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VOLUME XIII.

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CHAPTER I.

GENERAL DESCRIPTION, AREA AND POPULATION.

DISTRICT OR STATE.	Area in square miles.	Number of divisions.	Average area of a division in square miles.	POPULATION.			AVERAGE POPULATION OF A			AREALITY IN SQUARE MILES.		PROXIMITY IN MILES.		HOUSES.		
				Total.	Density per square mile.	Acreality in acres.	Proximity in yards.	Town.	Village.	Town.	Village.	Town.	Village.	Average population.	Acreality in acres.	Proximity in yards.
Ganjam	4,887	6	814.5	1,589,477	325	1,97	104.9	11,977	380	379	698.14	28.39	1.17	506	9.98	225.80
Vizagapatnam	4,619	5	923.8	1,943,311	421	1.52	92.2	16,192	676	728	513.22	24.34	1.73	470	7.15	199.86
Godavari	4,796	5	959.2	1,951,645	407	1.57	93.8	18,495	1,073	1,194	299.75	18.60	2.94	530	8.34	215.86
Kistna	8,397	4	2,099.25	1,855,582	221	2.90	127.2	13,431	936	1,004	899.70	31.14	2.99	546	15.81	297.23
Nellore	8,765	4	2,191.25	1,863,736	167	3.83	146.4	10,184	774	997	702.91	30.26	2.81	471	20.67	338.87
Cuddapah	8,722	5	1,744.4	1,272,072	146	4.39	156.6	6,426	950	1,020	290.67	33.78	2.95	527	27.33	393.10
Kurnool	7,514	5	1,502.80	817,311	109	5.88	181.3	18,615	956	1,132	663.89	27.69	2.72	527	23.37	353.60
Bellary	5,975	3	1,991.67	900,126	151	4.25	154.1	10,516	956	1,132	663.89	27.69	2.72	527	23.37	353.60
Annampur	5,275	3	1,758.33	708,549	134	4.76	163.2	6,935	687	753	527.50	24.68	2.54	505	24.08	366.85
Madras	2,842	3	947.33	452,518	158	0.04	15.2	10,450	525	569	315.73	19.10	1.42	753	0.31	41.54
Chingleput	7,616	4	1,904.00	1,186,928	156	1.60	94.6	10,450	525	569	315.73	19.10	1.42	753	0.31	41.54
North Arcot	7,829	4	1,957.25	2,180,187	276	2.24	111.8	13,191	454	488	684.67	27.07	1.71	634	14.17	239.38
Salem	7,890	4	1,972.50	2,034,839	258	2.51	117.1	15,410	472	515	634.45	28.11	1.88	489	12.01	259.12
Coimbatore	907	2	453.50	99,797	104	0.14	118.4	13,775	1,289	1,356	922.50	33.68	2.48	472	11.85	257.33
South Arcot	5,217	2	2,608.50	2,102,851	415	1.54	92.9	14,860	708	747	579.67	25.87	1.80	688	10.62	401.82
Tanjore	8,709	5	1,741.80	2,225,114	257	1.07	77.2	17,441	537	638	195.21	1.04	15.01	548	5.84	180.69
Tiruchinopoly	8,631	3	2,877.00	1,572,717	181	1.69	97.3	26,835	827	914	736.20	2.42	28.06	570	9.65	232.23
Madras	8,808	4	2,202.00	2,608,494	296	2.16	149.3	16,032	573	636	537.20	2.15	26.04	515	11.13	249.45
Thiruvallur	5,387	4	1,346.75	1,316,095	245	1.80	100.3	10,032	1,053	1,246	173.77	3.30	14.17	454	8.17	213.72
Melatur	5,585	5	1,117.00	2,352,565	475	1.35	86.8	27,681	1,095	1,179	797.85	2.48	30.35	587	7.91	210.21
South Canara	3,902	3	1,300.67	1,056,081	271	2.36	115.0	24,097	784	830	193.00	3.03	47.46	557	13.17	271.93
TOTAL	122,022	...	...	34,336,196	281	2.37	112.7	13,897	692	755	572.74	2.72	25.72	535	12.16	380.67
Ganjam Agency	3,483	...	...	307,326	88	7.25	201.3	...	166	166	...	...	1.89	430	31.18	417.44
Vizagapatnam Agency	12,623	...	...	859,781	68	9.40	229.2	...	92	92	...	...	1.35	455	42.73	488.65
Godavari	3,061	...	...	1,27,137	42	15.41	239.5	...	131	131	...	...	3.16	483	74.86	644.72
TOTAL AGENCY TRACTS	19,167	...	...	1,331,944	68	9.48	239.3	...	106	106	...	...	1.57	451	42.75	488.82
Total, British Territory	141,189	84	1,680.48	35,630,440	252	2.54	119.1	13,897	567	616	602.72	2.47	27.66	531	13.47	374.34
Peudatories	6,730	...	...	2,557,735	380	1.68	97.0	13,462	9,919	10,030	841.25	26.39	31.17	495	8.34	215.88
Travancore	1,262	...	...	723,006	531	1.21	82.1	10,109	1,030	1,099	272.40	2.07	17.74	532	6.66	192.91
Cochin	1,101	...	...	373,006	339	1.89	102.7	16,885	1,164	1,215	1101.00	3.59	35.66	535	10.11	237.71
Pudukotta	255	...	...	35,496	139	4.92	109.3	...	563	563	...	...	4.05	478	21.99	350.69
Bejavampalle	101	...	...	11,358	71	9.06	224.9	...	475	475	...	...	6.71	471	42.61	488.01
Saudur	9,809	...	...	2,700,622	265	1.66	99.4	12,509	2,727	2,831	686.36	7.35	28.16	509	8.46	217.43

* This includes the Agency Tracts also.



REPORT

ON THE

CENSUS OF THE MADRAS PRESIDENCY, 1891.

CHAPTER I.

GENERAL DESCRIPTION OF THE PRESIDENCY AND STATISTICS OF AREA, POPULATION, TOWNS, VILLAGES AND HOUSES.

(TABLES I, III, IV AND V.)

Physical Description.

THE Madras Presidency, or the Presidency of Fort St. George, occupies, if we include the state of Mysore and the little province of Coorg which geographically belong to it, practically the whole of the peninsula of India south of His Highness the Nizam's dominions, and also comprises a strip of littoral running from the Kistna river as far north as the Chilka lake, as well as a considerable area above the Eastern Ghâts which form the north-western boundary of this strip. The coast line from the Chilka lake to Cape Comorin and from that promontory northwards to a point situated in about 14° of latitude lies wholly within the presidency. Starting from the last mentioned point on the western coast, the land boundary runs in a north-easterly direction till it strikes the coast of the Bay of Bengal on the east at the Chilka lake. The territory to the north of this line consists at first of the North Canara and Dharwar districts of the Bombay Presidency and then of the Nizam's dominions, which are separated from Madras by the Tungabhadra river until it joins the Kistna, when the latter forms the boundary up to the eightieth degree of longitude. From this point to its mouth the Kistna lies wholly within the Madras territory, and the boundary runs north-east until it strikes the Godavari river, which forms the division between Madras and Hyderabad up to the tri-junction with the Central Provinces. From here the presidency is bordered by the Native states of the Central Provinces until the Bengal frontier is reached, when the boundary turns due east to the Chilka lake. The extreme linear length of the presidency is about 950 miles, and its extreme linear breadth is about 450 miles. The total length of coast line is about 1,700 miles, of which 1,250 miles are washed by the Bay of Bengal and 450 miles by the Indian Ocean.

2. Madras possesses two large mountain systems in the Eastern and Western Ghâts, which have been well described as giving the key to the physical configuration of South India. The former, starting from the Bengal frontier, run in a south-westerly direction until a little beyond the Kistna river, when they turn to the south, keeping parallel with the coast line to a point opposite the Pulicat lake. From here they turn south-west once more and stretch across the presidency till they become merged in the Nilgiri mountains, an outlying spur of the Western Ghâts. In the north their average height is about 3,000 feet, and there are peaks over 5,000 feet, but further south the elevation is somewhat less. This range of mountains does not form a complete water-shed, as it is pierced by the Godavari, Kistna and Cauvery rivers, all of which rise in the Western Ghâts. The latter range lies only partly in this presidency: it runs from the Bombay frontier to Cape Comorin at a distance from the coast line varying from 10 to 50 miles. This chain is much bolder than the

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para. 3.

range on the east coast, its average height is greater, and it is clothed with fine forests of bamboo and timber. On the west its sides are precipitous, but the slope on the east is more gradual. It forms a true water-shed, though there is a break in it, called the Pálghat gap, which is 25 miles wide. The Nilgiri mountains are a mass of hills at the junction of the Eastern and Western Ghâts: their loftiest peak (Doddabetta) is 8,642 feet high, and the plateau on which Ootacamund is situated is about 7,000 feet above sea level. The Ánaimalai and Palni Hills are formed by the widening out of the Western Ghâts to the south of the Pálghat gap. The Ánemudi peak (8,850 feet) in the Ánaimalais is the highest mountain in Southern India. Kodaikánal, the sanatorium on the Palnis, is about 7,000 feet above sea level and enjoys a climate which, in some respects, is superior to that of Ootacamund. Among minor hill ranges, the Shevaroyis in the Salem district are the most important; they are an outlying spur running southwards from the Eastern Ghâts and have an elevation varying from 4,000 and 5,000 feet.

3. The principal rivers of Madras are the Godávári, the Kistna, the Pennér, the Pálár, the Ponniár, the Cauvery and Vaigai.

Rivers.

Masonry dams (anients) have been thrown across all these rivers to divert their waters into irrigation canals. There is practically no navigation on them except in that portion of the Godávári which is above the great dam, but the canals of the Godávári and Kistna irrigation systems, which are connected with each other, are extensively used by passenger and cargo boats. The Buckingham salt-water navigation canal connects this system with the port of Madras and also extends to Merkánam, a large salt factory, about 70 miles south of the capital. The Kurnool canal, which starts from the dam across the Tunga-bhadra river, the principal tributary of the Kistna, is also utilized for navigation to some extent. The canals of the other irrigation systems are not utilized for water traffic.

4. The only natural freshwater lakes in the Madras Presidency are the Komarvólu Áva and Kondakirla Áva in the Vizagapatam district and the Colair lake in the Kistna district.

Lakes.

The latter is formed by a depression between the deltas of the Godávári and Kistna rivers and is connected with the sea by the Upputeru river. The Chilka and Pulicat lakes are backwaters rather than lakes. On the west coast there is an extensive system of lagoons, which is utilized for purposes of navigation.

5. The climate of the presidency is largely affected by the two mountain ranges already described. The Western Ghâts intercept the greater portion of the rain clouds brought by

Climate.

the south-west monsoon, so that, while the rainfall in the strip of country between the mountains and the Indian Ocean is very heavy from June to September, the period during which the south-west monsoon blows, it is comparatively light in the districts to the east of the great mountain barrier. The clouds brought by the north-east monsoon are stopped in the same way on the eastern side of the range, and the greater part of the rainfall of the eastern districts is given by this monsoon. The Eastern Ghâts act in a similar way, but only on the north-east monsoon, and owing to their lower elevation their effect as a barrier is, of course, not so great as that of the other range. The result is that the districts on the west coast have the heaviest rainfall, the quantity registered varying from 100 to 150 inches in the year. The districts lying to the east of, and immediately below, the Western Ghâts get little rain from the summer monsoon, which, on the other hand, gives a considerable amount to districts more remote, especially to those north of the Kistna. The east coast districts benefit most by the north-east monsoon. The plateau between the two ranges is naturally the worst off in respect of rainfall, as the rain clouds brought by both monsoons are stopped by the mountains before they reach this tract.

6. The presidency generally has a high mean temperature, but the variation is not so great as in other parts of India, and if Madras never enjoys the exhilarating and bracing cold of the Punjab, it never suffers its great heat.

Temperature.

7. I have no information regarding the number of miles of road in the presidency, but Madras is very well provided in this respect, and there is an enormous cart-traffic along the main

Roads and Railways.

lines of communication. On the 31st March 1892, the number of miles of railway open to traffic was 2,307½ or one mile of line to every 61 square miles of territory. In addition to this there were 643 miles under construction which, when completed, will give one mile of railway to every 48 square miles of territory.

Civil Divisions.

8. The Madras Presidency is divided into 22 districts. For the purpose of the Census tables these districts have been arranged in the following eight groups:—

Civil divisions.

