Zealand.....	7 to 13 "

New South  
Wales.

State aid to  
Denominational  
Schools.

Present system  
of Public  
Instruction.

In New South Wales there was for many years a dual system in existence. The four State-aided denominations—the Church of England, Roman Catholic, Presbyterian, and Wesleyan bodies—had schools supported by annual votes from Parliament, administered under the control of the head of each denomination for the time being. There were also National schools, equally supported by the State, but under the control of a Board appointed by the Government. This plan was found to be costly and wasteful in the extreme, for in many of the country towns there were several small and inefficient competing schools, where the total number of children was not more than sufficient for one well-conducted establishment. So strongly was this evil felt that changes in the law relating to education were made from time to time, until at length the denominational system was abolished altogether, and one general and comprehensive plan of Public Instruction adopted in its place. This was not brought about without much agitation, lasting over a considerable period. A League was formed, having for its object the establishment of education, secular, compulsory, and free. Under the auspices of Sir Henry Parkes the measure establishing the present system became law. In New South Wales education is non-sectarian, though facilities are afforded to clergymen to give religious instruction within specified school hours to those children whose parents desire it. It is compulsory, and free to all who cannot afford to pay, while a merely

nominal fee is charged to those who are in a position to contribute towards the cost of the teaching of their children. In New South Wales in 1889 there were 2,373 public schools, with an average attendance of 114,569 children out of 191,215 enrolled. For secondary education there are a number of superior and high schools entirely supported by the State, besides numerous colleges, grammar schools and denominational schools, which obtain no assistance from the Government, except in the case of the Sydney Grammar School, which receives an annual subsidy, amounting in 1889 to £2,350. Scholarships and bursaries have been founded in connection with many of these schools. Educational affairs are in New South Wales under the direction of the Minister for Public Instruction.

Schools in New South Wales.

In Victoria a system of free, compulsory, and secular primary education is in force, under a Minister for Education, who is responsible to Parliament. The compulsory clause is very strictly enforced, especially in the large towns, and education is entirely free as regards the ordinary subjects of primary instruction, while the teachers are allowed to impart additional subjects, for which a small fee has to be paid. At the end of 1889 Victoria had 2,063 State schools, with an average attendance of 130,859 scholars, out of 202,822 enrolled. Religion is strictly forbidden to be taught during school hours, and not at any time must a teacher impart it. Secondary education is principally in the hands of private or denominational establishments. The higher education is supplied by the University with its affiliated colleges.

Victoria.

The office of Minister for Education in the Government of Queensland is associated with some other office, usually that of the Postmaster-General. The Act now in force is of a tolerably liberal character, primary education being secular and free. The compulsory clause has not been adopted, as it would be a very difficult thing to enforce its provisions in the scattered and sparsely populated districts of the interior. The primary schools at the

Queensland.

end of 1889 were 584 in number, with an enrolment of 62,347 pupils, out of whom 40,472 were in average daily attendance. Secondary education is provided for by means of grammar schools, which are liberally assisted by the State. Queensland as yet has no University of her own, but sends a fair proportion of students to the Universities of Sydney and Melbourne.

**South Australia.** The South Australian system of primary education is very similar to those already described. It is presided over by a responsible Minister, with an Inspector-General and other officials. Education is compulsory, secular and free to all those who are unable to pay the small fees charged. There were 540 primary schools at the end of 1889, with 44,576 children on the rolls, and an average daily attendance of 28,216. Children who have attained a certain standard of instruction are exempt from compulsory attendance. Religious instruction is not allowed to be given except out of ordinary school hours. Secondary education is in the hands of private and denominational establishments, and the University at Adelaide, though small, is efficient.

**Western  
Australia.**

Quite a different system of education prevails in Western Australia. The public primary education is imparted in what are called elementary schools, which are entirely supported by the State, and provisional schools, which are subsidised to a less extent. Private schools are also assisted from the public purse, on condition of submitting to Government inspection on secular subjects. There is a high school at Perth and a grammar school at Fremantle, and further encouragement is given to secondary instruction by the institution of scholarships which are open for competition. At the end of 1889 there were seventy-three elementary and provisional schools, exclusive of assisted schools, in the colony, with 3,310 scholars on the roll, and an average attendance of 2,517. The local boards have power to enforce compulsory attendance.

In Tasmania there is no separate Minister for Education, but <sup>Tasmania.</sup> the department is under the control of the Treasurer, who has especial charge over matters relating to primary instruction. There are public schools in every country town throughout the colony, and several in Hobart and Launceston. They now number 229 in all, the average attendance being 8,973, out of an enrolment of 17,948 children. The principle of compulsion is nominally in force. Secondary education is encouraged by means of superior schools and a system of scholarships; and annual examinations are held at which successful candidates may gain the degree of Associate of Arts. There is no University in Tasmania.

New Zealand has an educational system which is entirely <sup>New Zealand.</sup> secular and free. There is no separate department of education, but matters of this kind are looked after by one of the members of the Cabinet. The whole colony has been divided into school districts, each presided over by a local board, and a capitation grant of £3 15s. per head is paid by the State for every child in average attendance, and in addition 1s. 6d. per child for the support of scholarships, with other grants for school buildings, training of teachers, &c. At the close of 1889 there were 1,155 public schools thus supported by the State, with an average attendance of 94,308 scholars out of a total enrolment of 117,603. High schools, colleges, and grammar schools provides the means for acquiring secondary education, and there is an University, which, like those of New South Wales, Victoria, and South Australia, is empowered to confer the same degrees as the Universities of Oxford and Cambridge.

In addition to the ordinary primary schools the New Zealand <sup>Maori Schools.</sup> Government maintained schools for native children in localities where there are few or no Europeans. The number of scholars altogether in 1889 was 2,426, and the teaching staff numbered 94. The expenditure for 1889 was £16,057.

Number of  
State Schools.

The following table gives the number of State schools in each of the colonies, together with the number of teachers and the average attendance of scholars :—

Colony.	Number of Schools.	Number of Teachers.	Number of Scholars to each School.	Average Attendance of Scholars.	
				Number.	Proportion to population
New South Wales .....	2,373	4,002	48	114,569	10·37
Victoria .....	2,063	4,586	63	130,859	11·85
Queensland .....	584	1,497	69	40,472	10·19
South Australia .....	540	1,076	52	28,216	8·78
Western Australia .....	73	122	34	2,517	5·86
Tasmania .....	229	459	39	8,973	6·03
New Zealand.....	1,155	2,894	81	94,308	15·36
Australasia.....	7,017	14,636	59	419,914	11·25

Attendance at  
State Schools.

In proportion to population the average attendance at State schools is highest in New Zealand, Victoria being second, and New South Wales third. New Zealand occupies a very creditable position with regard to education, for even taking private schools into account as well as the State Schools, there are 17·55 per cent. of the whole population attending school, against 16·35 per cent. in Victoria, and 14·14 per cent. in New South Wales. Western Australia stands lowest on the list, owing, no doubt, to the sparseness of its population.

Children of  
School age.

The number of children of "school age" in all the colonies for 1889 was 955,000. As almost the whole of the children enrolled at the different schools are over 5 or under 15 years of age, that period has been adopted as "school age" for purposes of computation in the following table :—



Number of children of school age :—

New South Wales .....	286,000
Victoria .....	286,000
Queensland .....	95,000
South Australia .....	78,000
Western Australia .....	11,000
Tasmania .....	36,000
New Zealand .....	163,000
<hr/>	
Australasia .....	955,000

Against the above total the gross enrolment of scholars, at <sup>Enrolment of</sup> both State and private schools, and the percentage of children of <sup>Scholars.</sup> school-going ages to the entire population, were :—

Colony.	Gross Enrolment.	Percentage to population of school-going age.
New South Wales .....	232,840	81·40
Victoria .....	252,568	88·45
Queensland .....	81,723	85·88
South Australia .....	58,403	75·15
Western Australia .....	4,744	44·35
Tasmania .....	22,787	62·37
New Zealand .....	131,061	80·55
<hr/>		
Australasia .....	784,126	82·14

Out of the total gross enrolment of 784,126 children, as just <sup>Private and</sup> given, 650,083 were enrolled in schools under the control of the <sup>Denominational</sup> Governments of the various colonies, and 134,043 were on the <sup>Schools.</sup> rolls of private and denominational schools. The difference between the number of children of school age and the number

Average daily attendance.

enrolled, amounting to 170,874, or 17·86 per cent. of the “school age” population, are either taught at home, or receive no education at all. The average daily attendance at the State schools of all the colonies was 419,914, or 64·59 per cent. of the gross enrolment. Calculated on the same percentage the average attendance at the various private schools would amount to 86,578, and that of all schools to 506,492. Compared with the total population of each Colony the proportion of children enrolled was as follows :—

Colony.	Enrolment per cent. of population.
New South Wales .....	20·75
Victoria .....	22·59
Queensland .....	20·10
South Australia .....	18·00
Western Australia .....	10·86
Tasmania .....	15·04
New Zealand ..	21·13
<b>Australasia .....</b>	<b>20·71</b>

This shows a school enrolment in Australasia of about one to every five inhabitants—a proportion as favourable as that of any European country.

Cost per child in the colonies.

In the State Schools of New South Wales the cost per child was until 1888 higher than in the other Australian Colonies; the figures for last year, however, show that that Colony has now reduced its expenditure per child below that of Victoria, though it is still a little over that of Queensland. The following figures do not include cost of buildings :—

	Total cost per child of the average attendance.
New South Wales .....	£4 11 10
Victoria .....	5 1 11
Queensland .....	4 2 4
South Australia .....	3 15 3
Western Australia .....	3 17 1
Tasmania .....	3 13 10
New Zealand .....	4 8 11

The cost per child in average attendance at State Schools in Australasia therefore averaged £4 8s. 9d. for the year 1889.