1. Northern ..	{ Ganjam. Vizagapatam. Godávári. Kistna. Nellore.	4. West Central ..	{ Salem. Coimbatore. Nilgiris. South Arcot.
2. North Central or Deccan.	{ Cuddapah. Kurnool. Bellary. Anantapur.	5. South Central ..	{ Tanjore. Trichinopoly. Madura.
3. East Central ..	{ Madras. Chingleput. North Arcot.	6. Southern ..	{ Tinnevely. Malabar. South Canara.
		7. West Coast ..	{ Ganjam. Vizagapatam. Godávári.
		8. Agency Tracts of	

The northern group consists of five districts lying between the Eastern Ghâts and the sea, which forms their eastern boundary. The first four districts receive most of their rain during the summer monsoon, but Nellore depends chiefly upon the north-east monsoon for its supply. In Ganjam and Vizagapatam the total annual fall is about 45 inches; Godávári and Kistna get only between 35 and 40 inches in a year, but the rivers from which these districts take their names render the lands which lie in their deltas more or less independent of local rain. In fact Kistna and Godávári are two of the most fertile districts in the presidency; Ganjam, on the other hand, has suffered considerably from bad seasons and famines. Vizagapatam occupies a more favourable position: much of the district is very fertile and the ryots are good farmers. There is a considerable export trade from its ports of Bimlipatam and Vizagapatam. Nellore suffers from periodical failure of the rains and, except in the delta of the Pennér, is a poor district. The districts in the Deccan group lie between the two mountain ranges and have but a scanty rainfall. These districts are the poorest in the presidency; the rains, which are never abundant, often fail altogether and famine and scarcity are of frequent occurrence. The present districts of Bellary and Anantapur were formed in 1882 out of the old district of Bellary. The districts in the next group get their chief rainfall from the north-east monsoon, the yearly average being 50 inches, but a portion of North Arcot lies above the Eastern Ghâts, and this receives a much smaller quantity. The Madras district consists merely of the presidency town. The districts in the west central group have not many features in common. Part of the Nilgiris, indeed, belongs properly to the west coast group, and it is, owing to this, that the average rainfall for the district is so high as 73 inches per annum; on the plateau the fall does not much exceed 50 inches. Coimbatore, lying as it does at the foot of the Western Ghâts, gets only about 13 inches of rain from the summer monsoon and about the same amount in the autumn. Salem is better off with a total fall of over 35 inches, but, notwithstanding this, the agricultural position of Salem is the worst of the three. The rains frequently fail and the irrigation works are insufficient. Coimbatore is better off, but in both districts the famine of 1877 caused great loss and suffering. In the Nilgiris famine is unknown. The two coast districts of South Arcot and Tanjore receive good rains from the north-east monsoon, the yearly average being between 45 and 50 inches. Trichinopoly, which is more inland, receives only 34 inches. The never failing floods of the Cauvery river, which are diverted to the fields by an excellent system of

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irrigation works, place Trichinopoly and Tanjore in a most favourable agricultural position. Nearly the whole of the latter district lies in the Cauvery delta and is almost entirely devoted to the cultivation of rice. South Arcot comprises a comparatively high proportion of unirrigated lands, but it is a fairly prosperous district, its position having been greatly improved in recent years by the large extension of the cultivation of oil-seeds. Madura and Tinnevely get a good fall of rain in the autumn, but, owing to their proximity to the Western Ghâts, they receive but little from the summer monsoon. Their total amount is 30 inches. Malabar and South Canara, situated on the western littoral, have the largest rainfall in the presidency, the average of the former being about 100 inches and that of the latter 150 inches. Nearly the whole of this is received during the time of the south-west monsoon. In these districts famine is unknown, for the rains never fail altogether and are, as a rule, abundant and seasonable. The Laccadive Islands, which are about 150 to 200 miles from the coast, are attached to these two districts, the northern group, called the Amindivis, belonging to Canara and the southern group to Malabar. The island of Minicoy, situated midway between the Laccadives and the Maldives, also forms part of the Malabar district. The so-called Agency Tracts of the three northern districts consist of the hill and forest country above the Eastern Ghâts and of the eastern slopes of those mountains. Climatologically this territory is similar to the neighbouring Central Provinces, getting good rains during the summer, but comparatively little in the autumn. The bulk of the area is covered with forest, but there is some excellent cultivation in favoured localities and the rains seldom fail.

Feudatory States.

Travancore.
Cochin.

Pudukota.
Banganapalle.

Sandur.

Travancore and Cochin are on the west coast and are similar in most respects to the district of Malabar. Pudukota is surrounded by the Tanjore and Trichinopoly districts, and resembles the latter in physical conditions. Banganapalle and Sandur are small states situated within the limits of Kurnool and Bellary respectively.

The state of Mysore is not included in the Madras feudatory states, as its political relations are controlled by the Government of India without the intervention of the Government of Madras.

District Administration.

10. The general administration of each district is controlled by a Collector, who is also the District Magistrate, except in the case of the Collector of Madras. The Madras district in fact consists simply of the presidency town, and the remarks that follow do not apply to it. Each district is sub-divided into divisions, and each division into taluks. The division is presided over by a Divisional officer with the title of Sub-Collector, Head Assistant Collector, Assistant Collector or Deputy Collector, as the case may be. The first four titles usually denote a member of the Covenanted Civil Service, but all Deputy Collectors are members of the so-called Uncovenanted or Provincial Civil Service, and in nearly all cases are natives of India. The head of the taluk is the Tahsildar, who is almost invariably a native official. In some cases the Tahsildar is assisted by a deputy, who has semi-independent charge of a portion of the taluk. The division immediately below the taluk is the Revenue Inspector's range, sometimes called a *firka*, and below this again comes the village. The chief duty of the administrative staff, which has been described above, is the collection of the land revenue. The following is a brief account of the systems of tenure and the mode of assessing the revenue. The bulk of the land is held on what is called the *raiya* tenure, that is, the farmer (*raiya* or *ryot*) pays rent for his land direct to the State without the intervention of any middleman. The *ryot* has an occupancy

District Administration: The Revenue Staff.

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right in his land, from which he can be ousted only if he fails to pay his rent or land-tax. On the other hand, he can throw up his lands, or a portion of them, at any time, subject to a liability for the tax for the current year if his relinquishment is made too late in the season to allow of the land being cultivated by anybody else. The *ryot* also has full power to sub-let, or sell, or otherwise dispose of his holding, and he can grow whatever crops he chooses. All that the Government requires is, that if the land is occupied, the occupant must pay the tax or rent. This tax is in theory half the net produce of the land, but in practice it is not more than one-third, and is usually much less. The tax is first calculated in grain and then converted into money at a commutation rate based on the average price during a series of years. The amount of the tax remains fixed for a period of thirty years, at the end of which time the settlement is revised, but only as regards the commutation rate, which is now fixed with reference to the average price of the preceding twenty years. The new commutation rate is then applied to the grain value of the land and the amount of the tax for another period of thirty years is thus arrived at. As no change is made in the grain valuation of the land, it is obvious that the State does not appropriate any benefits arising from improvements, whether they are made by the *ryots* themselves, such as wells, drainage, &c., or at the public cost, such as roads and railways. The unoccupied land belongs to the State, but, if it is not required for any public purpose, it is granted to any person who applies for it and the grantee at once becomes possessed of all the rights over the land which have been mentioned above.

But although Madras is essentially a *raiya* province, a considerable portion of the land is held on the *zemin* tenure. The *zemin* is a landlord who stands in the same position to his tenants as the Government does to its *ryots*, but he is required to pay a land-tax which was originally calculated on the amount of his rental. The proportion taken in this presidency was usually about two-thirds of the gross rental. This amount was fixed in perpetuity, and in this important respect it differs from the tax payable by the *ryot* which, as already stated, is subject to revision at the end of every thirty years. It is on this account that the *zemin* system is commonly called the permanent settlement. The *zemindars* have profited greatly under this settlement, as their money incomes are now much larger than when the tax was fixed, owing to the extension of cultivation and rise in prices.

In the case of *raiya* lands the land revenue is usually paid in the first instance to the head of the village who is assisted by a *karnam* or accountant. It is the duty of the latter to keep an account of the amount due by every landholder (*pattadar*) in the village, and the village head is required to collect each instalment of revenue as it becomes due. The Revenue Inspector supervises the work of these village officers, while above him, in ascending scale, are the Tahsildar, the Divisional officer and the Collector. The whole of the revenue administration is supervised by the Board of Revenue, subject to the control of the Government.

The land revenue forms nearly one-half of the gross public income of the presidency.

The other main sources of revenue are—

- a. Tax on salt.
- b. Excise on intoxicating liquors and drugs.
- c. Stamps.
- d. Income tax.

- e. Customs.
- f. Government forests.
- g. Provincial rates.

Except the first two, the whole of these are collected by, or under the orders of, the Collector and his subordinates. And although there is a special department for dealing with the taxation of salt, liquor and intoxicating drugs, yet, even in the case of these items of the revenue, the Collector exercises considerable powers of control, and is, in a general way, responsible for the interests of the State on the one hand and those of the inhabitants of his district on the other.

It must not be supposed that a Collector and his subordinates have only to collect the revenue. Their duties are manifold and varied, comprising almost every conceivable detail of administration, including things so wide apart as the

Chap. I. superintendence of mule-breeding operations and the maintenance of Christian
para. 11. burial grounds. Their work as Magistrates will be noticed in the next paragraph.
The public receipts of the Presidency of Madras from all sources for the years
1889-90 and 1890-91 are given in the following statement :—

Imperial, Provincial and Local receipts.

No.	Principal heads of revenue.	1889-90.	1890-91.
		RS.	RS.
1	Land revenue	503,39,354	485,10,661
2	Salt	175,68,186	195,17,836
3	Stamps	65,01,678	64,57,268
4	Excise	114,02,053	119,97,376
5	Provincial rates	76,17,311	81,10,986
6	Customs	18,09,281	17,83,387
7	Assessed taxes	13,29,033	13,20,948
8	Forest	15,57,627	17,95,406
9	Registration	10,27,462	10,83,991
10	Tributes	34,52,431	34,49,431
11	Other sources	166,53,130	222,45,025
	Total	1,197,66,546	1,267,27,317

11. The criminal law of a district is administered by a staff of magistrates of different grades, having varying powers as regards punishment and the cognizance of offences. At the bottom of the scale is the village head, who can take cognizance of cases of assault and petty theft. His powers of punishment are limited to a sentence of imprisonment for 12 hours, or confinement in the stocks for 6 hours. Resort is seldom made to this primitive court. The lowest grade of regular magistrates is the Taluk Magistrate, an office held by the Tahsildar. The Tahsildars have, however, with a few exceptions, recently been relieved of all but occasional magisterial work by the appointment of special taluk magistrates, an arrangement which is at once more convenient to the people, who thus obtain a stationary court, and to the Tahsildar, who is more free to move about his charge. The work of taluk magistrates is supervised by the Divisional officer, who is a magistrate as well as a revenue official. Appeals from the decisions of the subordinate magistracy lie to him, and he examines all judgments and sentences passed by them, whether appealed against or not. Serious offences arising in any taluk under his control are tried in his court and not in that of the taluk magistrate. The office of District Magistrate is held by the Collector. He does little original work, and confines his action to the control of both taluk and divisional magistrates, copies of whose judgments are sent for his perusal. Above the magistracy is the Sessions Judge, who, besides holding a jail-delivery every month, exercises supervision over the work of the magistracy and hears appeals against convictions by divisional magistrates. Appeals from the decisions of sessions judges are heard by the High Court at Madras. For the districts of Bellary and Anantapur, there is only one sessions judge, and in the same way the Nilgiri district is included in the jurisdiction of the judge of Coimbatore. The Malabar district, on the other hand, is divided into two sessions divisions.

12. Civil justice is administered by the sessions judge in his capacity of District Judge, and he is assisted by two classes of officers designated, respectively, Subordinate Judges and District Munsifs. Heads of villages (village munsifs) have also a limited jurisdiction in

petty suits. The work of the district judge chiefly consists of supervision and the hearing of appeals, the bulk of the original work being done by the subordinate judges and district munsifs, nearly the whole of whom are natives of India.