The following is the State expenditure on primary education for 1889, exclusive of cost of buildings:—

	£
New South Wales .....	525,933
Victoria .....	666,862
Queensland .....	166,564
South Australia .....	106,240
Western Australia.....	9,698
Tasmania .....	39,737
New Zealand .....	348,114

Australasia ..... £1,863,148

The number of schools, and of scholars enrolled in private schools, in 1889, was as follows:—

Private Schools.

Colony.	Number of Schools.	Number of Teachers.	Gross Enrolment of Scholars.	
			Number.	Percentage to Population.
New South Wales.....	1,884	700	41,625	3·77
Victoria .....	787	*.....	49,746	4·50
Queensland.....	130	457	9,294	2·34
South Australia.....	302	742	13,647	4·24
Western Australia .....	16	*.....	1,434	3·34
Tasmania.....	88	*.....	4,839	3·25
New Zealand .....	293	686	13,458	2·19
Australasia.....	3,500	.....	134,043	3·59

\* Information not available.

Technical instruction is given in nearly all the capital cities of each of the Australian Colonies, and there is every probability that instruction in such matters will before long be very much extended. So far the expenditure on this important branch of education can only be got for the colonies enumerated below, which was in 1889:—

	£
New South Wales.....	19,488
Victoria .....	33,804
Tasmania .....	1,434

The amount credited to Victoria includes a grant of £15,000 to the "Working Men's College," founded by the late Hon. F. Ormond, M.L.C.

Technical college.

In New South Wales, during the year 1878, a sum of £2,000 was granted by Parliament towards the organization of a Technical College, and for five years the work of the institution was carried on in connection with the School of Arts. In 1883, however, a board was appointed by the Government to take over its management, and the Technical College became thenceforth a State institution. Towards the end of 1889 the Board was dissolved, and the Technical College came under the direct control of the Minister of Public Instruction.

Number of students.

The college is open to students of each sex and, during 1889, about 446 female students attended for at least one term. The number of individual students in 1889 averaged 2,719 persons. The average daily attendance was 1,194.

Country classes

Branch technical schools have also been established in the suburbs, and in the northern, southern, and western districts of the Colony. In 1889 these country classes had an average of 840 students enrolled, with an average attendance of 371.

New building for technical college.

The Government are erecting a new building for the technical college and technological museum at Ultimo, in the western portion of the metropolis.

Cost of technical education.

In 1889 the expenditure of the Board of Technical Education amounted to £17,500 received from the State, and £1,988 from pupils, in all £19,488.

Technical education in Victoria.

Technical education in Victoria is extending rapidly, but while the Government of New South Wales has wholly borne the cost of this class of education, that of Victoria has received great assistance from private munificence, the Hon. F. Ormond, M.L.C., having given £15,500 to assist in the establishment of a Working Men's College. In 1888 there were nearly 1,800 students on the rolls of this institution. There are besides this college, the Schools of Mines and Design, wholly supported by the Government and other technical schools in the various important centres of the Colony.

Technical Education has well advanced in South Australia. The School of Mines and Industries has, in Adelaide, about 100 students on the roll. It is proposed shortly to extend the benefit of this class of education to the country districts. Also in Queensland Technical Education is active, the classes being worked in conjunction with the Metropolitan School of Arts, the number of students on the rolls being nearly 600.

South Australia  
and Queensland.

In Tasmania the foundations of new Technical Schools were laid in 1889 in Hobart, but there are branch schools in Launceston. The schools are under the direction of local Boards of Advice, the members of whom act directly under the Minister of Education. The number of students in 1889 was 153.

Technical  
schools in  
Tasmania.

Western Australia and New Zealand have not extended their educational operations so as to embrace Technical Education.

GENERAL EDUCATION.

Striking evidence of the rapid progress made by these colonies in regard to education is afforded by a comparison of the educational status of the people as disclosed by the census of 1861 and of 1881. In these years the numbers who could read and write, read only, and who were unable to read, were as follow :—

Progress of  
Education.

Educational pro-  
gress since 1861.

Australasia.—Education of the People.

	1861.				1881.			
	Read and Write.	Read only.	Cannot Read.	Total.	Read and Write.	Read only.	Cannot Read.	Total.
New South Wales	188,543	46,024	110,293	350,860	507,007	49,372	195,029	751,408
Victoria .....	327,800	56,945	155,577	540,322	651,567	49,535	161,244	862,346
Queensland....	17,181	3,714	9,164	30,059	136,718	13,631	63,176	213,525
South Australia..	72,207	18,029	35,994	126,330	200,057	15,267	64,541	279,865
Western Australia	8,446	1,559	5,585	15,590	19,697	2,429	7,582	29,708
Tasmania.....	48,281	13,137	28,559	89,977	74,967	9,605	31,133	115,705
New Zealand ....	67,998	8,922	22,101	99,021	346,228	27,323	116,382	489,933
Total.....	730,456	148,930	373,273	1,252,659	1,936,301	167,162	639,087	2,742,550

## DEGREE OF EDUCATION.

Educational  
status of the  
people.

The figures in the preceding table refer to the total population, and the number of illiterates is, therefore, unduly swelled by those under school-going age. If the population over 5 years of age be considered in comparison with the total population the following table shows the results for the whole of Australasia :—

Degrees of Education of total Population, and of Population over 5 years for 1861 and 1881.

Degree of Education.	Population who could read and write, read only, and could not read.			
	Whole Community.		Community over 5 years of age.	
	1861.	1881.	1861.	1881.
	No.	No.	No.	No.
Read and write .....	730,456	1,936,301	730,339	1,936,111
Read only .....	148,930	167,162	143,908	161,295
Cannot read .....	373,273	639,087	168,929	243,583
Total .....	1,252,659	2,742,550	1,043,176	2,340,989

Percentage of  
Education.

The same particulars expressed centesimally are :—

Degree of Education.	Whole Community.		Community over 5 years.	
	1861.	1881.	1861.	1881.
	per cent.	per cent.	per cent.	per cent.
Read and write .....	58·31	70·60	70·00	82·70
Read only .....	11·89	6·10	13·80	6·89
Cannot read .....	29·80	23·30	16·20	10·41
Total .....	100·00	100·00	100·00	100·00

It will be seen, therefore, that while, in 1861, of every 100 people over 5 years of age, there were only 70 who could read and write, this percentage, in 1881, had increased to nearly 83, while the number of those who were totally illiterate had, in the same period, decreased from 16 to 10 per cent. Decrease of illiteracy.

Looking at the matter still more closely with reference to age, it will be seen that the improvement in education is most marked in the case of the rising generation. The following table shows the degree of education of all children between the ages of 5 and 10 years in the years of 1861 and 1881, numerically and centesimally :— Improved education of the young.

Children between the ages of 5 and 10 years.

Degree of Education.	Total Numbers.		Percentage.	
	1861.	1881.	1861.	1881.
	No.	No.	per cent.	per cent.
Read and write .....	37,322	175,921	26·63	49·41
Read only .....	51,337	75,583	36·63	21·23
Cannot read .....	51,503	104,507	36·74	29·36
Total .....	140,162	356,011	100·00	100·00

The percentage of those able to read and write has therefore nearly doubled itself in 20 years, while the percentage of those able to read only has decreased in a marked degree, and the percentage of those wholly illiterate in 1881 was only about four-fifths of what it had been in 1861.

The Marriage Register affords further proof of the advance of education, and it has the further advantage of giving annual data, while the Census figures are only available for decennial periods. The numbers of those who signed the Marriage Register by marks were :— Marriage Register signed with marks.

Marriages, Australasia.												
	1861.			1871.			1881.			1889.		
	Marriages.	Marks.		Marriages.	Marks.		Marriages.	Marks.		Marriages.	Marks.	
		M.	F.		M.	F.		M.	F.		M.	F.
New South Wales	3,222	596	989	3,953	573	768	6,284	347	525	7,530	261	243
Victoria .....	4,434	*	*	4,693	342	650	5,896	171	245	9,194	139	127
Queensland .....	320	*	*	970	*	*	1,703	84	169	3,123	90	115
South Australia ..	1,158	*	*	1,250	*	*	2,308	100	159	2,062	49	45
Western Australia	149	*	*	159	*	*	197	*	*	300	*	*
Tasmania .....	717	*	*	598	*	*	856	*	*	967	*	*
New Zealand .....	878	*	*	1,864	*	*	3,279	105	190	3,632	73	94
	10,878			13,487			20,523	807	1288	26,808	612	624

\* Information not available.

Percentages of  
mark signatures.

The percentages for those Colonies where the necessary information is available is worked out in the following table :—

#### Percentages of Mark Signatures.

Year.	Males.	Females.	Total.
1861 .....	18·50	30·69	24·60
1871 .....	10·58	16·40	13·49
1881 .....	4·14	6·61	5·38
1889 .....	2·49	2·54	2·52

The percentage in 1889 was therefore only about one-tenth of that in 1861, and there is every reason to expect that in the course of another few years the proportion will be still further diminished.

Increase of  
school attend-  
ance.

The number of children attending school has increased at a far greater rate than the population, showing that the advantages of education have been of late years more within the reach of the masses than formerly :—

#### Number of Children attending Public and Private Schools.

1861 .....	130,060
1871 .....	312,130
1881 .....	670,776
1889 .....	784,126

Population from 1861 to 1889 nearly trebled itself, but the number of school children in 1889 was about six times as great as in 1861.



LETTERS AND NEWSPAPERS.

The Post Office returns of the various Colonies point indirectly to the spread of education, through showing the wonderful increase in the distribution of letters and newspapers that has taken place. The following table shows that while in 1851 only 2,165,000 letters and 2,150,000 newspapers passed through the Post Offices, these numbers had in 1889 increased to 161,154,000 and 92,395,000 respectively :—

Spread of education shown by Postal Returns.