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13. Each district has a regular police force, and there is in every village a watchman, who is expected to assist the ordinary police. The latter body is presided over by a District Superintendent, who usually has one or more assistants. These officers are all Europeans or Eurasians. For each taluk there is an Inspector of Police, with jurisdiction over the various 'stations' into which the taluk is divided. The district magistrate exercises a certain amount of control over the police of his district, but the immediate superior officer of the district superintendent is the Deputy Inspector-General, of whom there are three for the presidency. The whole department is administered by an Inspector-General.

14. A small jail is attached to the court of every taluk magistrate, and in this are confined prisoners whose sentences do not exceed one month. Until recently there was a district jail at the head-quarters of each district for the reception of prisoners whose sentence did not exceed one year, but some of these have been abolished and the prisoners formerly confined in them are now sent to the central jails, which correspond to the large prisons in England. There are eight of these, but two of them are of comparatively small size. The taluk magistrate has charge of the jail attached to his court, and the district medical officer is the superintendent of the district jail. The superintendents of the central jails are special officers who have no other duties to perform. The whole department is presided over by an Inspector-General. The sessions judge and the higher magistrates are *ex-officio* 'visitors' of the jails within their jurisdiction.

15. The chief duty of the District Medical and Sanitary officer, more familiarly known as the District Surgeon, is the control of the various hospitals and dispensaries in the district; but he is also superintendent of the district jail when there is one, and is required to attend all Government officials without fee. He has the direct management of the hospital at the head-quarter station and periodically visits the outlying hospitals and dispensaries which are under the charge of apothecaries or hospital assistants. He is also required to keep an eye on the general sanitation of the district; but, owing to want of adequate funds, there is little scope for any active measures in this direction. The district surgeon is usually a commissioned officer of the Indian medical service, but in some cases the post is held by an Assistant Surgeon holding only an Indian diploma. There are practically no private practitioners except the village *hakim*, or *vaidyan* as he is called in this presidency.

16. For the registration of documents a special department exists, presided over by an Inspector-General. The actual work of registration is performed by sub-registrars, of whom there are a number in each district. These are controlled by the district registrar, who is immediately subordinate to the Inspector-General. The officers of this department are all natives of India. The registration of births and deaths is entrusted to the village accountant, or, in towns, to the municipal authorities, and forms no part of the duties of the staff of the Registration department.

17. The management of the Government forests is in the hands of the Collector, who is assisted in this branch of his duties by a trained European assistant, called the district forest officer, under whom there is a special staff of rangers, foresters and forest guards. The strength of this branch of the administration varies very much in different districts, for in some there are practically no State forests.

18. The last member of the regular district staff is the executive engineer, who has charge of the irrigation works and the public buildings. Where these are numerous or important, the district is sub-divided into several divisions, each with an engineer at its head and one or more assistants. On the other hand some engineers have charge of two districts. These officers belong to what is known as the Public Works depart-

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para. 19. ment, which is recruited in England. The immediate superior of the executive engineer is the superintending engineer, of whom there are six for the presidency. At the head of the department are two Chief Engineers—one for irrigation and the other for roads, buildings, &c. These two officers are also secretaries to the Government.

19. The Madras Presidency has a somewhat elaborate system of local government. In each district there is a district board, consisting of a president and not less than twenty-four members. Under the district board are taluk boards, each consisting of a president and not less than twelve members, while under the taluk board again are the unions or panchayats, consisting of a chairman and not less than five members. Certain officials of the Revenue department are *ex-officio* members of these boards, and the non-official members are either nominated by the Government or elected. The income of the boards is chiefly derived from the land-cess, which is a small tax levied on all holders of land, and the main objects of expenditure are the maintenance of highways, education and sanitation, the latter including the upkeep of all hospitals and dispensaries.

The large towns are governed by municipal councils possessing much the same powers as the district boards. The chief sources of the municipal income are a profession-tax, levied on all persons exercising a trade or profession within the town, and a house-tax. The objects of expenditure are much the same as in the case of district boards. The Collector and his divisional officers are required to keep an eye on the proceedings of district boards and municipal councils, and they frequently take an active part in the business of these bodies. The Collector, indeed, is *ex-officio* president of the district board and a great deal of the executive work remains in his hands.

20. The schools of a district are usually on the results-grant system, that is, they are inspected annually by officers of the Educational department and receive a grant from the district board or municipal council according to the results as shown in the inspector's report. Some schools, however, are maintained entirely at the expense of the boards, but this system is only resorted to when special circumstances render the results-grant method unsuitable. There is very little free education, some fee, however small, being almost invariably charged. Higher education is given in colleges, which are either Government, municipal, or private institutions. The latter receive grants-in-aid, but these are paid from provincial and not from local revenues. The Educational department consists of an inspecting staff and a body of professors and lecturers. The head of it is the Director of Public Instruction, who exercises a general control over the education work of the district boards, and is the adviser of the Government on all matters relating to the instruction of the people. In addition to the semi-public institutions mentioned above there are many petty private schools which afford elementary instruction on native lines.

21. When it is remembered that the only private practitioners are quack-doctors, ignorant of all modern principles of medicine, that the village barber is the usual surgeon and his spouse the midwife, the importance of hospitals and dispensaries becomes apparent. District boards and municipal bodies have already done much towards establishing such institutions, but much still remains to be done. The professional staff required for hospitals and dispensaries is provided by the Government, but the services of the apothecaries and hospital assistants so provided are paid for by the district board.

22. The foregoing account of the system of administration is not applicable to the agency tracts attached to the three northern districts. The inhabitants of these tracts are half-civilized tribes, suspicious of all interference and control, and quick to resist with arms any act which may seem to them to be a violation of their ancient rights and customs. For such a people the elaborate procedure of the ordinary courts and the intricacies of the ordinary laws are wholly unsuitable, and they are accordingly governed under a special Act which vests the administration in the hands of an

officer called the Agent to the Governor, whence comes the name of the 'Agency Tracts.' The Agent is always the Collector of the district in which the special tracts are situated, and he combines in his own person the offices of Collector, District Magistrate, Sessions Judge and District Judge, and has, in addition, considerable powers of a *quasi*-political character.

23. I do not propose to give a detailed description of the system of administration in the five feudatory states, but it may be stated in general terms that in all it is on much the same lines as in British territory, though in the small principalities of Banganapalle and Sandūr the machinery and methods are of a less elaborate character than in the other three. The highest administrative officer is the Dewán or minister, who is directly responsible to the ruling chief. A certain amount of control is exercised by the Madras Government—in the case of the two larger states through the Resident in Travancore and Cochin, and in Pudukóta, Banganapalle and Sandūr through the Collectors of Trichinopoly, Kurnool and Bellary respectively.

Area.

24. The area of the Madras Presidency is 141,189 square miles, and the native states attached to it contain 9,609 square miles. Madras is the second largest of the older provinces of the Indian Empire, but, including Burma, it stands only third in the list. Again, if the area of feudatory states be also taken into account, Bombay has a greater extent and Madras drops to the fourth place. The figure given above does not include the area of the Laccadive Islands and Minicoy, as this has not been ascertained by the Survey department. Their extent probably does not exceed 15 square miles.

Province.	Area in square miles.		
	British territory.	Native states.	Total.
Burma	171,430	...	171,430
Bengal	151,543	35,824	187,377
Madras	141,189	9,609	150,798
Bombay and Sind..	125,064	69,045	194,109
Punjab	110,667	38,299	148,966
North-West Provinces and Oudh..	107,503	5,109	112,612
Central Provinces..	88,501	29,435	115,936

Country.	Area in square miles.
United Kingdom	121,481
Austria	115,903
Greece	25,041
Hungary	125,039
German Empire	211,168
France	204,092
Italy	114,410
Servia	19,050
Switzerland	15,832
Holland	12,646
Belgium	11,373

Compared with countries in Europe, Madras is about 20,000 square miles larger than the United Kingdom, and is rather greater in extent than Austria and Greece together. The Agency Tracts alone are equal in area to the kingdom of Servia and larger than either Switzerland, Holland or Belgium. The area of the Madras Presidency without the agency tracts exceeds that of the United Kingdom by 541 square miles.

The average area of a district, excluding Madras but including the agency tracts and taking them as part of the districts to which they are attached, is 6,722 square miles, which is about 300 square miles more than the area of Wales. If the agency tracts be excluded, the average area is 5,809 square miles, or about the size of the kingdom of Saxony. The largest district is Vizagapatam with 17,242 square miles, but nearly three-fourths of this vast extent lies within the agency tracts and is very sparsely populated. If the agency tracts be omitted from consideration, Madura (8,808 square miles) is the largest district; it is closely followed by Nellore (8,765), Cuddapah (8,722) and Kistna (8,397). The districts may be grouped thus with reference to area:—

- (1) Over 8,000 square miles .. Kistna, Nellore, Cuddapah and Madura.
- (2) Between 7,000 & 8,000 .. Kurnool, North Arcot, Salem and Coimbatore.
- (3) Between 5,000 & 6,000 .. Bellary, Anantapur, South Arcot, Tinnevely and Malabar.
- (4) Between 4,000 & 5,000 .. Ganjam, Vizagapatam and Godáviri.
- (5) Between 3,000 & 4,000 .. Tanjore, Trichinopoly and South Canara.
- (6) Between 2,000 & 3,000 .. Chingleput.
- (7) Under 1,000 square miles .. Nilgiris.

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If the agency tracts were included, Vizagapatam and Ganjam would be in the first, and Godavari in the second group.

25. In the marginal statement the areas given in Census Table I. are compared with the areas found in the corresponding table of the census of 1881. The figures agree in the case of only three districts—Chingleput, Nilgiris and South Canara. In the 1881 tables the native states of Banganapalle and Sandur were treated as part of the Kurnool and Bellary districts respectively, while in the present tables they have been shown separately as feudatory states. The combined area of the two is 416 square miles, and if this be deducted from the 1881 figure, the total area is reduced to 139,484 square miles, or 1,705 square miles less than in 1891. This difference, however, is not due to any actual increase of territory, but to the greater accuracy of the figures now given, which have been furnished by the Survey department and embody the latest results of its operations. The only change in the limits of the presidency since the previous census consists of a loss of 24 acres caused by the transfer of four villages from Ganjam to the Pooree district of Bengal. As the area statistics adopted in the 1881 tables were obtained from the Survey office, it

Changes in area since 1881.			
District.	1891.	1881.	Difference.
	SQ. MILES.	SQ. MILES.	SQ. MILES.
Ganjam ...	4,887	3,106	+ 1,781
Vizagapatam ...	4,619	3,477	+ 1,142
Godavari ...	4,796	6,525	- 1,729
Kistna ...	8,397	8,471	- 74
Nellore ...	8,765	8,739	+ 26
Cuddapah ...	8,722	8,745	- 23
Kurnool ...	7,514	7,788	- 274
Bellary ...	5,975	11,007	- 5,032
Anantapur ...	5,275	...	+ 243
Madras ...	29	27	+ 2
Chingleput ...	2,842	2,842	...
North Arcot ...	7,616	7,256	+ 360
Salem ...	7,529	7,553	- 24
Coimbatore ...	7,860	7,842	+ 18
Nilgiris ...	957	957	...
South Arcot ...	5,217	4,873	+ 344
Tanjore ...	3,709	3,654	+ 55
Trichinopoly ...	3,631	3,561	+ 70
Madura ...	8,808	8,401	+ 407
Tinnevely ...	5,387	5,381	+ 6
Malabar ...	5,595	5,785	- 190
South Canara ...	3,902	3,902	...
Total ...	122,022	119,972	+ 2,050
Agency:			
Ganjam ...	3,488	5,205	- 1,717
Vizagapatam ...	12,623	13,903	- 1,280
Godavari ...	3,061	820	+ 2,241
Total ...	19,172	19,928	- 756
Grand Total ...	141,190	139,900	+ 1,290

is remarkable that the total was so incorrect. The present figures may, I believe, be accepted as accurate, except perhaps in the case of Bellary, Anantapur, Malabar and South Canara, the survey of which districts is not yet complete. The greatest variations are found in the three northern districts, but these are largely due to transfers of areas from the agency tracts to the regulation part of each district and *vice versa*. The apparent decrease in Kurnool is due to the exclusion of the area (255 square miles) of the Banganapalle state from the present figure. The inclusion of the Sandur state in Bellary in 1881 only makes the real variation in the case of that district greater than appears in the above statement; the present excess is due to the inaccuracy of the former figures, and the same explanation applies to Madura and Malabar. A considerable extent was transferred from Salem to North and South Arcot in 1885, but the area of all of these districts was understated in 1881.

26. Travancore, the largest of the feudatory states, has an area of 6,730 square miles, which is about the same as the average size of a Madras district. Cochin, which comes next in order, contains only 1,362 square miles and Pudukota 1,101 square miles. Banganapalle and Sandur are much smaller, their extent being, respectively, 255 and 161 square miles.

Population.

27. The total population of the presidency is 35,630,440, or some two millions less than that of the United Kingdom. If the feudatory states be included, the population amounts to 39,331,062, which exceeds the population of France by more than a million. The population of the chief provinces of India and some of the countries of Europe is given below:—

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Indian Provinces.

Province.	Population.	Year of census.
Madras ...	35,630,440	1891.
Bombay ...	18,857,044	
Bengal ...	71,346,987	
North-West Provinces and Oudh ...	46,905,085	
Punjab ...	20,866,847	
Central Provinces ...	10,784,294	
Burma ...	7,722,053	

Other Countries.

Country.	Population.	Year of census.
England and Wales ...	29,001,018	1891
Scotland ...	4,025,647	
Ireland ...	4,706,162	
Islands ...	147,870	
United Kingdom ...	37,880,697	
France ...	38,095,156	1890
Germany ...	49,422,928	
Italy ...	28,459,628	1880
Austria ...	23,835,261	1890
Hungary ...	17,335,929	1890
Spain ...	17,550,243	1887
Denmark ...	2,185,159	1890
Norway ...	1,999,176	1891
Belgium ...	6,093,798	1889
Holland ...	4,548,596	1889
Switzerland ...	2,933,334	1888

The population of each district is given in the table prefixed to this chapter. Taking the agency tracts as part of the districts to which they are attached, the district containing the greatest number of inhabitants is Vizagapatam. Its population is 2,802,992, which is larger than that of many countries in Europe, and within 200,000 of that of the island of Ceylon. Malabar comes next in order, and both that district and Madura contain more than two and a half millions of people. Then follow Tanjore with rather less than two and a quarter millions, and North Arcot, South Arcot, Godavari and Coimbatore with populations ranging from 2,180,487 to 2,004,839. Salem, Tinnevely, Ganjam and Kistna have each over a million and three-quarters. Next to these come Nellore with 1,463,736 and Trichinopoly, Cuddapah, Chingleput and South Canara each with over one million. Bellary, Kurnool and Anantapur contain less than a million inhabitants each. Excluding Madras and the Nilgiris, the district with the smallest population is Anantapur, which contains only 708,549 inhabitants, but this is larger than the combined populations of South Australia, West Australia and Queensland, larger also than the populations of New Zealand and Tasmania taken together.

28. Still excluding Madras and the Nilgiris, the average population of a district is 1,752,000. The mean population of a district in other provinces is given below. In calculating these averages I have omitted Calcutta, Howrah, Darjeeling and the Chittagong Hill Tracts from the Bengal figures, and Bombay, Simla and Rangoon from those of Bombay, the Punjab and Burma respectively, for these districts are similar in their special circumstances to Madras and the Nilgiris in this presidency:—

Province.	Average population of a district.	Province.	Average population of a district.
Madras ...	1,753,906	Punjab ...	671,684
Bengal ...	1,582,128	Central Provinces ...	599,127
North-West Provinces and Oudh ...	957,247	Assam ...	391,202
Bombay ...	784,143	Burma ...	188,543

Bombay and Madras are the only provinces in which the detailed system of *raiyyatwari* land tenure prevails, and the difference in the size of the revenue districts in the two presidencies is very remarkable. The Madras district is in fact, as has been observed by a recent writer, more like the Commissioner's division of other provinces.

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29. The floating population, that is those people who did not sleep in any house on the census night, amounts to 498,927. These were enumerated as travellers by road, rail, canal and sea, and the numbers of each class are given in the marginal table. The houseless poor are unavoidably included in the travellers by road. In 1881 the floating population numbered 618,728 persons. The great decrease is remarkable, but it is found in nearly every district, and I do not think that there is the slightest ground for supposing that the enumeration of this section of the population was defective in 1891, as elaborate and timely arrangements were made for dealing with it. The decrease

is confined to the travellers by road and canal. The former fell from 590,152 to 473,815 and the latter from 19,447 to 7,479. The canal population of 1881 included the people found on the Malabar rivers and backwaters: in 1891 these were not distinguished from the travellers by road. The sea-going population was 6,478 in 1881 and 10,890 in 1891. The travellers by rail have increased from 549 to 6,743. The 1881 figure was no doubt much too low, but there can be as little doubt that that for 1891 is too high, owing, I believe, to gangs of labourers and the like having been enumerated on the schedules provided for railway passengers. The abstraction has been carefully tested, and there is no question as to its accuracy.

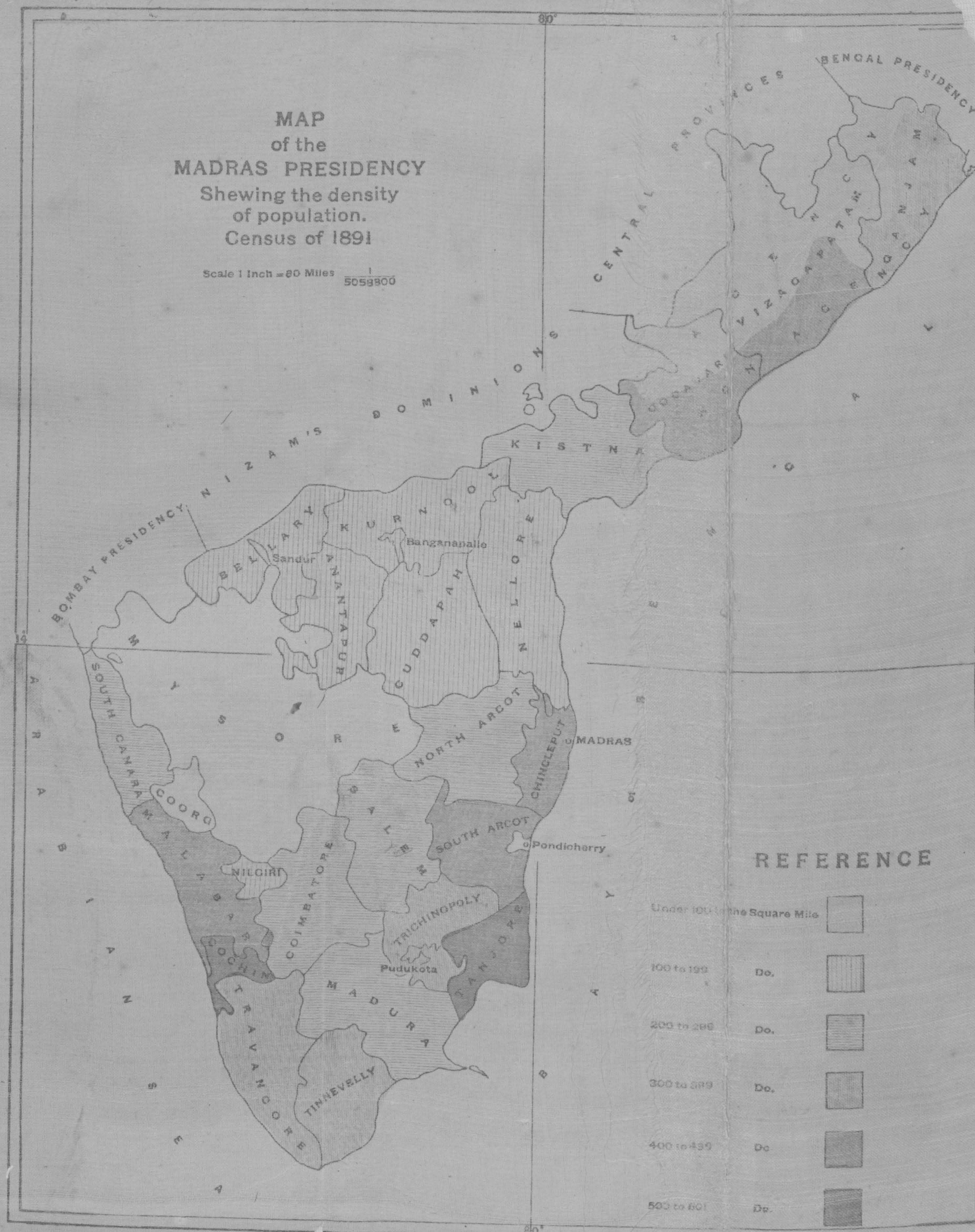
The following statement shows the floating population enumerated in the several districts:—

Floating population.

District.	TOTAL FLOATING POPULATION.			RAILWAY.		SEA-GOING.		CANAL.		TRAVELLERS BY ROAD AND HOUSELESS POOR.	
	Total.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Ganjam ...	28,785	23,090	7,785	...	...	402	41	188	4	21,410	7,740
Visagapatam ...	23,206	18,016	5,190	...	...	820	24	...	...	17,196	5,166
Godavari ...	47,747	33,244	14,503	...	...	1,038	29	4,081	1,257	28,125	13,217
Kistna ...	49,709	33,643	16,066	7	2	449	...	347	170	32,840	15,894
Nellore ...	30,308	19,246	11,062	...	...	...	...	520	47	18,726	11,015
Cuddapah ...	33,833	22,469	11,364	361	74	...	...	125	27	21,988	11,263
Kurnool ...	19,752	12,450	7,302	11	7	...	...	217	136	12,222	7,159
Bellary ...	49,508	32,018	17,490	861	109	...	...	...	...	31,657	17,381
Anantapur ...	17,966	12,464	5,502	497	204	...	...	...	...	11,997	6,298
Madras ...	6,082	4,819	1,243	57	8	244	3	...	...	4,094	1,292
North Arcot ...	11,283	7,626	3,705	407	134	...	...	...	...	7,054	3,593
Salem ...	10,248	6,907	3,341	395	96	...	...	...	...	17,563	10,758
Coimbatore ...	14,319	10,275	4,044	831	215	...	...	...	...	6,512	3,245
Nilgiris ...	1,569	1,336	233	...	...	...	...	...	...	9,444	3,829
South Arcot ...	21,001	13,247	7,754	149	60	452	16	...	...	1,336	233
Tanjore ...	14,565	10,365	4,200	690	123	439	...	67	7	12,646	7,078
Trichinopoly ...	11,481	7,213	4,268	247	57	...	...	...	...	9,239	4,070
Madurai ...	22,534	16,251	6,283	895	198	800	48	...	...	6,966	4,211
Tinnevely ...	22,056	14,184	7,874	44	8	352	30	...	...	14,556	6,099
Malabar ...	15,081	13,439	1,642	162	25	3,584	7	...	...	13,788	7,896
South Canara ...	12,680	10,313	2,347	...	...	2,083	27	...	...	9,693	1,610
TOTAL ...	498,927	343,579	155,348	5,350	1,393	10,867	323	5,789	1,690	317,689	150,787
Agency: Ganjam ...	192	161	31	...	...	...	...	...	...	161	31
Visagapatam ...	2,346	2,043	303	...	...	...	...	...	...	2,043	303
Godavari ...	2,801	1,880	921	...	...	...	...	...	...	1,880	921
TOTAL AGENCY TRACTS ...	5,339	4,084	1,255	...	...	...	...	...	...	4,084	1,255
Total, British Territory ...	498,927	343,579	155,348	5,350	1,393	10,867	323	5,789	1,690	321,773	152,042

MAP
of the
MADRAS PRESIDENCY
Shewing the density
of population.
Census of 1891

Scale 1 Inch = 80 Miles
5059300



30. In population as in area Travancore comes first of the feudatory states with rather more than two and a half million inhabitants. Only three Madras districts have a greater population than this state. Cochin, with 722,906 inhabitants, has a population which is larger than that of only one Madras district. Pudukóta has rather more than half this number of inhabitants. The little states of Banganapalle and Sandúr have populations of 35,000 and 11,000 respectively.

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Density, Areality and Proximity.