Australasia.		
	Letters.	Newspapers.
1851 .....	2,165,000	2,150,000
1861 .....	14,801,000	11,640,000
1871 .....	32,122,000	18,354,000
1881 .....	85,483,000	47,611,000
1889 .....	161,154,000	92,395,000

The following are the numbers of letters and newspapers per head of population in each of the years above mentioned :—

	Letters per Inhabitant.	Newspapers per Inhabitant.
1851 .....	4·74	4·70
1861 .....	11·80	9·26
1871 .....	16·61	9·48
1881 .....	30·87	17·19
1889 .....	43·18	24·75

In 1889 the number of letters per inhabitant was, therefore, nine times, and that of newspapers five times, larger than in 1851.

PUBLIC LIBRARIES.

In all the Colonies Public Libraries have been established, those in the capital cities generally going by the name of "The Public Library," while those in the country towns are known as Schools of Art, Mechanics' Institutes, &c. The Free Public Libraries in Melbourne and Sydney are splendid institutions, the former comparing favourably with many of the libraries in European capitals. The following table shows the number of

Public Libraries.

libraries which furnished returns, and the number of books belonging to them, in 1889:—

	No. of Libraries.	No. of Books.
New South Wales.....	199	320,856
Victoria (1888) .....	352	670,152
Queensland.....	74	98,140
South Australia.....	136	141,289
Tasmania .....	37	54,206
New Zealand (1886).....	303	292,108
Total of six Colonies ... ..	1,101	1,576,751

### UNIVERSITIES AND COLLEGES.

The advance of education is hardly more clearly indicated by the institution and success of Colleges and Universities, than is the progress of wealth or the attainment of leisure. In Australia the earliest attempts to provide for what may be termed the luxuries of education, were made in New South Wales in 1852, and in Victoria in 1855, when the Universities of Sydney and Melbourne respectively were established. No other Colony of Australasia was at that time sufficiently advanced in wealth and population to follow the example thus set, but New Zealand in 1870, and South Australia in 1874, each founded an University. In all cases the Universities are in part supported by grants from the public funds, and in part by private endowments and the fees paid by students.

Endowments  
and Fees.

The Government Endowment and Lecture Fees received by the Sydney and Adelaide Universities in 1889, and by the Melbourne University in 1888, were as follows:—

	Government Endowment.	Lecture Fees.
Sydney .. .....	£18,800 .....	£5,667
Melbourne .....	15,500 .....	13,282
Adelaide .....	3,201 .....	3,382

In addition to the above annual endowment the Adelaide University has received a perpetual endowment of 50,000 acres of land from Government.

The number of students attending lectures in 1889 (Melbourne in 1888) is shown in the figures herewith :—

University.	Students attending Lectures.		
	Matriculated.	Not Matriculated.	Total.
Sydney .....	275	327	602
Melbourne .....	538	1	539
Adelaide .....	118	198	316
New Zealand (Affiliated Colleges)	332	256	588
Total .....	1,263	782	2,045

Attached to the University there are in Sydney three Colleges, while a fourth is in course of establishment for female students. In Melbourne there are also three Affiliated Colleges, and in both capitals these are connected with different religious bodies. In New Zealand there are four Affiliated Colleges—at Dunedin, Christchurch, Wellington, and Auckland, but, except in Christchurch, which is the seat of the Senate, these are wholly undenominational in character. In Adelaide there are no Affiliated Colleges attached to the University; and in New Zealand the University itself is an examining and not a teaching body, founded mainly on the principles of the London University.

The Australasian Universities are empowered to grant the same degrees as the British Universities, with the exception of degrees in Divinity. In all the Universities women have now been admitted to the corporate privileges extended to male students; and at the Sydney, Melbourne, and Adelaide Universities this includes qualifying for degrees in medicine.

The number of degrees conferred by those Universities of which returns have been made are as follows :—

Sydney .....	789
Melbourne (to 1888).....	1,430
New Zealand.....	249

and there are upwards of 1,300 students qualifying for degrees at the present time.

## PARLIAMENTS.

FROM the nature and composition of the population of Australia at and for some time after its first settlement, the government and direction of affairs naturally rested in the hands of the Governor alone, and it was not until the year 1824, during the time of Sir Thomas Brisbane, that any attempt was made to provide the Governor with recognized advisers. In that year the first Legislative Council was appointed, consisting of six gentlemen, of whom five held the principal official positions in the Colony, the sixth being Mr. John Macarthur, the founder of the Australian wool industry. The first Act of Parliament ever passed in Australia was a measure dealing with the currency, in 1824. Four more members were added to the Council in the following year, by Governor Darling, and further additions were made from time to time. On 6 June, 1838, the public were first admitted to hear the debates, for up to that time even the reporters of the Press had been excluded. Henceforth, however, the proceedings were more or less fully reported. Until the year 1843 the members of the Legislative Council were all nominated by the Governor, but in that year the principle of election was introduced, in conjunction with that of nomination. The nominated members were twelve in number, six being official and six non-official. The elected members comprised a number of men whose names have become historic, such as W. C. Wentworth, William Bland, William Lawson, Charles Cowper, Terence Aubrey Murray, W. H. Suttor, Francis Lord, Richard Windeyer, Alexander Macleay, Roger Therry, Charles Nicholson, and John Dunmore Lang, the two last mentioned being among the representatives of the Port Phillip district, since known as Victoria.

First Legislative Council.

Introduction of the elective principle.

Mr. Alexander Macleay was the first Speaker of this body, First Speaker. succeeded by Sir Charles Nicholson in 1846. Mere representation in the Legislature did not altogether satisfy the colonists, for as far back as the year 1845 the question of Responsible Government was publicly discussed. The agitation once started was never allowed to slumber, but aided by a vigorous and outspoken Press, as well as by the talented oratory of some of the patriotic members of the Legislature, it continually acquired new strength, until, in the year 1855, the Imperial Parliament passed a measure to sanction the new Constitution that the colonists sought. On 22 May, 1856, the first Australian Parliament under Responsible First Parliament under responsible Government. Government was opened by Sir William Denison, in Sydney. It consisted of a nominated Upper House, called the Legislative Council, and a Legislative Assembly, consisting of fifty-four elected members, of whom Sir Daniel Cooper was chosen the first Speaker. The first Ministry consisted of Sir Stuart Alexander Donaldson as Colonial Secretary and Premier; Mr. Thomas Holt, Colonial Treasurer; Sir William Manning, Attorney-General; Mr. J. B. Darvall, Solicitor-General; Mr. G. R. Nichols, Auditor-General; and Mr. W. C. Mayne as Representative of the Government in the Legislative Council. From that time the principles upon which the Government of New South Wales is based have never altered, though there have been some changes in the details. Various amendments of the Electoral Act have taken place from time to time, by which the number of representatives to the Legislative Assembly has been largely increased, and alterations have taken place, all in the direction of the removal of restrictions, and the extension of the liberties of the people. The Legislative Council now numbers sixty-nine members, and the Assembly 137.

The example and influence of New South Wales has not been Victoria. without effect on the other Australasian Colonies. Victoria, after its separation from New South Wales, was legislated for by a Council of partly nominated and partly elected members, but on

21 November, 1856, the first Parliament under the new Constitution of Victoria was opened. This Constitution differed from that of the parent Colony in that the Legislative Council, as well as the Assembly, was elective; it consisted of thirty members, while there were fifty-eight in the Lower House. Mr. W. C. Haines was the first Premier. There are now forty-two members in the Council, and eighty-six in the Assembly.

**Tasmania.**

Tasmania, on its separation from New South Wales, at the end of 1825, was provided with a nominated Legislative Council, under which it was governed for some thirty years. Following the lead of their neighbours, the colonists of this island also agitated for a Constitution, which was eventually granted to them, and came into force on 2 December, 1856. Tasmania possesses a Legislative Council and a Legislative Assembly, both of which are elective.

**South Australia.**

South Australia, like the other Australian Colonies, was at first subject to the nominee system of appointment to the Legislative Council, but in 1848 it obtained the boon of adding elected members to those nominated. Constitutional Government was granted to this Colony in 1856, and the first Parliament under the new order of things assembled on 22 April in the following year. The South Australian Legislature consists of a Legislative Council of eighteen members and a House of Assembly of forty-four. Both Houses are elected by the people.

**Queensland.**

Queensland, which separated from New South Wales at the end of the year 1859, was never as a separate colony under the nominee system, but commenced with Responsible Government, under which her first Parliament opened on 29 May, 1860. Her Legislative Council consists of thirty-one members, who are nominated by the Governor. The Legislative Assembly, of which there are fifty-four members, is elected by the people.

**New Zealand.**

In New Zealand, as in the other Colonies, the form of government in the early days was of a mixed description, but in the year

1862 an Act was passed by the Imperial Parliament conferring upon this Colony a Constitution. New Zealand was divided into six provinces, subsequently increased to nine, each governed by a Superintendent and Provincial Council, elected according to a franchise which was practically equivalent to household suffrage. The provincial system, however, did not give satisfaction, and was abolished in 1876, when a system of Parliamentary Government for the whole of the Colony, very similar to that of the large Australian Colonies, came into existence. The Legislature now consists of two branches—a Legislative Council of nominees appointed by the Governor for life, and a House of Representatives, chosen on an elective basis similar to that which obtained for the elections to the old Provincial Councils. There are now eighty-eight members of the House of Representatives, among whom are four Maoris, chosen to represent them by their countrymen.

Western Australia, which was proclaimed a British Colony on 1 June, 1829, was the last of the group to enjoy the privilege of Responsible Government. At an early stage of its existence the Colony possessed a Legislative Council, consisting exclusively of officials nominated by the Governor. Subsequently, elected members were added, representing the principal districts of the Colony, and this state of things continued until the end of last year, when the new Constitution came into existence. Under it there are two houses of Legislature; the Upper House consists of fifteen nominated members, and the Lower House of thirty members, representing the thirty electorates into which the Colony is divided. The first Premier is the Hon. John Forrest, and the first Representative Parliament is now engaged in its legislative labours.

## SOCIAL CONDITION.

## SAVINGS OF THE PEOPLE.

Working man's  
Paradise.

THE Colonies of Australasia have from very early days been regarded in the light of a working-man's paradise. The high rates of wages which have generally prevailed, and the cheapness with which food could be purchased, have tended to make the position of the wage-earners superior to that occupied by the same class in any other portion of the globe. These advantages have induced a greater degree of comfort, if not luxury, amongst a class in Australasia which in other parts of the world has little of comfort and knows nothing of luxury. A high standard of living is not conducive to thrift, nevertheless the progress of saving has gone on with great rapidity.

Banks.

Some idea both of the celerity and extent of this accumulation may be gathered from the increase of deposits in the Banks carrying on business in the Colonies. It is true that these deposits cannot be taken as representing altogether local savings, as money not belonging to colonists finds its way into the Banks, and remains for greater or less periods on deposit there. In spite of this element of uncertainty, however, the following table showing the total deposits in Banks of all kinds in the Colonies of Australasia gives a valuable indication of the increasing wealth of the community.



Deposits in Banks (including Savings Banks).

	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales.....	5,645,101	7,989,801	23,006,720	38,057,226
Victoria .....	7,575,406	12,476,677	23,721,348	43,740,869
Queensland.....	334,503	1,647,830	5,633,097	11,780,172
South Australia.....	875,327	2,038,719	6,231,004	8,728,134
Western Australia .....	*2,487	*15,583	*23,344	868,757
Tasmania .....	†729,085	875,512	2,969,390	4,807,102
New Zealand .....	905,675	3,789,639	10,618,893	13,786,055
	16,067,584	28,833,761	72,203,796	121,768,315
Per head of population.....	£13	£15	£26	£32

\* Savings Banks only. † Banks of issue only.

From this it may be gathered that the increase of deposits of all classes in Banks between 1861 and 1881 was exactly 100 per cent., allowing for the increase of population ; while between 1871 and 1889, a period of only eighteen years, the deposits per head of population increased by about 113 per cent. When compared with Great Britain, it will be found that the amount of deposits per head of population in Australasia far exceeds that in the mother-country. In 1861, indeed, the sum per head in Britain exceeded

Increase of Deposits.

that in Australasia, amounting to £15, against £13 in the Colonies. In 1874 the total in Britain amounted to £25 per head, which ten years later, in 1884, sunk to £23, and in 1889 to £16. In the Colonies there has been no falling off at any period, and in 1888 the total deposits per head far exceeded the highest level ever reached in Great Britain.

Savings Banks.

Turning to the case of the wage-earning classes in the Colonies, it will be found that the Savings Banks, which may be taken to be practically the Bank of these classes, show enormous development since 1861. From the return here given it is evident that the tendency for many years has been to an increase in the number of small depositors. The figures for 1881 and 1889 show this in a marked degree. In these eight years it appears that the number of depositors in Savings Banks increased from 311,124 to 631,173, or more than double. In 1881, however, each depositor had an average of £30 in the Bank, but in 1889 he had only £25. The amount per depositor in decennial periods from 1861 may appear to point to a serious retrogression, varying as it does from £47 to £25, but it is not so, for the large increase in the number of depositors must be taken into consideration. There is evidence that the different classes of the community are more largely represented, and the smaller amount of average deposit seems to show that habits of thrift have in a greater degree extended to the poorer classes. It is the total number of depositors and the total amount of deposits, therefore, which indicate the general prosperity of the people. A greater number of depositors than the comparatively small total for 1861 might probably be selected from the number in any of the other years noted in the table whose average deposits would far exceed £47. Queensland depositors have the largest amounts at their credit, averaging £36 per head, while those of Western Australia have the smallest in proportion to their numbers, being only £10. The subjoined table shows the progress of accumulation in each of the Colonies for the several periods:—

Extension of  
habits of thrift.

## Savings Banks.

	1861.		1871.		1881.		1889.	
	Depositors.	Amount.	Depositors.	Amount.	Depositors.	Amount.	Depositors.	Amount.
		£		£		£		£
New South Wales .....	12,203	615,409	24,379	945,915	72,384	2,698,703	134,914	4,280,083
Victoria .....	12,001	582,796	45,819	1,117,761	101,829	2,569,438	268,462	4,971,933
Queensland .....	242	12,193	6,769	407,134	20,168	944,251	43,875	1,597,784
South Australia .....	3,248	131,590	14,270	517,000	37,742	1,288,450	65,815	1,905,632
Western Australia.....	† 224	2,487	‡ 1,062	15,583	3,219	23,344	2,965	31,062
Tasmania .....	*	*	8,500	217,413	14,728	369,278	24,397	497,492
New Zealand .....	1,144	22,921	14,275	454,966	61,054	1,549,515	90,745	2,191,451
	29,062	1,367,396	115,074	3,675,772	311,124	9,442,979	631,173	15,475,437
Amount per Depositor .....	£47		£32		£30		£25	

\* Information not available.

† 1863, first year of Savings Banks.

‡ 1872.

## INSOLVENCY.

Insolvency.

The view presented in the last section, of the accumulation of wealth in the hands of the people, would be incomplete without some notice of insolvencies. The Bankruptcy laws of the different Colonies are even more dissimilar than the laws on most other questions of importance; they have also been fluctuating, and the subject of many experiments and amendments. This renders any work of comparison difficult and unsatisfactory. The information here given is imperfect in relation to Western Australia, from which no reliable particulars have been obtainable, and also in reference to New Zealand, the returns from which are incomplete. In other respects the figures give a comparative view of insolvencies at decennial periods, and also in 1889.

Schedules of insolvents not reliable.

It must be pointed out that great caution should be exercised in dealing with figures representing the liabilities and assets of insolvents, because in the present state of the law there is no means of compelling those who seek the relief of the Courts to give an accurate statement of their affairs. The natural tendency is to understate the liabilities, and to overestimate the assets, so as to make the estate look as favorable as possible. It is very seldom indeed, when a bankrupt estate is finally wound-up, that the creditors find themselves in so satisfactory a position as the schedule as originally filed by the insolvent would lead them to believe. The real deficiency would therefore be considerably larger than the calculated amount, as given in the table:—

## Australasia, Insolvent Estates.

	Assets per cent. of Liabilities.	Average Deficiency per Insolvent.
		£
1861 .....	54·83 .....	444
1871 .....	46·49 .....	525
1881 .....	71·61 .....	155
1889 .....	90·34 .....	156

Insolvencies.

Colony.	1861.			1871.			1881.			1889.		
	No.	Liabilities.	Assets.	No.	Liabilities.	Assets.	No.	Liabilities.	Assets.	No.	Liabilities.	Assets.
		£	£		£	£		£	£		£	£
New South Wales...	463	589,727	335,340	544	325,941	124,288	724	379,290	218,212	1,101	794,603	396,723
Victoria ... ..	1,287	1,088,298	604,120	631	444,117	217,841	620	303,892	386	697	2,389,731	2,627,182
Queensland .....	24	46,866	35,341	73	411,835	197,934	153	73,602	39, A	74	328,175	213,475
South Australia.....	108	101,140	37,379	247	246,713	117,794	*696	123,629	83,729	†190	57,707	31,423
Tasmania .....	155	173,933	84,410	25	62,560	35,360	33	§13,770	§9,588	12	19,993	13,564
New Zealand .....	**	**	**	737	**	**	1,406	823,018	717,381	724	1,255,743	1,095,584
	2,037	1,999,964	1,096,590	2,257	1,491,166	693,217	3,632	1,717,201	1,229,726	3,088	4,845,952	4,377,951

\* Including 481 private arrangements under Insolvency Act, the liabilities and assets in which cases are not included in the total. † Including 95 private arrangements under Insolvency Act, the liabilities and assets in which cases are not included in the total. § Returns not complete. \*\* No return.

Decrease of  
Insolencies  
generally.

From the table on the preceding page it would appear that the number of insolencies was greater in Victoria in 1861 than in any other year under notice ; while in 1881 the extraordinary number of 1,406 was reached in New Zealand, a total greater than any single Colony has produced in any year given in the table ; notwithstanding this large number, however, the deficiency between the estimated assets and liabilities was very small, amounting to an average of only £75 per insolvent. It is an important and gratifying feature that, in spite of the great increase of population, and the consequent extension of trade and commerce, the number of insolencies has increased but little, while the amount of the indebtedness of the bankrupts per head is less than at some former periods, and the proportion of assets to liabilities is greater. The proportion of insolvents to population in Australasia has largely decreased since 1861, the numbers being, per 1,000 inhabitants :—

1861 .....	16·09
1871 .....	11·46
1881 .....	12·87
1889 .....	8·15

#### NEWSPAPERS AND LETTERS.

Australasian  
Newspapers.

There is hardly anything more indicative of the social superiority of a civilized people than the prevalence of correspondence and a large distribution of newspapers. In these respects all the Colonies of Australasia have for many years been remarkable. In proportion to population, it is doubtful whether any country in the world can boast of a larger number or a better class of newspapers than these Colonies. Great advances have been made in this respect since 1871, and the rate of progress, both in number and excellence, has advanced even more rapidly between 1881 and the present time. There is no means of correctly estimating the number of newspapers actually printed and distributed in the Colonies, because the Post Office returns indicate but a small proportion of the actual production. Some idea, however, may

be gathered for purposes of comparison with other countries, by noting the distribution of newspapers through the agency of the Post Office. The return for 1889, which comprises all the Colonies, shows that no less than 92,395,000 newspapers passed through the Post Offices, being an average of 25 to every inhabitant.

In the same year there were 161,154,000 letters delivered through the post, being more than 43 letters for every man, woman, and child in Australasia. An examination of the statistics of other countries shows that the people of these Colonies stand absolutely at the head of the world's populations in this respect. The inhabitants of Great Britain have nearly but not quite so large a correspondence per head, but the people of no other nation can even approach it.