31. The population of the presidency being 35,630,440, the number of persons to the square mile is 252 as against 218 in 1881. The accompanying map shows how the density varies from district to district. Excluding the Madras City, the extreme limits are 601 persons to the square mile in the fertile district of Tanjore and 42 to the square mile in the wild hill and forest tracts of the Godáviri agency. The area of each of the six density groups into which the presidency is divided in the map, the ratio of the area of each to the total area, and the average density of each group are given below. The Madras City is not included:—

GROUP.	Area.	Percentage of total area.	Population.	Average density.
	SQ. M.			
I. Under 100 persons to the square mile ...	19,167	13.58	1,294,244	68
II. Between 100 & 200 ...	37,208	26.36	5,262,091	141
III. Between 200 & 300 ...	44,112	31.25	11,667,984	265
IV. Between 300 & 400 ...	13,905	9.85	4,878,289	351
V. Between 400 & 500 ...	28,059	16.33	9,847,200	427
VI. Over 500 ...	3,709	2.63	2,228,114	601
Total ...	141,160	100.00	35,177,922	249

The first group consists entirely of the Agency Tracts, in which there are only 68 persons to the square mile.

The second group comprises the districts of Nellore, Cuddapah, Kurnool, Bellary, Anantapur and Níliris. With the exception of the last named, these districts are contiguous. The density is greatest in Nellore, where there are 167 persons to the square mile; in Níliris the number of individuals to this area is only 104, in Kurnool it is 109, in Anantapur 134, in Cuddapah 146 and in Bellary 151.

The third group contains six districts—Kistna, North Arcot, Salem, Coimbatore, Madura and South Canara. The first and last are isolated, but the other four form a continuous tract of country. The number of persons to the square mile varies from 221 in Kistna to 296 in Madura.

In the next group are Ganjam, Trichinopoly and Tinnevely, the densities being, respectively, 325, 378 and 356 persons to the square mile.

In the fifth group are Vizagapatam and Godáviri on the east coast, Chingleput and South Arcot further down on the same coast, and Malabar on the west coast.

In the last group there is only one district, Tanjore, and this has 601 individuals to the square mile.

The Ponáni taluk of Malabar, with an area of 390 square miles, has 1,152 persons to the square mile; this is the most densely populated tract of any considerable size in the presidency, but the Kumbakónam taluk of Tanjore is close behind it with 1,104 persons to the square mile. The taluks of Kumbakónam, Negapatam, Nannilam, Mayavaram and Shiyáli, which form the bulk of the area irrigated by the Cauvery system, have together a

* Amalápuram.
Rámachandrapuram.
Narsápuram.
Tanuku.

† Rápalla.
Bandar.

density of 887 persons to the square mile. The density of the four taluks* of the Godáviri delta is 556, while in the two chief delta taluks† of the Kistna there are only 305 persons to the square mile.

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32. The density statistics for each of the principal provinces of India and for some of the chief countries in Europe and elsewhere are here given for purposes of comparison:—

Persons to the square mile.		Persons to the square mile.	
Density in other provinces and countries.			
Madras	252	Bombay	151
Bengal	471	Central Provinces	125
North-West Provinces and Oudh	436	Burma	45
Punjab	189		
England and Wales	498	United States of America	21
Scotland	132	Mexico	13
Ireland	144	Jamaica	132
United Kingdom	312	Brazil	3
Belgium	586	Peru	5.8
Holland	330	Chile	8.6
Italy	249	Victoria	9.8
German Empire	234	New South Wales	3.6
France	187	South Australia	0.3
Spain	89	Queensland	0.5
Java	449	West Australia	0.03
Japan	268	Tasmania	4.4
Canada	5	New Zealand	5.5

Only two provinces in India and only three countries in Europe have a greater density than the Madras Presidency. Of the Asiatic countries given only Java and Japan are more populous. But in spite of the high position which Madras occupies, there is no reason to fear that the population has yet made any near approach to the limit which the land will support. Complete statistics of the culturable area, which is still unoccupied, are not available, as no reliable returns are obtained from permanently settled zemindaris, but detailed figures are given by the Board of Revenue for 94,140 square miles; of this area 57,418 square miles are culturable, and of this latter extent, again 12,296 square miles or 21.41 per cent. are still unoccupied. These figures refer chiefly to settled *raiyatwari* lands, and they possibly afford a fair index of the proportions of occupied and unoccupied culturable land in ordinary zemindari areas. In the Agency Tracts, however, which are not included in the Board's returns, the proportion of unoccupied land is much higher, and there is there a large field for the extension of cultivation by immigrants from more congested districts.

33. In the report on the census of 1881 the taluks of Palkonda, Párvatipur, Sálúr and Srungavarapukóta in the Vizagapatam district were said to be the most populous in the presidency. The areas of these taluks, as given in the 1881 returns, were, however, seriously wrong and in consequence the density was very much overstated in each case. As the matter is of some importance in connection with railway projects, I give the figures below:—

TALUK.	NUMBER OF PERSONS PER SQUARE MILE.		
	Census Report 1881.	Corrected Figures 1881.	Census of 1891.
Palkonda	1,214	599	625
Párvatipur	1,224	278	272
Sálúr	1,257	447	465
Srungavarapukóta	1,241	402	472

34. The average density of the five feudatory states is 385 persons to the square mile, but here also there is considerable divergence, the little state of Sandúr having only 71 inhabitants to the square mile, while Cochin has 531. The latter has thus a greater density than any of the Indian provinces, and is nearly as populous as Belgium. Travancore is much lower down in the scale, having only 380 persons to the square mile.

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35. The term areality is used to denote the average area for each unit of population. The areality of the Madras Presidency is 2.54 acres, or 12,275 square yards to each person. This is compared with the areality for other Indian provinces in the marginal statement.

Areality.	
Province.	Acres.
Madras	2.54
Bengal	1.36
North-West Provinces and Oudh	1.47
Punjab	3.39
Bombay	4.24
Central Provinces	5.13
Burma	14.21

In England and Wales there are 1.28 acres to each individual, in Belgium 1.19 acres, and in Holland 1.78 acres. In the densely populated Ponáni and Kumbakonam taluks, the area for each inhabitant is only 0.56 and 0.58 of an acre respectively.

In the feudatory states, as a whole, there was a space of 1.66 acres to every individual. In Cochin the average area was 1.21 acres, in Travancore 1.68 acres, in Pudukóta 1.89 acres, in Banganapalle 4.60 acres, and in Sandúr 9.05 acres.

36. Another way of expressing the relation between area and population is to state the average distance between each person, supposing the inhabitants were equally distributed over the face of the country. In the Madras Presidency this distance is 119 yards. In Bengal it is 87 yards, in the North-West Provinces and Oudh 91 yards, and in Bombay 154 yards. The proximity for each district and feudatory state is given in the table prefixed to this chapter. In the Madras town the people are only 15 yards apart. In the most populous rural tract, the Ponáni taluk of Malabar, the distance between each inhabitant is 56 yards. In the Agency Tracts the people are 230 yards asunder.

Towns and Villages.

37. The total number of towns and villages, excluding uninhabited villages, is 57,079; the number in 1881 was 51,964. The details for each district are given in the marginal statement. It must be explained that in Madras a 'village' is not a single collection of houses, but a revenue term denoting a certain area of agricultural land. Within this area there is nearly always one group of houses, and frequently there are two or three such groups, while occasionally there is no habitation at all. The extent of the area depends partly upon custom, partly on administrative convenience. At the time of the survey and settlement of a district, it is usual to amalgamate contiguous villages which are too small to warrant a headman being provided for each, and to sub-divide those which are too large for a single headman to manage efficiently. In zemindari tracts, where the village establishments are not under the control of the Government, this process goes on to a much less extent, and it is there more common for a village to consist of only one group of habitations. In the agency tracts again, especially in the great Jeypore zemindari in Vizagapatam, every little cluster of huts is treated as a village, and the returns show that in a number of cases a village name has been given to a single house. The result is that the average population of a village in the agency tracts is 106, while in the rest of the presidency it is 755. In Malabar, there are practically no villages except in

Towns and Villages.			
Number of Towns and Villages, excluding uninhabited villages.			
DISTRICT	1891.	1881.	Difference.
Ganjam	4,191	4,182	+ 2
Vizagapatam	2,668	2,667	+ 1
Godavari	1,634	2,031	- 397
Kistna	1,848	1,823	+ 25
Nellore	1,793	1,688	+ 105
Cuddapah	1,276	1,241	+ 35
Kurnool	802	772	+ 30
Bellary	795	1,161	- 366
Anantapur	941	900	+ 41
Madras	1	1	
Chingleput	1,997	2,003	- 6
North Arcot	4,465	3,967	+ 498
Salem	3,811	3,972	- 161
Coimbatore	1,478	1,447	+ 31
Nilgiris	62	10	+ 42
South Arcot	2,897	2,850	+ 47
Tanjore	3,550	3,551	- 1
Trichinopoly	1,502	1,485	+ 17
Madura	4,103	3,971	+ 132
Tinnevely	1,538	1,497	+ 41
Malabar	2,250	437	+ 1,813
South Canara	1,223	1,232	- 9
TOTAL	44,880	42,945	+ 1,935
Agency.			
Ganjam	1,846	2,706	- 860
Vizagapatam	9,384	6,095	+ 3,289
Godavari	969	218	+ 751
TOTAL	12,199	9,019	+ 3,180
Grand Total	57,079	51,964	+ 5,115

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the Pálghat taluk; elsewhere the people live in detached homesteads and the lowest unit of area for administrative purposes is the *désam*. Above this is the *amsam* consisting of a varying number of *désams*. For the purpose of village officials the *amsam* corresponds to the village elsewhere, and in the census returns of 1881 the village in Malabar means an *amsam*. But on the occasion of the present census it was decided to treat the *désam* as the unit, and the number of villages now shown against Malabar means the number of *désams*. In respect of area and population the *désam* approaches much more nearly to an ordinary village than the *amsam* does. A consideration of the foregoing remarks will make it clear that the increase of 5,117 in the number of towns and villages by no means necessarily indicates an addition since the last census of that number of separate groups of habitations.

Turning now to individual districts, the decrease in the Godávári is mainly due to transfers made to the agency tracts; in Bellary the decrease is caused by the amalgamation of small villages at the recent survey; in Nellore and North Arcot the changes are chiefly found in zemindári lands, where the village is less stable than in raiyatvári taluks; Salem has lost some villages, which have been transferred to North and South Arcot. In the Nílgeri district in 1881, the *náds*, which are large areas containing many groups of habitations, were treated as villages, but on the present occasion a smaller unit has been adopted with the result that the ten villages of 1881 are now increased to 52; in Madura the increase is partly the net result of the linking up and sub-division of raiyatvári villages and partly an unexplained addition in the zemindári tracts; the increase in Malabar is due to the change in the unit adopted, which has been mentioned above. The figures for the agency tracts show great variations and no complete explanation is forthcoming. The practice of 'shifting cultivation' which obtains in part of the agency leads to frequent changes in the location of dwellings and the multiplication of village names, and as the bulk of the area is held on zemindári tenure, the lists of villages are imperfect and liable to arbitrary alteration from time to time. I think it will be found that the large increase in the Vizagapatam agency is due to the inclusion, in 1891, of a great number of outlying houses, which in 1881 were either omitted altogether or were incorporated in some neighbouring village. In the Godávári agency there has been a real increase by transfers from the non-agency portion of the district and from Vizagapatam.

38. The total number of towns and villages will not necessarily equal the number of villages given in the revenue returns, for a town may consist of the sites of several revenue villages, which will, therefore, appear in the tables as one town instead of two, three or more villages. Sometimes again the hamlets of the village which gives its name to the town are not included in the latter, as they are situated at a distance from the main site. A notable instance of this is Rámesvaram, the famous place of pilgrimage; the revenue village of this name extends over an enormous area and includes a number of hamlets which lie at a considerable distance from the actual town itself. These hamlets were, therefore, treated as a distinct village, so that we have in the returns a town of Rámesvaram and a village of that name also. The adoption of this plan causes an increase in the number of towns and villages over the number of revenue villages, but this increase is probably more than counterbalanced by the loss from the causes referred to above. Lastly, a town may be formed of one village and one or more hamlets of another, the main site of which is not included. This will neither increase nor diminish the number of villages, but the population of the village which is shorn of its hamlet will appear in the census statements as less than the real population by the number of persons enumerated in the hamlet.