Amount of  
correspondence

#### PARKS, MUSEUMS, &c.

All the Australasian capitals are liberally supplied with parks and recreation grounds. In Sydney and the suburbs there are parks, squares, and public gardens comprising an area of 3,793 acres, including 780 acres, which form the Centennial Park. In addition to these there is the National Park, of 36,328 acres, picturesquely situated at Port Hacking, about 16 miles from the Metropolis. Melbourne has no less than 5,072 acres of recreation grounds, of which 1,723 acres are within the city boundaries, 2,780 acres in the suburban municipalities, and 569 acres outside those municipalities. Adelaide is surrounded by a broad belt of park lands, and also contains a number of squares within the city boundaries, covering altogether an area of 2,300 acres. Brisbane, Hobart, Perth, and the chief cities of New Zealand are also well provided for in this respect. In all the Colonies large areas of land have been dedicated as public parks. The Botanic Gardens of Sydney, Melbourne, Brisbane, and Adelaide are included in the areas above referred to. Each of these gardens has a special attraction of its own. They are all well kept, and reflect great credit upon the communities to which they belong.

Parks and  
Recreation  
Grounds.

Botanic Gardens.

Museums and  
Art Galleries.

The various capitals of the Colonies, and also some of the prominent inland towns, are provided with museums for the purposes of instruction as well as recreation, and, in addition, there are in Sydney, Melbourne, Adelaide, and Hobart art galleries, containing excellent collections of paintings and statuary. All these institutions are open to the public free of charge.

### PUBLIC CHARITIES.

As shown in the chapter on "Finance," wealth in Australasia is widely distributed, and the contrast between rich and poor, which seems so peculiar a phase of old-world civilizations, finds no parallel in these southern lands. That there is poverty in the colonies is undeniable, but no one in Australasia is born to poverty, and that hereditary pauper class, which forms so grave a menace to the freedom of many States, has, therefore, no existence here.

Propertied  
classes.

It is estimated that in the United Kingdom six persons in every hundred possess property to the amount of £100; whereas in the colonies the proportion is twelve and a half per cent. This bare statement shows the vast difference in the conditions of life in Australia and in the richest country of Europe. No poor rate is levied in the colonies, nor is such needed; for although it may happen that from time to time the assistance of the State is claimed by, and granted to, able-bodied men who are unable to find employment, that assistance takes the form of wages paid for work specially provided by the State to meet a condition of the labour market which is certainly abnormal.

State assistance  
to charities.

The chief efforts of the authorities, as regards charity, are directed towards the rescue of the young from criminal companionship and temptation to crime, the support of the aged and infirm, the care of the imbecile or insane, and the subsidising of private charity for the cure of the sick and injured, and the amelioration of want.

Supervision of  
expenditure.

Even where the Governments grant aid for philanthropic purposes, the management of the institutions supervising the expenditure is in private hands; and in addition to State-aided



institutions there are numerous private charities, whose efforts for the relief of those whom penury, sickness, or misfortune has afflicted are beyond all praise.

The rescue of the young from crime is attempted in two ways—  
 first, by means of Orphanages, Industrial Schools, and Reformatories, which take care of children who have been abandoned by their natural guardians, or who are likely, from the poverty or incapacity of their parents, to be so neglected as to render them liable to lapse into crime ; and, secondly, by sequestering children who have already committed crime, or whose parents or guardians find themselves unable to control them.

Rescue of the young from crime.

It will be noticed that the number of deaths from accident in the Australasian colonies is very great. This arises from the peculiar nature of the occupations in which a large proportion of the adult male population is employed. Although a century has elapsed since settlement commenced in Australasia, its resources are by no means developed, and very many men are at work far away from the home comforts of everyday life, and from home attendanc in case of sickness or injury. Hospitals are therefore absolutely essential under the conditions of life in the country districts of the colonies, and they are accordingly found in every important country town.

Necessity for hospitals.

The following table shows the total expenditure and the number of persons admitted to the hospitals during the year 1889, as far as information can be obtained :—

#### Hospitals, 1889.

Colony.	Total expenditure.	No. of persons admitted during the year.
	£	
New South Wales .....	136,587	15,632
Victoria .....	135,209	18,356
Queensland .....	103,748	14,096
South Australia* .....	12,877	2,075
Tasmania .....	29,263	1,928
New Zealand .....	69,686	7,380

\* Adelaide Hospital only.

Asylums for  
the Insane.

All the Colonies possess institutions for the care of the insane, which are under Government control. The treatment meted out to the inmates is that dictated by the greatest humanity, and the hospitals are fitted with all the conveniences and appliances which modern science points out as most calculated to mitigate or remove the affliction under which these unfortunates labour.

The following table shows the number of insane patients, and expenditure for the year 1889 :—

Colony.	No. of patients.	Expenditure.
		£
New South Wales .....	2,974	100,302
Victoria .....	3,627	114,081
Queensland .....	993	.....
South Australia .....	790	22,066
Western Australia .....	123	.....
Tasmania .....	307	29,262
New Zealand .....	1,761	36,744

Destitute  
Asylums.

The amounts expended on destitute asylums cannot be separated from other items of expenditure in some of the Colonies. As far as they can be ascertained they were, for 1889, including both Government aid and private contributions, in New South Wales, £59,966; Victoria, £57,031; Queensland, £14,281; and Tasmania, £11,553; while the number of inmates of the various asylums was, at the end of 1889 :—

Colony.	Inmates.
New South Wales .....	2,500
Victoria .....	1,950
Queensland .....	581
South Australia .....	350
Tasmania .....	467
New Zealand .....	519

Out-door Relief

A liberal amount of out-door relief is also given in all the Australasian Colonies.

The total expenditure of the Governments of the Australasian Colonies in connection with all forms of relief and in aid of hospitals and other charitable institutions amounted in 1889 to £815,244; adding to this the amount of private subscriptions, &c., the poor and the unfortunate have benefited during the year to the extent of over £1,000,000. This sum, though not excessive in proportion to the population, may yet appear large in view of the general wealth of the Colonies, which should preclude the necessity of so many seeking assistance; and there is the risk that the charitable institutions may encourage the growth of the pauper element, for while free quarters and free food are so accessible those who are disinclined to work are tempted to live at the public expense.

Public and  
private expendi-  
ture in charity

### PUBLIC MORALITY.

A gratifying feature in the social life of the Colonies of Australasia has been the decrease of serious crime in proportion to population. It is a peculiar circumstance that, though the people of Australasia are of one blood, and the laws against crime are practically the same in each Colony, some of the Colonies show a far greater ratio of conviction for serious crime than do the others. A crude theory has been put forward that this pre-eminence in crime is due to a convict taint in the Colonies possessing a comparatively high record. The incorrectness of this presumption will be manifest, since Tasmania—the province in the most favourable position but one in regard to serious crime—is also the one which suffered most from the transportation system. Whatever be the explanation, the fact, however, remains that New South Wales and Queensland—especially the first-named—have a higher rate of crime than the other Colonies. The official returns of the various Colonies, with the exception of Western Australia, for three decennial periods and in 1889 are given herewith.

Decrease of  
Crime.

## COMMITTALS AND CONVICTIONS.

### Australasia—Crime.

Colony.	1861.		1871.		1881.		1889.	
	Appre- hensions.	Convictions in Superior Courts.	Appre- hensions.	Convictions in Superior Courts.	Appre- hensions.	Convictions in Superior Courts.	Appre- hensions.	Convictions in Superior Courts.
New South Wales .....	16,737	437	18,025	628	41,402	1,066	38,345	910
Victoria .....	25,766	846	22,800	511	25,346	332	37,321	651
Queensland .....	2,045	24	3,265	91	10,063	92	12,718	256
South Australia .....	3,581	122	5,475	91	14,297	213	6,625	78
Tasmania .....	599	127	3,631	74	6,229	51	2,594	42
New Zealand .....	4,839	100	15,606	162	19,796	270	18,476	325
Total .....	53,567	1,656	68,802	1,557	117,133	2,024	116,079	2,202

Committals and  
Convictions.

The Committals for Trial and the Convictions in the Superior Courts per 1,000 inhabitants for each Colony were for 1889 :—

Colony.	Committals for Trial per 1,000 inhabitants.	Convictions in Superior Courts per 1,000 inhabitants.
New South Wales .....	1·30	0·82
Victoria .....	1·00	0·59
Queensland .....	1·43	0·64
South Australia .....	0·59	0·24
Tasmania .....	0·71	0·28
New Zealand .....	0·75	0·53
Total .....	1·05	0·61

Diminution of  
crime.

The table given above shows that crime is steadily diminishing from period to period. The record of apprehensions cannot be regarded as a trustworthy guide, because it includes many classes of offences which are not to be fairly reckoned as criminal, and the number of these has a tendency to increase with the increase of local enactments of various kinds. On the other hand, the record of committals for trial forms a fair index of the serious offences coming before the Courts, and taken in conjunction with the convictions for crime in the Superior Courts may be regarded as

Decrease in  
Committals and  
Convictions.

conclusive on the question of the progress or the reverse of society in this respect. It will be seen that both committals and convictions have steadily decreased, beginning in 1861, but diminishing between that time and 1889 to considerably less than one-half. The following table gives a general view of this decrease of crime within a period of twenty-eight years :—

Australasia.

	Apprehensions per 1,000 of population.	Committals for Trial per 1,000 of population.	Convictions in Superior and Circuit Courts per 1,000 of population.
1861 .....	43·30	2·22	1·34
1871 .....	36·23	1·38	0·82
1881 .....	43·18	1·24	0·75
1889 .....	31·46	1·05	0·61

In noting these facts and comparing results with that obtained in Great Britain during the same period, it must not be forgotten that most of the Colonies of Australasia have been compelled gradually to reform a portion of their original population, and that in the case of Colonies such as Victoria and Queensland, not originally peopled in any degree by convicts, the attractions of the gold-fields have drawn within their borders a population by no means free from criminal instincts and antecedents. Viewed in this light the steady progress made cannot but be regarded as exceedingly satisfactory, and a confident expectation may be reasonably entertained that the same improvement will be continued until the ratio of crime to population will compare favourably with that of any part of the world.

Progress of  
morality

A very large proportion of all the apprehensions were arrests for drunkenness. In four out of the six Colonies from which returns are available the arrests for this class of offence amounted to nearly one half of the number of those taken into custody, and

Arrests for  
Drunkenness.

## ARRESTS FOR DRUNKENNESS.

in the other two Colonies was not far below one-third. The following table shows the arrests for all offences and those for drunkenness per 1,000 inhabitants in each Colony, during the year 1889 :—

Colony.	Total Apprehensions per 1,000 Inhabitants.	Arrests for Drunkenness per 1,000 Inhabitants.
New South Wales .....	34·73	16·63
Victoria .....	33·79	16·36
Queensland .....	32·03	15·51
South Australia .....	20·61	6·23
Tasmania .....	17·43	7·76
New Zealand.....	30·10	8·89
Average for six Colonies...	31·46	13·88

A return showing only the number of arrests for drunkenness is not a safe index as to the abuse of alcoholic liquors, for a great deal depends on the state of the law and the manner in which it is administered, and it is evident that the maintenance of the law will always be less strict in sparsely settled country districts than in larger centres of population where the police are comparatively more numerous, if not in proportion to the population, at least in proportion to the area they have under their supervision. The following table shows the number of inhabitants to each police constable for the whole of each Colony and for their metropolitan areas :—

Police in proportion to inhabitants.

Colony.	No. of Inhabitants to each Policeman.	
	For the whole Colony.	In the Metropolitan area.
New South Wales .....	704	688
Victoria .....	734	718
Queensland .....	516	455
South Australia .....	776	763
Tasmania .....	478	705
New Zealand.....	1,238	.....
Average for six Colonies...	729	.....

The quantity of intoxicants consumed per head is another, and perhaps a safer index to the habits of the communities of the colonies in respect to drunkenness, especially as the mode of life is so similar in all the Australasian Colonies. Tried by this standard, the Colonies occupy the following positions—expressed in proof gallons of alcohol only :—

Colony.	Proof gallons of alcohol per head of population.
New South Wales .....	2·71
Victoria.....	3·82
Queensland .....	2·60
South Australia .....	2·58
Western Australia .....	3·95
Tasmania .....	1·88
New Zealand .....	1·64
Australasia .....	2·82

The consumption per head of various classes of intoxicants in the several Colonies is shown in the chapter on “Food Supply and Cost of Living.”

SUICIDES.

Suicides would unfortunately appear to be increasing, if not rapidly at least steadily. The following table, although imperfect as regards Western Australia, indicates a portion of the past history and present position of the Colonies in this respect :—

Suicides.	1871.	1881.	1889.
New South Wales .....	28	83	112
Victoria.....	90	102	143
Queensland .....	8	21	56
South Australia .....	11	34	24
Western Australia .....	*	*	5
Tasmania .....	4	6	11
New Zealand.....	*	42	47
	141	288	398
Per 100,000 of population.....	8·58	10·62	10·66

\* Information not available.

## ILLEGITIMATE BIRTHS.

Taken over a series of years (1876 to 1888 inclusive), the mean annual rates were as follows :—

## Deaths by Suicide in Australasia.

Colony.	Per 100,000 of mean population.
New South Wales .....	9·85
Victoria.....	11·44
Queensland .....	14·11
South Australia .....	10·04
Tasmania .....	4·68
New Zealand .....	9·10
Australasia (six Colonies) .....	10·41

Rate of deaths  
by suicide.

Tasmania, therefore, stands in a more favourable position than any of the other Colonies, and is the only Colony in which the rate is less than in the United Kingdom, where deaths by suicides average only 7 per 100,000 of population. Information for Western Australia is to hand only for 1888 and 1889, during which years the suicides numbered 6 and 5 respectively, or at the rate of 12·91 per 100,000 inhabitants.

## Births of Illegitimate Children and Total Births.

	1871.		1881.		1889.	
	Illegiti- mates.	Total Births.	Illegiti- mates.	Total Births.	Illegiti- mates.	Total Births.
New South Wales	782	20,143	1,263	28,993	1,987	37,295
Victoria.....	747	27,382	1,382	27,145	1,809	36,359
Queensland .....	156	5,205	345	8,220	674	14,401
South Australia ...	*	7,082	*	10,708	255	10,318
Western Australia	*	760	*	1,005	67	1,594
Tasmania .....	*	3,053	*	3,918	191	4,757
New Zealand .....	*	10,592	534	18,732	612	18,457
	1,685	74,217	3,524	98,721	5,595	123,181
Per cent. of Births	3·19	.....	4·24	.....	4·54	.....

\* Information not available.



Illegitimacy also is increasing upon the whole in Australasia, as the table just given shows. The ratio, indeed, compared with the total births is still rather better than in England; but while the percentage of illegitimate births has steadily declined during the last fifty years in England, it has advanced in Australasia during the period included in the table. The following are the average annual percentages of illegitimate births to total births, calculated over a series of years for each of the Colonies and the United Kingdom :—

	Illegitimate Births per cent.
New South Wales.....	4·40
Victoria .....	4·50
Queensland.....	3·96
South Australia.....	2·24
Western Australia .....	4·18
Tasmania .....	4·15
New Zealand .....	2·71
England .....	4·83
Ireland .....	2·50
Scotland .....	8·35

The question of divorce, which has assumed considerable importance owing to recent legislation on the subject, is one of much interest, the more so because for some years past all the Colonies of Australasia have offered large facilities for divorce in all cases coming within the law. The prevailing opinion has been that such facilities were calculated to increase divorce to an extent that would prove hurtful to public morals. So far as the experience of these Colonies goes, at present the fear would seem to be groundless, but sufficient time has not yet elapsed to enable any definite opinion to be hazarded. The following table, extending over a period of five years, is calculated to throw some light on this vexed question :—

Divorces granted in each Colony, 1884-89.

	1885.	1886.	1887.	1888.	1889.
New South Wales .....	23	32	25	28	44
Victoria .....	21	16	18	28	38
Queensland .....	1	1	0	6	11
South Australia.....	31	18	14	16	12
Western Australia .....	...	...	...	2	2
Tasmania .....	2	6	0	4	3
New Zealand.....	...	24	16	32	17

## INSANITY.

Ratio of  
insanity.

The number of insane persons under official cognizance throughout Australasia on the 31st December, 1889, was 10,575. This represents 2·79 per 1,000 of the population. The rates in the United Kingdom for the year 1887 were—England, 2·88; Scotland, 2·91; and Ireland, 3·16. The amount of insanity in Australasia and in England, compared with their respective populations, is, therefore, about the same, though there appears to be a tendency in the latter country for the rate to increase. The ratios, both in Scotland and Ireland, are higher than in the rest of Great Britain or in Australasia. The following table shows the proportion of lunacy in each of the Colonies at the end of 1889, from which it will appear that the greatest proportion is to be found in Victoria, and the smallest in Tasmania, South Australia, and Queensland :—

	Insane persons per 1,000 of population.
New South Wales.....	2·65
Victoria .....	3·24
Queensland.....	2·44
South Australia.....	2·43
Western Australia.....	2·81
Tasmania .....	2·0
New Zealand .....	2·84
Australasia.....	2·79

## CONCLUDING REMARKS.

Present condi-  
tion of Austra-  
lasia.

The preceding pages contain but a brief sketch, or imperfect outline, of the present condition of the Australasian Colonies; showing, in fact, only the most prominent features, but leaving unnoticed an immense number of details, which, if there were

space to introduce them, would add considerably to the impressiveness of the picture. Even the material resources of these vast provinces have not been fully indicated, for nothing has been said of the magnificent timber, unlimited in quantity and unsurpassed for quality, which abounds in every part of Australasia. Nothing has been said, either, of the boundless supplies of fish which are to be obtained in every part of the enormous coastline of these provinces, which will one day form the source of a large and profitable trade. The political institutions of the Seven Colonies have been described, but scarcely any notice has been taken of the system of local self-government which, in one form or another, pervades the whole of Australasia to a greater or less extent; nor has there been room to dilate at any length upon the literary, scientific, and charitable institutions which are to be found in all the principal centres of Australasian population, diffusing the blessings of art, science, and literature on the one hand, and soothing the pains of sickness, and mitigating the sorrows of distress, on the other. Enough has been said, however, to show how these great Colonies, from the humblest beginnings, have grown and expanded into important provinces, peopled with a race of hardy, enterprising, and industrious colonists, with free institutions such as are enjoyed by few nations in the old world, and without those social and caste impediments which are in older countries so great a hindrance to the march of civilization.

It is impossible for a reflective mind to survey the progress made by Australasia in one century without asking the question, "What will the future be?" It scarcely requires the gift of prophecy to find an answer. Here is an enormous territory, with illimitable resources implanted by Nature, without taking into account the possibilities of development by culture and acclimatization. Here is a people who one hundred years ago found Australasia a desert, but who have already begun to make it blossom like the rose. It is not to be supposed that they will rest

Australasia's  
future.

content with what they have done, but rather that the progress they have already made will stimulate them to a further advance. They will not heedlessly trample under foot the vast mineral riches they know to underlie the soil ; they will not abstain from gathering those plenteous fruits of Nature which are to be had for little more than the labour of stretching out the hand. On the contrary, they will increase in numbers, in wealth, in intelligence, and in power, and the Seven Colonies of Australasia, whether federated into one State, or as separate communities united only by the common bond of kinship, are destined in the near future to play an important part in the world's progress, as much on account of the enterprise of their people as by reason of the magnitude of their territories and the extent of their resources.



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APPENDIX.

AUSTRALASIAN STATISTICS,

1861-1889.

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## APPENDIX.