39. Excluding Madras and the agency tracts, the average population of a village, including towns also in that expression, is 755, and the average district divergence from this is 282 or 37.35 per cent. For villages alone the average is 692, and the mean district deviation is 249 or 35.98 per cent. The average number of inhabitants in a town is 13,867, the mean district divergence being 3,896 or 28.10 per cent. The degree of dispersion about the mean in the case of these averages is, however, so great—the mean error being between 500 and 600 per

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cent. in the case of towns and villages together—that the arithmetical mean affords but little information as to the actual state of things. A much better idea of this is given by the following statement, which shows the distribution of 1,000 towns and villages by population groups in each district:—

Number of towns and villages in each group out of 1,000.

DISTRICT.	1-199.	200-499.	500-999.	1,000-1,999.	2,000-2,999.	3,000-4,999.	5,000 and over.	Total.
Ganjam	471	315	144	54	9	5	2	1,000
Vizagapatam	242	290	259	151	38	12	8	1,000
Godávári	130	192	286	238	94	46	19	1,000
Kistna	133	252	257	247	78	25	8	1,000
Nellore	196	201	249	183	50	23	8	1,000
Cuddapah	151	226	244	259	77	34	9	1,000
Kurnool	94	160	365	302	57	15	7	1,000
Bellary	67	200	400	254	42	21	16	1,000
Anantapur	209	293	266	173	31	19	9	1,000
Chingleput	265	387	240	75	17	9	7	1,000
North Arcot	428	263	190	90	17	8	4	1,000
Salem	411	312	153	83	25	13	3	1,000
Coimbatore	118	189	250	286	100	77	30	1,000
Nílgeri		154	115	461	154	58	58	1,000
South Arcot	161	319	305	167	33	9	6	1,000
Tanjore	273	365	223	98	23	9	6	1,000
Trichinopoly	145	284	286	207	50	23	5	1,000
Madura	475	227	188	89	35	24	12	1,000
Tinnevely	162	215	256	202	80	55	30	1,000
Malabar	76	244	308	233	77	44	18	1,000
South Canara	167	309	272	181	44	19	8	1,000
TOTAL	275	279	229	146	41	21	9	1,000
Agency { Ganjam	738	205	48	8	1			1,000
{ Vizagapatam	897	92	10	1				1,000
{ Godávári	845	118	25	8	2			1,000
TOTAL, AGENCY TRACTS	869	111	17	2	1			1,000
Total, British Territory.	402	243	184	115	33	16	7	1,000

Another way of considering the relation between the people and the size of the groups in which they congregate is to observe the numbers, out of a given total, living in each kind of town or village. In the following table the distribution in this way of every 1,000 of the population is shown:—

Number of persons in 1,000 living in each class of village or town.

DISTRICT.	1-199.	200-499.	500-999.	1,000-1,999.	2,000-2,999.	3,000-4,999.	5,000 and over.	Total.
Ganjam	112	267	262	196	60	47	56	1,000
Vizagapatam	34	134	252	283	124	63	110	1,000
Godávári	11	57	175	271	193	139	154	1,000
Kistna	14	87	185	348	187	93	85	1,000
Nellore	25	119	222	304	145	100	85	1,000
Cuddapah	17	78	176	362	184	123	60	1,000
Kurnool	7	57	264	409	138	53	72	1,000
Bellary	7	66	259	300	88	69	211	1,000
Anantapur	31	129	248	314	98	96	84	1,000
Chingleput	52	229	293	177	69	63	117	1,000
North Arcot	74	178	278	249	80	56	85	1,000
Salem	79	194	205	221	114	95	92	1,000
Coimbatore	8	40	135	246	177	215	170	1,000
Nílgeri		28	44	327	197	125	279	1,000
South Arcot	23	149	201	304	105	46	82	1,000
Tanjore	44	195	252	212	88	52	157	1,000
Trichinopoly	16	107	223	316	134	93	111	1,000
Madura	64	115	155	195	136	144	191	1,000
Tinnevely	15	60	148	230	159	165	223	1,000
Malabar	8	73	187	278	158	136	160	1,000
South Canara	24	128	236	301	128	86	97	1,000
TOTAL	35	124	216	267	131	101	126	1,000
Agency { Ganjam	375	370	185	63	7			1,000
{ Vizagapatam	603	285	71	12	12			1,000
{ Godávári	447	263	120	83	36	9		1,000
TOTAL, AGENCY TRACTS	533	303	103	31	13	11	6	1,000
Total, British Territory.	53	131	211	258	127	98	122	1,000

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In 64.55 per cent. of the towns and villages of the whole presidency the number of inhabitants is less than 500, in 82.89 per cent. it is less than 1,000, and in 94.41 per cent. it is below 2,000. Places with a population between 2,000 and 5,000 inhabitants form 4.87 per cent. of the total, and in only 0.72 per cent. does the population exceed 5,000. These figures, however, must be considered in conjunction with those given in the second of the tables. From this we see that 12.2 per cent. of the people reside in places containing not less than 5,000 inhabitants and 22.5 per cent. in the small towns having a population between 2,000 and 5,000. The large villages with under 2,000, but not less than 1,000, inhabitants contain 25.8 per cent. of the people, while the remaining 39.5 per cent. are found in small villages with a population below 1,000.

The figures for the different districts vary considerably. In the agency tracts, Ganjam, North Arcot, Salem and Madura, the proportion of villages with less than 200 inhabitants is very high, while in Bellary, Kurnool and Malabar it is much below the average. In the Nilgiris there are no villages in this group. Taking villages with populations between 1 and 499, we find that in the Vizagapatam agency tracts, 99 per cent. of the village come under this category, in the Godavari agency 96 per cent., and in the Ganjam agency 94 per cent. In the ordinary regulation districts the variations are from 79 per cent. in Ganjam, 72 per cent. in Salem, and 70 per cent. in Madura to 27 per cent. in Bellary, 25 per cent. in Kurnool, and 15 per cent. in Nilgiris. In the next cumulative group, viz., that of villages with a population under 1,000, Ganjam is still the highest with 93 per cent., but Chingleput comes next with 89 per cent., and then North Arcot, Salem, Tanjore and Madura, in all of which districts the percentage is over 80. The Nilgiri district still has the lowest proportion, but the positions of other districts are considerably altered. The statement showing the number per mille of population living in each size of town or village presents similar variations. In the agency tracts and in Ganjam, Chingleput and North Arcot more than half the population live in villages with less than 1,000 inhabitants. In Tanjore, Salem, South Arcot, Vizagapatam and Anantapur between 40 and 50 per cent. live in such villages; in South Canara, Nellore, Trichinopoly, Madura, Bellary and Kurnool the percentage is between 30 and 40; in Kistna, Cuddapah, Malabar and Tinnevely it is between 20 and 30; in Coimbatore it is 192, and in Nilgiris only 72.

40. It must be remembered that the above figures afford only an approximate index of the size of a single group of dwellings such as would be called a village in England, for, as has already been explained, the Madras village may, and frequently does, consist of several detached hamlets, the most important of which gives its name to the whole revenue village. The number of hamlets attached to each village has not been ascertained, but some indication of the degree in which hamlets are found in the different districts is given by the figures showing the average area of villages. Thus in Ganjam the average area of a village is only 1.17 square miles, and we may feel pretty confident that there the revenue village and what may be called the population village are usually identical. In Tanjore, the average area is only 1.04 square miles and the same conclusion follows. In the north central districts the average area of a village is very high, but in the case of Cuddapah and Kurnool the average is raised somewhat by the inclusion in the total area on which the calculation is made of a large extent of forest land. Yet, even when allowance is made for this, the size of a village is large, and if all the ryots of such a village lived in the same place, it is obvious that some of them would be put to considerable inconvenience in going backwards and forwards to their lands. We may fairly conclude, therefore, that in these districts hamlets are common. In the Nilgiris the average village contains 18.40 square miles, but there is so little cultivation in this district that it does not

District.	Average population.	Average area in Sq. M.
Cuddapah	950	6.84
Kurnool	972	9.37
Bellary	956	7.52
Anantapur	687	5.61

these districts hamlets are common. In the Nilgiris the average village contains 18.40 square miles, but there is so little cultivation in this district that it does not

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follow that the number of 'population' villages greatly exceeds the number of revenue villages. In the agency tracts, hamlets are of rare occurrence, and we find there a low average area; in the Vizagapatam agency, it amounts to only 1.35 square miles, and the so-called villages are not more than a mile and a quarter apart. For the whole presidency the area of towns and villages is 2.47 square miles, and the proximity or mean distance between each is 1.69 miles.

41. It is not easy to say why the revenue villages differ so much in size. There is, of course, a limit both to area and population; but this does not completely explain the divergences. Why, for example, should the Godavari village be just about double that of Chingleput both in extent and number of inhabitants? If one village headman is sufficient for nearly 1,300 persons in Coimbatore, why should one be required for every 537 in Tanjore, where the population is less scattered? To answer these questions fully, it would be necessary to examine in detail the circumstances of each district. Speaking generally, however, it is probably correct to say that in the case of *rājādvāri* tracts the tendency is towards villages of a large size, but this is modified by the existence in some districts, notably Chingleput and Tanjore, of *mirāsī* or joint villages, the amalgamation of which would cause inconvenience. In poor districts again, the villages would necessarily be larger than in rich districts, as the amount of the fund for the payment of village servants is too small in the former to support a large staff of headmen, accountants, &c. Lastly, in *semi-dāri* tracts, which form a considerable proportion of the area of the presidency, the size of the village depends upon long-standing custom, unaffected by rules for the revision of village establishments. The tendency in such tracts is towards small villages, and this, of course, reduces the district average.

42. Turning now to the feudatory states we find the Travancore town or village has no less than 10,030 inhabitants, and an area of 26.39 square miles. For villages alone the average population is 9,919. The smallest village has a population of 716, and no less than 98 per cent. of the total towns and villages have over 2,000 inhabitants. In this state, as in the British district of Malabar, there are no regular villages, and the above high averages are due to the fact that the *Proverty*, which is a comparatively large revenue division, has been taken as the equivalent of the ordinary village. In 1881 the *Kara*, the average area of which was in that year only 2 square miles, was adopted as the lowest unit, and it is to be regretted that the same principle was not adhered to on this occasion. The writer of the report on the census of 1881 says, "the *Kara* is our village or social unit and corresponds to the English parish;" and it is not clear why the *Kara* was abandoned and the *Proverty* substituted for it.

In Cochin, the *désam* has been taken as the equivalent of a village, and the average population of each is 1,030, while the average area is 2.07 square miles. The total number of *désams* is 653, which is one less than in 1881.

In the other feudatory states the village is of the ordinary type. In Pudukkōta the number of villages has fallen from 596 to 306. I have no information as to the cause of this reduction, but it is probably due to the same process of amalgamation which has taken place in British districts. The average population is 1,164, which is higher than the average in the neighbouring districts of Trichinopoly and Tanjore. The mean area is 3.59 square miles.

Banganapalle has 63 and Sandūr 24 villages. These numbers each differ by one from the corresponding figures for 1881. The average population is 563 in Banganapalle and 475 in Sandūr; the average area is 4.05 square miles in the former and 6.71 in the latter state. The villages are both smaller and less populous than those of the British districts of Kurnool and Bellary, in which these two states are situated.

I give below statements showing (1) the proportion of towns and villages in each group and (2) the percentage of the population living in towns and villages of each size:—

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Distribution of 1,000 towns and villages according to number of inhabitants.

STATE.	1-199.	200-499.	500-999.	1,000-1,999.	2,000-2,999.	3,000-4,999.	5,000 & over.	Total.
Travancore ...	...	...	8.9	15.7	27.5	109.8	843.1	1,000.0
Cochin ...	91.2	291.8	270.5	220.4	60.8	42.5	22.8	1,000.0
Pudukōta ...	58.6	175.9	338.8	273.6	101.0	39.1	13.0	1,000.0
Banganapalle ...	349.2	317.5	174.6	127.0	...	31.7	...	1,000.0
Sandūr ...	625.0	125.0	125.0	83.3	...	41.7	...	1,000.0
Total ...	88.0	205.8	227.2	185.9	59.7	54.3	179.1	1,000.0

Number of people in each group out of 1,000 of the population.

STATE.	1-199.	200-499.	500-999.	1,000-1,999.	2,000-2,999.	3,000-4,999.	5,000 & over.	Total.
Travancore ...	...	...	0.3	2.2	7.2	47.4	942.9	1,000.0
Cochin ...	10.4	90.5	177.6	231.4	131.6	151.8	156.7	1,000.0
Pudukōta ...	5.6	51.8	206.8	306.2	199.7	128.9	...	1,000.0
Banganapalle ...	86.4	200.8	205.0	319.3	...	188.5	101.5	1,000.0
Sandūr ...	89.2	84.8	205.9	238.4	...	381.7	...	1,000.0
Total ...	3.7	25.1	58.3	91.2	50.8	78.4	692.5	1,000.0

Towns.