## AUSTRALASIAN STATISTICS, 1861 TO 1889.

## Population.

Colony.	1861.	1871.	1881.	1889.
	No.	No.	No.	No.
New South Wales...	357,978	517,758	778,690	1,122,200
Victoria .....	541,800	747,412	880,218	1,118,030
Queensland .....	34,367	125,146	226,968	406,660
South Australia.....	126,830	185,626	286,324	324,480
Western Australia..	15,691	25,353	30,013	43,700
Tasmania .....	90,211	101,785	118,923	151,480
New Zealand .....	99,021	266,986	500,910	620,280
Australasia.....	1,265,898	1,970,066	2,822,046	3,786,830

## Increase of Population during previous ten years.

Colony.	1861.	1871.	1881.	1889.
	No.	No.	No.	No.
New South Wales...	179,310	159,780	260,932	343,510
Victoria .....	444,311	205,612	132,806	237,810
Queensland .....	25,792	90,779	101,822	179,690
South Australia.....	63,130	58,796	100,698	38,160
Western Australia..	12,115	9,692	4,630	13,685
Tasmania .....	21,024	11,574	17,138	32,557
New Zealand .....	83,986	167,965	233,024	119,369
Australasia.....	829,668	704,198	851,950	964,781*

\* Increase in previous eight years.

## Births.

Colony.	1861.	1871.	1881.	1889.
	No.	No.	No.	No.
New South Wales...	14,681	20,143	28,993	37,295
Victoria .....	23,461	27,382	27,145	36,359
Queensland.....	1,423	5,205	8,220	14,401
South Australia.....	5,551	7,082	10,708	10,318
Western Australia ..	585	760	1,005	1,594
Tasmania .....	3,207	3,053	3,918	4,757
New Zealand .....	3,441	10,592	18,732	18,457
Australasia.....	52,349	74,217	98,721	123,181

## Deaths.

Colony.	1861.	1871.	1881.	1889.
	No.	No.	No.	No.
New South Wales...	5,343	6,407	11,536	14,796
Victoria .....	10,522	9,918	12,302	19,392
Queensland.....	500	1,785	3,320	6,132
South Australia.....	1,962	2,378	4,012	3,501
Western Australia...	257	332	412	611
Tasmania .....	1,477	1,363	1,733	2,093
New Zealand .....	1,109	2,642	5,491	5,772
Australasia .....	21,170	24,825	38,806	52,297

## Marriages.

Colony.	1861.	1871.	1881.	1889.
	No.	No.	No.	No.
New South Wales...	3,222	3,953	6,284	7,530
Victoria .....	4,434	4,693	5,896	9,194
Queensland.....	320	970	1,703	3,123
South Australia.....	1,158	1,250	2,308	2,062
Western Australia...	149	159	197	300
Tasmania .....	717	598	856	967
New Zealand .....	878	1,864	3,277	3,632
Australasia.....	10,878	13,487	20,521	26,808



## Shipping—Inwards.

Colony.	1861.	1871.	1881.	1889.
	tons.	tons.	tons.	tons.
New South Wales...	366,236	706,019	1,456,234	2,632,081
Victoria .....	549,195	663,002	1,219,227	2,270,827
Queensland.....	57,007	143,611	761,899	506,780
South Australia.....	103,196	187,314	640,885	1,063,130
Western Australia...	57,456	63,922	145,098	497,232
Tasmania .....	113,610	107,271	192,024	458,247
New Zealand .....	197,986	274,643	420,134	602,634
Australasia .....	1,444,686	2,145,782	4,835,501	8,030,931

## Shipping—Outwards.

Colony.	1861.	1871.	1881.	1889.
	tons.	tons.	tons.	tons.
New South Wales...	379,460	794,460	1,330,266	2,689,098
Victoria .....	540,807	692,023	1,192,675	2,328,351
Queensland.....	51,657	139,064	771,909	494,229
South Australia.....	96,135	186,310	628,606	1,065,374
Western Australia ..	57,800	63,026	139,948	507,586
Tasmania .....	116,608	108,889	191,738	453,999
New Zealand .....	205,350	265,618	413,487	593,252
Australasia .....	1,447,817	2,249,390	4,668,629	8,131,889

## Shipping—Inwards and Outwards.

Colony.	1861.	1871.	1881.	1889.
	tons.	tons.	tons.	tons.
New South Wales...	745,696	1,500,479	2,786,500	5,321,179
Victoria .....	1,090,002	1,355,025	2,411,902	4,599,178
Queensland.....	108,664	282,675	1,533,808	1,001,009
South Australia.....	199,331	373,624	1,269,491	2,128,504
Western Australia...	115,256	126,948	285,046	1,004,818
Tasmania .....	230,218	216,160	383,762	912,246
New Zealand .....	403,336	540,261	833,621	1,195,886
Australasia .....	2,892,503	4,395,172	9,504,130	16,162,820

## APPENDIX.

Imports.				
Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales...	6,391,555	10,933,508	17,587,012	22,863,057
Victoria .....	13,532,452	12,341,995	16,718,521	24,402,760
Queensland.....	967,951	1,562,665	4,063,625	6,052,562
South Australia.....	1,976,018	2,158,022	5,224,063	6,998,795
Western Australia..	147,913	*226,656	404,829	818,127
Tasmania .....	953,517	778,087	1,431,144	1,611,035
New Zealand .....	2,493,811	4,078,193	7,457,045	6,297,097
Australasia.....	26,463,217	32,079,126	52,886,239	69,043,433

\* In 1872.

Exports.				
Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales...	5,594,839	11,259,909	16,307,805	23,294,934
Victoria .....	13,828,606	14,557,820	16,252,103	12,734,734
Queensland.....	709,599	2,998,934	3,540,366	7,736,309
South Australia.....	2,032,311	3,582,397	4,407,757	7,379,581
Western Australia..	95,789	*209,196	502,769	761,392
Tasmania .....	905,463	740,638	1,555,576	1,459,857
New Zealand .....	1,370,247	5,282,084	6,060,866	9,339,265
Australasia' .....	24,536,854	38,630,978	48,627,242	62,706,072

\* In 1872.

Total Trade.				
Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales...	11,986,394	22,193,417	33,894,817	46,157,991
Victoria .....	27,361,058	26,899,815	32,970,624	37,137,494
Queensland.....	1,677,550	4,561,599	7,603,991	13,788,871
South Australia.....	4,008,329	5,740,419	9,631,820	14,378,376
Western Australia..	243,702	*435,852	907,598	1,579,519
Tasmania .....	1,858,980	1,518,725	2,986,720	3,070,892
New Zealand .....	3,864,058	9,360,277	13,517,911	15,636,362
Australasia.....	51,000,071	70,710,104	101,513,481	131,749,505

\* For 1872.

## Domestic Produce Exported, as per Customs' Returns.

Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales...	4,000,269	5,757,574	11,955,277	17,423,311
Victoria .....	10,596,368	11,151,662	12,480,567	9,776,670
Queensland .....	698,747	2,407,888	3,478,376	7,511,744
South Australia.....	1,838,639	3,289,861	3,643,402	3,796,250
Western Australia..	147,913	192,144	502,769	748,899
Tasmania .....	408,980	730,946	1,548,116	1,442,605
New Zealand .....	1,339,241	5,171,104	5,762,250	9,042,008
Australasia.....	19,030,157	28,701,179	39,370,757	49,741,487

## Export of Wool, as per Customs' Returns.

Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales...	1,768,978	4,748,160	7,149,787	10,620,636
Victoria .....	2,095,264	4,702,164	5,450,029	5,928,847
Queensland .....	613,074	1,158,833	1,331,869	2,680,134
South Australia.....	695,405	1,350,689	1,912,312	2,194,701
Western Australia..	54,297	122,637	256,689	395,904
Tasmania .....	326,413	298,160	498,400	283,237
New Zealand .....	523,728	1,606,144	2,909,760	3,976,375
Australasia.....	6,077,159	13,986,787	19,508,846	26,079,834

\* In 1872.

## Gold—Quantity Produced.

Colony.	1861.	1871.	1881.	1889.
	oz.	oz.	oz.	oz.
New South Wales...	465,685	323,609	142,627	119,759
Victoria .....	1,967,453	1,355,477	858,850	614,839
Queensland .....	1,077	171,937	270,945	739,103
South Australia.....	*	*	16,976	20,833
Western Australia..	*	*	*	15,492
Tasmania... ..	*	6,005	56,693	32,332
New Zealand .....	194,031	730,029	270,561	203,211
Australasia.....	2,628,246	2,587,057	1,623,652	1,745,569

\* Gold found in these years was very small.

## Live Stock—Sheep.

Colony.	1861.	1871.	1881.	1889.
	No.	No.	No.	No.
New South Wales...	5,615,054	16,278,697	36,591,946	50,106,768
Victoria.....	6,239,258	10,002,381	10,267,265	10,882,231
Queensland.....	4,093,381	7,403,334	8,292,883	14,470,095
South Australia.....	3,038,356	4,412,055	6,810,856	6,386,617
Western Australia..	279,576	670,999	1,267,912	2,366,681
Tasmania.....	1,714,498	1,305,489	1,847,479	1,551,429
New Zealand.....	2,761,583	9,700,629	12,985,085	15,503,263
Australasia.....	23,741,706	49,773,584	78,063,426	101,267,084

## Live Stock—Horned Cattle.

Colony.	1861.	1871.	1881.	1889.
	No.	No.	No.	No.
New South Wales...	2,271,923	2,014,888	2,597,348	1,741,592
Victoria.....	628,092	799,509	1,286,677	1,394,209
Queensland.....	560,196	1,168,235	3,618,513	4,872,416
South Australia.....	265,434	143,463	314,918	324,412
Western Australia..	33,795	49,593	63,009	119,571
Tasmania.....	87,114	101,540	130,526	150,004
New Zealand.....	193,285	436,592	698,637	895,461
Australasia.....	4,039,839	4,713,820	8,709,628	9,497,665

## Live Stock—Horses.

Colony.	1861.	1871.	1881.	1889.
	No.	No.	No.	No.
New South Wales...	233,220	304,100	398,577	430,777
Victoria.....	84,057	181,643	278,195	329,335
Queensland.....	28,983	91,910	194,217	352,364
South Australia.....	52,597	78,125	159,678	170,515
Western Australia..	10,720	22,698	31,755	42,806
Tasmania.....	22,118	23,054	25,607	29,778
New Zealand.....	28,275	81,028	161,736	187,382
Australasia.....	459,970	782,558	1,249,765	1,542,957

## Area under Crop.

Colony.	1861.	1871.	1881.	1889.
	acres.	acres.	acres.	acres.
New South Wales...	295,917	393,413	569,243	947,072
Victoria .....	410,406	851,354	1,435,446	2,097,945
Queensland .....	4,440	59,969	117,664	232,643
South Australia.....	400,717	837,730	2,156,407	2,245,114
Western Australia...	24,705	51,724	53,353	73,408
Tasmania .....	163,385	155,046	148,494	189,959
New Zealand .....	68,506	337,282	1,070,906	1,386,287
Australasia.....	1,368,076	2,686,518	5,551,513	7,172,428

Grass and fallow lands are not included.