Towns.

43. The number of towns in the presidency is 214; the number in 1881 was 226.

44. It is difficult to find any good definition of a town. Writing on this subject in the report on the census of 1881, Mr.

Definition of Town.

Melver said: "Town is ordinarily a word of some-what vague application, and there was some difference of opinion as to its appropriate definition. At the former enumeration any village over 5,000 inhabitants was returned as a town. This line, if further limited by other conditions, might have afforded a fairly good definition, although it would have excluded some places that are clearly towns. By itself the 5,000 inhabitants standard was a poor one. It included, for instance, 186 amsams or townships in Malabar, each on an average occupying 15 square miles, and many of them not containing a single street. Size, compactness and certain architectural, commercial, or industrial features are all considerations which would go to make up the definition of a town for census purposes. In the present census the following definition was adopted:—'A town is a collection of numerous dwellings near each other within a limited area, having shops which provide a continual open market for the supply of goods, especially of manufactured goods.' This was fairly elastic, and for the rest the selection was left very much to the District officers. The result is probably about the best attainable. The definition has, perhaps, been interpreted a little too liberally in Tinnevely and a little too rigidly in Malabar. But it is known that in the former the people do congregate in closely-built villages much more than in any other district, and that the reverse is the case in Malabar and Canara."

In 1891 a somewhat more precise test was attempted. I quote from my circular on the subject:—

"The Census Commissioner has laid down the following general principles to aid District officers in determining what is a town in the census acceptance of the term:—

"(a) The population should not be less than 5,000, residing in houses more or less contiguous, not in scattered collections, as hamlets, &c.

"(b) The place, if not containing the above population, should be under the operation of some Municipal Act.

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"(c) Though containing the above population, it should not be merely a large village, but should have some distinctly urban character, as that of a market town.

"(d) Where a town is made up of several distinct portions, each should be shown separately as municipal limits, suburbs, and cantonment, respectively.

"The notes on each district, which are appended to volume I of the report on 'the census of 1881, show what places were treated as towns on the last occasion. I also beg to invite your attention to para. 720 of that volume."

It will be seen that no place with a population of less than 5,000 was to be regarded as a town unless it possessed a municipal constitution. As a consequence of this, the number of towns with less than 5,000 inhabitants fell from 43 in 1881 to 14 in 1891. None even of these fourteen towns fulfilled the strict letter of the conditions laid down, but, on various grounds, they were considered to have an urban character.

45. One of the most marked characteristics of the village is the close bond

which unites all the inhabitants. The relations which exist between them existed between their fathers, their grandfathers and their ancestors many generations back; the farmer holds the land his fathers held, and his ploughmen are the descendants of theirs. The simple wants of the villagers are supplied by the village artisans; their implements of husbandry by the blacksmith and carpenter, their cooking utensils by the potter and coppersmith, their few clothes by the weaver. They are shaved by the village barber, whose wife acts as midwife, and washed for by the village *dhobi*, who also is bound to supply torches for processions. All these persons are paid fixed annual fees of grain and money, or else they are remunerated by special grants of land, or more frequently the two methods are combined. The payment of these fees is compulsory, and in return each artisan does all the work of his trade that is required of him. In such a community there is no possibility of the intrusion of outsiders, for there is no room for them. If a ryot has to pay the potter, whether he takes his pots or not, he will not be likely to transfer his custom to a stranger who demands payment for each article, even though the latter's wares are superior. Nor in such a village is there any place for shops. The weaver, it is true, has to some extent been supplemented by the dealer in Manchester cloths, but these are purchased at the nearest market, which also supplies the few articles that make up the needs of the typical villager. Now as a village increases in size, the hereditary artisans are no longer capable of supplying all the requirements of their crafts and strangers are necessarily introduced. These come, as a rule, from large towns and bring with them the town custom of trade as opposed to the village custom of service. It does not take long for the former to oust the latter, and the social constitution of the community is radically changed. New influences and new powers arise: the village headman is overshadowed by the comparatively wealthy shopkeeper; the accountant finds himself matched against a sharp vakil; the old schoolmaster's ancient methods are replaced by those inspired by an Education department; perhaps a dispensary is started with a hospital assistant, who pronounces contemptuously on the practices of the *Vaidyan* and *Hakim*. The effect of the introduction of these revolutionary elements is soon evident. The authority of the old heads of the community is weakened, the depressed classes begin to assert a freedom and independence hitherto undreamt of, and their masters in their turn cease to take the same paternal interest in them. Here also service gives way to trade. The bonds weaken, and we have a body of people whose relations to each other are very different from those found in the old village community. The transition from one stage to the other is sometimes slow, sometimes rapid. The construction of a large public work or the opening of a railway station will frequently bring about the change in a year or two. On the other hand, a village may increase by ordinary natural growth up to a comparatively large population without any interference with the manner of life of its inhabitants. Speaking generally, it is probably safe to take a group of 2,000 inhabitants as the utmost

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limit, which the old type of village can reach without any change in its character. But even when this change has taken place more or less completely, it is doubtful whether the village has a sufficient claim to be regarded as a town, for the population remains largely agricultural. The distinction between urban and rural population is, in Great Britain, chiefly of value from the point of view of sanitation and vital statistics. In India, however, the conditions of town life are very different from what they are in England. We have here no factory chimneys vitiating the atmosphere with their smoke, no close work-rooms, and few, if any, unhealthy trades. The weavers put up their looms in the street, the coppersmith works in an open shed, and it is the same with all other artisans. Of large manufactures there are practically none; here and there a spinning or weaving mill may be met with, and there are one or two sugar refineries, but the whole number of large works is so small that any one acquainted with the presidency could mention them all without difficulty. Nor do the houses, except in the large towns, differ much from those in villages. They are more numerous and somewhat more closely packed, but they are only one-storied buildings and almost as readily accessible to the purifying rays of the Indian sun and the cleansing breezes of the monsoons as the cottage of the villager. The more frequent presence of the cess-pool is compensated for by the rare occurrence of the manure heap. There is, perhaps, greater risk from epidemic diseases, but, taking all the circumstances into consideration, the sanitary position of the ordinary town in the Madras Presidency is but little inferior to that of the village. The inferiority, of course, becomes greater with the size of the town, and from the point of view that I am now considering, I should fix the lower population limit of towns at about 15,000 inhabitants. From the politico-social stand-point, however, a much lower limit is required, and I am inclined to think that a population of 2,000 would not be too low for this. It must be clearly understood that I refer in both cases to populations occupying a single site and not to an aggregate of a number of detached hamlets. A Madras village of 5,000 inhabitants may be made up of five separate hamlets, each with a population of about 1,000, and the conclusion as to the correct classification can, therefore, be drawn from the population figures given in the census returns. It may, on the occasion of the next enumeration, be desirable to compile the total population of each village-site, but this would add to the cost of the operations, and it would greatly increase the work of District officers, who alone would be able to decide whether a hamlet was to be regarded as detached or forming part of the parent village.

Population of towns.

46. In the following table the number of towns in each population group is compared with the number of 1881:—

Towns containing between		1891.	1881.
400,000 and 500,000 inhabitants	...	1	1
75,000 and 100,000 do.	...	2	1
50,000 and 75,000 do.	...	6	7
25,000 and 50,000 do.	...	27	21
15,000 and 20,000 do.	...	14	13
10,000 and 15,000 do.	...	42	30
5,000 and 10,000 do.	...	106	110
4,000 and 5,000 do.	...	7	21
3,000 and 4,000 do.	...	5	17
2,000 and 3,000 do.	...	2	3
1,000 and 2,000 do.	...	...	2
Total	...	214	226

I give below for purposes of comparison the number of large towns, i.e., those with a population of 50,000 and upwards, in each of the principal provinces of India. Chap. I.
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Provinces.	Number of large towns.	Population of large towns.	
		Total.	Average.
Madras	9	991,728	110,192
Bombay	8	1,518,552	189,819
Bengal	10	1,452,900	145,290
North-West Provinces and Oudh.	18	2,038,076	113,226
Punjab	10	989,767	98,977
Central Provinces	2	201,495	100,747
Burma	3	424,924	141,641

With the exception of the capital, the Madras Presidency does not contain a single town with a population over 100,000, and in this respect presents a marked contrast to the North-West Provinces, Bombay and Burma.

47. The nine towns, with a population of over 50,000, were the same in both years. Their populations in 1891 and 1881 and the increase between the two enumerations are given below:—

Name of Town.	1891.	1881.	Variation.	
			Population.	Per cent.
Madras	452,518	405,848	+ 46,670	+ 11.50
Trichinopoly	90,609	84,449	+ 6,160	+ 7.29
Madura	87,428	76,847	+ 10,581	+ 13.77
Salem	67,710	59,631	+ 8,079	+ 13.55
Calicut	66,078	57,085	+ 8,993	+ 15.75
Bellary	59,467	53,460	+ 6,007	+ 11.24
Negapatam	59,221	53,776	+ 5,445	+ 10.13
Tanjore	54,390	54,745	- 355	- 0.65
Kumbakonam	54,307	50,008	+ 4,299	+ 8.40

In the case of Calicut, Negapatam and Kumbakonam the rate of increase is greater than that of the districts in which these towns are situated. In the case of Trichinopoly, Madura, Salem and Bellary it is less, but the abnormally high rate of increase in the three districts, of which the last three towns are the capitals, is due to causes which affect chiefly the rural population, and it does not follow, nor do I think it is the case, that the lower rate of advance in the towns is due to emigration from town to country. With the exception of Kumbakonam and Tanjore, the rate of increase is about what might be expected from the normal growth of population. The advance between 1871 and 1881 was in some cases greater, but these figures cannot be used with confidence, as it is doubtful whether the areas of the towns were the same at both enumerations.

Kumbakonam has increased by only 8.40 per cent.; the rate of increase however for the Tanjore district, in which it is situated, is only 4.56 per cent, so it has at least made more progress than the surrounding rural tracts. It is clear,

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therefore, that the town has not lost by migration to the country villages of the district, though there has probably been a not inconsiderable migration, especially among the educated classes, to other parts of the presidency.

Tanjore contains 355 fewer inhabitants than in 1881. In 1871 it was the third largest city in the province: in 1881 it stood fifth, and now it has dropped to eighth, and has even ceased to be the largest town in the district to which it gives its name. Between 1871 and 1881 the rate of increase was 4.9 per cent. What the population was in the days of its prime, I have not been able to ascertain even approximately, but there can be little doubt that it has declined since the death of the last Rajah in 1855. The existence of a court, even though a titular one, exerts a considerable influence upon the population of the town in which it is held, as it attracts numbers of all kinds of professions, and in India still larger numbers of Brahmans. The dispersion of this miscellaneous multitude must have commenced with the death of the Rajah, and it has evidently been more rapid since the demise of the princess, his successor. The line of the Tanjore family has now come to an end, and with it has gone a large crowd who depended on its patronage or its alms.

Towns with 20,000 and 50,000 inhabitants.

48. The following are the 27 towns with populations between 20,000 and 50,000:—

Name of Town.	Population in 1871.	Population in 1881.	Increase.	
			Population.	Per cent.
Cuddalore	47,355	43,545	3,810	8.75
Coimbatore	46,363	33,967	7,416	19.03
Vellore	44,925	40,956	3,967	9.69
Conjeeveram	42,548	37,275	5,273	14.15
Mangalore	40,922	32,099	8,823	27.49
Cocanada	40,553	30,441	10,112	33.22
Pálghát	39,431	Not known.		
Bandar or Masulipatam	38,809	36,415	2,394	6.57
Vizagapatam	34,487	30,291	4,196	13.85
Vizianagaram	30,881	Not known.		
Ellore	29,382	25,992	4,290	17.10
Nellore	29,336	27,505	1,831	6.66
Rajahmundry	28,397	24,555	3,842	15.65
Cannanore	27,418	26,386	1,032	3.91
Tellicherry	27,196	24,531	2,615	10.64
Adóni	26,243	22,441	3,802	16.94
Berhampore	25,653	23,599	2,054	8.70
Tuticorin	25,107	16,261	8,826	54.21
Tinnevely	24,765	23,221	1,547	6.66
Kurnool	24,376	20,329	4,047	19.91
Máyavaram	23,765	23,044	721	3.13
Guntúr	23,359	19,646	3,713	18.90
Srirangam	21,632	19,773	1,859	9.40
Scivilliputtúr	21,448	18,256	3,192	17.48
Bezváda	20,741	10,908	10,643	105.40
Mannárgudi	20,395	19,403	986	5.08
Dindigul	20,203	Not known.		