## Alienation of Lands at close of 1889.

Colony.	Area Alienated in Fee Simple.	Area in process of Alienation.	Area Alienated or in process of Alienation.	Area neither Alienated nor in process of Alienation.
	acres.	acres.	acres.	acres.
New South Wales...	26,026,057	17,574,059	43,600,116	152,282,034
Victoria .....	15,842,312	6,650,000	22,492,312	33,753,448
Queensland.....	9,919,692	2,237,488	12,157,180	415,506,180
South Australia...	9,572,868	2,175,956	11,748,824	566,443,176
Western Australia..	3,315,905	445,232	3,761,187	674,639,633
Tasmania .....	4,647,988	.....	4,647,988	12,130,012
New Zealand .....	19,378,511*	525,958	19,904,469	46,805,931
Australasia.....	88,703,333	29,608,743	118,312,076	1,901,560,414

\* Includes 514,914 acres held under perpetual lease.

## Occupation of Lands at close of 1889.

Colony.	Area of Colony.	Area Alienated or in process of Alienation.	Area Leased.	Area neither Alienated nor Leased.
	acres.	acres.	acres.	acres.
New South Wales...	195,882,150	43,600,116	137,698,939	14,583,095
Victoria .....	56,245,760	22,492,312	22,732,563	11,020,885
Queensland.....	427,663,360	12,157,180	289,706,747	125,799,433
South Australia.....	578,192,000	11,748,824	106,314,880	460,128,296
Western Australia..	678,400,820	3,761,187	107,194,183	567,445,450
Tasmania .....	16,778,000	4,647,988	630,481	11,499,531
New Zealand .....	66,710,400	19,904,469	11,999,494	34,806,437
Australasia.....	2,019,872,490	118,312,076	676,277,287	1,225,283,127

## Public Revenue.

Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales...	1,421,831	2,238,900	6,714,327	9,063,397
Victoria .....	2,952,101	1,691,266	5,186,011	8,675,990
Queensland.....	238,238	799,005	1,971,208	3,614,652
South Australia.....	558,587	778,094	2,171,983	2,270,433
Western Australia..	67,261	*105,300	206,205	442,725
Tasmania .....	256,958	271,928	505,006	678,909
New Zealand .....	691,464	1,342,116	3,757,493	3,991,919
Australasia .....	6,186,440	7,226,609	20,512,233	28,738,025

\* In 1872.

## Public Expenditure.

Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales..	1,540,005	2,733,102	5,783,683	9,250,271
Victoria .....	3,092,021	1,754,251	5,108,642	7,919,902
Queensland.....	255,180	787,555	1,782,272	3,550,858
South Australia.....	482,951	759,478	2,054,284	2,355,927
Western Australia..	*161,786	†98,248	197,386	386,000
Tasmania .....	324,447	287,262	463,684	681,674
New Zealand .....	Not to hand	‡931,768	3,675,797	3,981,721
Australasia.....	5,856,390	7,351,664	19,065,748	28,126,353

\* Inclusive of Imperial expenditure.

† In 1872.

‡ Provincial expenditure.

## Public Debt.

Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales...	4,017,630	10,614,330	16,924,019	46,646,449
Victoria .....	6,345,060	11,994,800	22,426,502	37,627,382
Queensland.....	70,000	4,047,850	13,245,150	25,840,950
South Australia.....	866,500	2,167,700	11,196,800	20,435,500
Western Australia..	1,750	Nil.	511,000	1,371,981
Tasmania .....	*486,500	1,315,200	2,003,000	5,019,050
New Zealand .....	600,761	8,041,913	27,455,218	37,162,891
Australasia .....	12,388,201	38,181,793	93,761,689	174,104,203

\* In 1862.

## Total Deposits in all Banks.

Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales...	5,645,101	7,989,801	23,006,720	38,057,226
Victoria .....	7,575,406	12,476,677	23,721,348	43,740,869
Queensland .....	334,503	1,647,830	5,633,097	11,780,172
South Australia.....	875,327	2,038,719	6,231,004	8,728,134
Western Australia ..	2,487*	15,583*	23,344*	868,757
Tasmania .....	729,085†	875,512	2,969,390	4,807,102
New Zealand .....	905,675	3,789,639	10,618,893	13,786,055
Australasia .....	16,067,584	28,833,761	72,203,796	121,768,315

\* Savings Banks only.

† Banks of Issue only.

## Deposits in Banks of Issue (average of last quarters).

Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales...	5,029,692	7,043,886	20,308,017	33,777,143
Victoria .....	6,992,610	11,358,916	21,151,910	38,768,936
Queensland .....	322,310	1,240,696	4,688,846	10,182,388
South Australia.....	743,737	1,521,719	4,942,554	6,822,502
Western Australia.....	.....*	.....*	.....*	837,695
Tasmania .....	729,085	658,099	2,600,112	4,309,610
New Zealand .....	882,754	3,334,673	9,069,378	11,594,604
Australasia .....	14,700,188	25,157,989	62,760,817	106,292,878

\* Information not to hand.

## Deposits in Savings Banks.

Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales...	615,409	945,915	2,698,703	4,280,083
Victoria .....	582,796	1,117,761	2,569,438	4,971,933
Queensland .....	12,193	407,134	944,251	1,597,784
South Australia.....	131,590	517,000	1,288,450	1,905,632
Western Australia...	2,487*	15,583†	23,344	31,062
Tasmania .....	No information	217,413	369,278	497,492
New Zealand .....	22,921	454,966	1,549,515	2,191,451
Australasia .....	1,367,396	3,675,772	9,442,979	15,475,437

\* In 1863, the first year of Savings Banks.

† In 1872.

## Number of Letters and Post-cards.

Colony.	1861.	1871.	1881.	1889.
	No.	No.	No.	No.
New South Wales...	4,369,463	7,509,500	26,355,600	53,971,300
Victoria .....	6,109,929	11,716,166	26,308,347	48,097,268
Queensland .....	515,211	1,792,644	5,178,547	13,070,083
South Australia.....	1,540,472	3,162,774	10,758,605	16,388,607
Western Australia...	193,317	668,957*	984,271	2,737,034
Tasmania.....	835,873	1,189,994	2,682,329	4,814,239
New Zealand .....	1,236,768	6,081,607	13,215,235	22,075,696
Australasia.....	14,801,033	32,121,642	85,482,934	161,154,227

\* For 1872.

## Number of Newspapers.

Colony.	1861.	1871.	1881.	1889.
	No.	No.	No.	No.
New South Wales...	3,384,245	3,992,100	16,527,900	36,530,800
Victoria .....	4,277,179	5,172,970	11,440,732	20,662,732
Queensland .....	427,489	1,307,305	4,530,263	10,937,339
South Australia .....	1,089,424	2,212,620	5,927,332	9,085,714
Western Australia...	137,476	352,608*	715,046	1,392,825
Tasmania.....	895,656	1,136,338	2,345,700	5,424,657
New Zealand .....	1,428,351	4,179,784	6,124,021	8,360,508
Australasia.....	11,639,820	18,353,725	47,610,994	92,394,575

\* For 1872.

## Miles of Telegraph (Poles).

Colony.	1861.	1871.	1881.	1889.
	No.	No.	No.	No.
New South Wales...	1,616	4,674*	8,515	10,732
Victoria .....	.....	2,295*	3,350	3,967
Queensland .....	169	2,525	6,280	9,456
South Australia....	597	1,183	4,946	5,511
Western Australia ..	.....	750*	1,585	2,961
Tasmania.....	.....	291*	928	1,979
New Zealand .....	.....	2,015	3,824	4,874
Australasia.....	.....	13,733	29,428	39,480

\* In 1873.



## Government Railways—Net Earnings.

Colony.	1861.	1871.	1881.	1889.
	£	£	£	£
New South Wales...	13,817	158,257	705,892	967,251
Victoria .....		†382,438	732,223	1,164,303
Queensland .....	*	21,660	114,633	201,695
South Australia .....	11,186	22,834	128,653	407,834
Western Australia...	*	*		-13,490
Tasmania.....	*	591	6,721	18,094
New Zealand .....	*		368,927	412,782
Australasia.....				3,158,469

(-) minus = loss. \* Railways not in existence. † 1873.

## Railways—Miles open for Traffic.

Colony.	1861.	1871.	1881.	1889.
	No.	No.	No.	No.
New South Wales..	73	358	1,041	2,263
Victoria .....	214	329	1,247	2,471
Queensland .....		218	800	2,064
South Australia.....	56	132	832	1,774
Western Australia...			92	499
Tasmania.....		45	167	374
New Zealand .....		145	1,333	1,912
Australasia.....	343	1,227	5,512	11,357

NOTE.—Private lines included. New South Wales and Victoria figures are for 30 June, 1890.



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