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The growth of some of these towns in the decade between the two enumerations has been very rapid. The population of Bezváda has more than doubled itself. Tuticorin has increased by 54 per cent., Cocanada by 33 per cent., and Mangalore by 27 per cent. In the case of Bezváda, however, the actual increase in numbers is only 10,643, and this is easily accounted for by the growth of business and, therefore, of population produced by the Bellary-Kistna and Nizam's State Railways. Bezváda is the terminus of both these lines, and it is also at the head of the Kistna system of canals, which provide water communication not only with the Kistna delta but with that of Godávári too. The population of Bezváda has also no doubt been further increased by the commencement of the East Coast Railway, which starts from that place.

The population of Tuticorin increased by 54.10 per cent. between 1871 and 1881, and in the past ten years it has grown by 54.21 per cent. The town now contains two and a half times the population enumerated in 1871, but the absolute numbers are not very large, the addition during the last decade being only 8,826 people. Tuticorin is the southern terminus of the South Indian Railway, and its port has a growing trade.

The increase in the size of Cocanada is more important, because the population figures are somewhat greater. In 1871 its inhabitants numbered 17,839, and they had risen to 28,856 in 1881, but whether the limits of the town were the same in both cases is not known. Between 1881 and 1891 the municipal boundaries were slightly extended, and the population in the former year residing within the present limits of the town was 30,441. This has now advanced to 40,553. The rapid strides which this important seaport has made bid fair to be continued in the future, as it will soon have a railway. Hitherto its only communication with the interior has been by means of road and canal, and the latter is not open throughout the year.

Mangalore, the capital of South Canara, is the port not only of that district but also of a part of Mysore and Coorg, from which places it receives coffee for shipment to Europe. The Basel Lutheran Mission has established weaving factories and tile works, and, in the latter industry the missionaries have had local imitators. These works have no doubt attracted population from the rural districts, and the high rate of increase (27.49 per cent.) must be attributed at least in part to this cause. The increase between 1871 and 1881 was rather over 8 per cent. The town which has the next highest proportional increase is Kurnool, where the population has risen by 19.91 per cent. The increase for the district as a whole, however, is 20.52 per cent., and the town has merely shared in the general prosperity.

This explanation is applicable also to Guntúr, Ellore, Rajahmundry, Coimbatore and Conjeeveram.

In Vizagapatam the rate of increase (13.85 per cent.) is higher than that of the district in which it is situated, where the population has advanced by only 8.55 per cent.

In the following towns the rate of increase is comparatively low:—

Cannanore	3.91	Tinnevely	6.66
Máyavaram	3.13	Nellore	6.66
Mannárgudi	5.08	Srirangam	9.40
Bandar or Masulipatam	6.57	Vellore	9.69

In the case of Cannanore the low rate is ascribed to the withdrawal of the European regiment which was formerly stationed there. Mávaram and Mannárgudi are both in Tanjore, and have been affected by the same causes as have depressed the rate of increase throughout the whole of that district; these will be examined fully in the next chapter. Bandar, or as it is more generally called Masulipatam, is evidently a declining port, for between 1871 and 1881 its population decreased, and even now the increase is less than would be caused by the normal growth of the population, the increment in the district as a whole being at the rate of 19.83 per cent. The opening of the railways at Bezváda has possibly drawn off a considerable number of its people.

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Nellore is another town which decreased between 1871 and 1881, and its population is still lower than it was twenty years ago. The rate of increase for the Nellore district is 19.96 per cent., so it is clear that the town has been losing many of its inhabitants, notwithstanding the extension of a railway to it. I have not been able to ascertain any satisfactory reason for this.

The rate of increase in Tinnevely is about half that of the district, and it now contains fewer inhabitants than Tuticorin. The large increase in the latter town is possibly due to migrations from Tinnevely, which is less favourably situated for purposes of trade.

Srirangam suffers in the same way from the near neighbourhood of Trichinopoly, but the increase is not so low as to warrant the conclusion that there has been any considerable migration from the one to the other.

The case of Vellore only calls for remark because the increase in the North Arcot district, in which it is the largest town, was as high as 19.62 per cent., and it was therefore to be expected that the population of the town would have risen by more than 9.69 per cent., especially as it has always had a very large trade in grain which must have been developed since the famine of 1877. Vellore has hitherto laboured under the disadvantage of being four miles from its railway station. This want has now been supplied by the construction of a metre gauge railway, which connects it with the South Indian system on the one side and that of the Southern Mahratta Company on the other. This may, however, affect the prosperity of Vellore adversely, for Kátpádi, situated as it is at the junction of the new line with the broad gauge system of the Madras Railway Company, will no doubt, in time, prove a formidable rival as a centre of trade. At present Kátpádi is a mere village, but its site is capable of almost indefinite extension.

Towns with 15,000 to 20,000 inhabitants.

49. The fourteen towns in the next group, containing a population between 15,000 and 20,000, are given below:—

Towns.	1891.	1881.	Variation.	
			Population.	Per cent.
Chicacole	18,241	16,355	+ 1,886	+ 11.53
Parlákimedi	16,390	10,812	+ 5,578	+ 58.59
Anekápallo	17,010	Not known.	...	...
Cuddapah	17,379	18,982	- 1,603	- 8.44
Gudiyátam	18,747	Not known.	...	...
Tiruppattár	16,499	14,278	+ 2,221	+ 15.56
Vádiyambádi	15,938	15,426	+ 512	+ 2.67
Ootacamund	15,053	12,335	+ 2,718	+ 22.03
Chidambaram	18,640	19,837	- 1,197	- 6.03
Palni	16,940	Not known.	...	...
Periyakulam	16,363	15,446	- 917	- 5.50
Palameottah	18,686	17,964	+ 722	+ 4.02
Kulasákarapatnam	15,924	14,972	+ 952	+ 6.36
Cochin	17,601	15,698	+ 1,903	+ 12.12

The rate of increase in Parlákimedi is very high, but the population of this town, as given in the 1881 returns, is of doubtful accuracy. According to the census of 1871, Parlákimedi contained 15,958 inhabitants, in 1881 its population fell to 10,812—a decline of 32.25 per cent., and by 1891 it had risen to 16,390. These violent variations are very improbable and indicate some defect in the

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enumeration. Ootacamund is a steadily increasing town. Between 1871 and 1881 the population rose by 23.57 per cent., and in the last decade it has again increased by 22.03 per cent. With the opening of the Nilgiri railway there is every prospect that the growth of this popular hill station will be maintained. The decrease of 8.44 per cent. in the population of Cuddapah is ascribed to the unhealthiness of the town in 1889 and 1890, but this explanation cannot be accepted as adequate. Regarding Chidambaram the Collector writes as follows:—

“I have noticed in the town a curiously low birth-rate and a high death-rate, which I cannot explain. The town has already used up all available space, and there is little room for expansion. It is also subject to visitations of cholera.”

50. The following are the 42 towns with a population between 10,000 and 15,000:—

Towns.	1891.	1881.	Variation.	
			Population.	Per cent.
Bobbili	14,468	14,948	- 480	- 3.18
Sálar	12,917	11,850	+ 1,067	+ 8.96
Pálkonda	10,367	9,531	+ 836	+ 8.77
Párvatipur	10,053	9,933	+ 120	+ 1.21
Pittápuram	13,731	11,593	+ 2,138	+ 18.44
Peddápuram	13,658	11,278	+ 2,380	+ 21.10
Sámarlakóta	13,409	10,204	+ 3,205	+ 31.41
Dowláshveram	10,492	8,002	+ 2,490	+ 31.12
Chirala	10,581	9,061	+ 1,520	+ 16.78
Ongole	10,960	9,200	+ 1,760	+ 18.04
Nandyál	10,737	8,907	+ 1,830	+ 20.55
Hospet	12,878	10,219	+ 2,659	+ 26.02
Kampti	10,529	9,823	+ 706	+ 7.13
Ráyardrug	10,392	8,766	+ 1,626	+ 18.43
Tádpatri	10,283	8,585	+ 1,698	+ 19.78
St. Thomas' Mount	13,137	15,013	- 1,876	- 12.50
Tirupati	14,242	13,232	+ 1,010	+ 7.63
Kálahasti	11,764	9,935	+ 1,829	+ 18.31
Arcot	10,928	10,718	+ 210	+ 1.96
Ambúr	10,566	10,390	+ 176	+ 1.69
Wallájab	10,485	10,367	+ 118	+ 1.14
Sédamangalam	12,354	12,575	- 221	- 1.79
Rásipur	10,539	7,969	+ 2,570	+ 32.25
Erode	12,330	9,864	+ 2,466	+ 25.00
Karúr	10,750	9,205	+ 1,545	+ 16.78
Porto Novo	14,061	12,688	+ 1,373	+ 10.82
Tiruvannámalai	12,165	9,592	+ 2,573	+ 26.72
Poraiyár	14,468	13,333	+ 1,135	+ 8.51
Védarániyam	13,438	11,990	+ 1,448	+ 12.08
Tiruválúr	12,934	12,379	+ 555	+ 4.48
Adirámpatnam	10,748	9,755	+ 993	+ 10.18
Ramnád	13,619	10,519	+ 3,100	+ 29.47
Arrupakkóttai	12,673	10,831	+ 1,842	+ 17.01
Kálakkarai	12,396	11,887	+ 509	+ 4.28
Paramakudi	10,001	9,287	+ 714	+ 7.69
Virudupatti	14,075	10,732	+ 3,343	+ 31.16
Viravanallár	13,951	12,318	+ 1,633	+ 13.26
Rájapálayam	13,301	12,021	+ 1,280	+ 10.65
Tenkási	12,361	11,987	+ 374	+ 3.12
Sivakási	12,184	10,833	+ 1,351	+ 12.47
Káyalpatnam	11,465	11,806	- 341	- 2.98
Kalladakkurichi	11,096	10,936	+ 160	+ 1.46

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The proportional increase is in many cases large, but the actual numbers are small, and it is not proposed to notice the figures in detail. It should, however, be explained that the decrease in the population of St. Thomas' Mount is due to a reduction in the military force stationed there, and to the removal of a large survey office which had its head-quarters in this town in 1881.

51. The towns with a population below 10,000 are given in Tables IV and V,

Towns with less than 10,000 inhabitants.

and it is not necessary to reproduce them here. There are, however, two cases which require mention. In 1881 the town of Panruti in the district of South Arcot was shown as having a population of 20,172, whereas its population is now given as 8,956. This great difference is due to the fact that the town in 1881 consisted of Panruti and five other revenue villages, whereas, at the recent census, Panruti village alone was taken as the town by the district authorities. It was assumed that the change had been made after due consideration of the principles laid down by the Census Commissioner, but, when it was too late to make any correction in the tables, the officiating Collector informed me that, in his opinion,

Towns.	Population given in census tables.	Population including omitted villages.
Panruti	8,956	22,563
Tiruvannamalai	12,153	12,456
Viluppuram	7,950	10,394
Tirukkóilúr	5,732	7,600

the villages included in the town in 1881 should have been included in 1891 also. It was further discovered that a similar mistake had been made with regard to three other towns in the same district—Viluppuram, Tirukkóilúr and Tiruvannamalai. I give in the margin the population of each of these towns as they are actually shown in the tables and as they

would have been if the inhabitants of the omitted villages and hamlets had been included, so far as this can be ascertained.

The other instance to which I referred above is Saidápet in the Chingleput district. In 1881 the population of this town was 10,290; in 1891 it was only 5,702; but while the latter represents the population of Saidápet village alone, the former includes that of a neighbouring village also. This village, however, did not really form part of the town of Saidápet, and it was, therefore, properly excluded. There are many other cases in which similar changes have been made, but they are not, as a rule, of such magnitude as this.

52. Of the 214 towns, 56 are municipal towns, the local administration of which is vested in a Municipal Council.

Municipal Towns and Cantonments.

Name of Town.	Population.
Tirupati	14,242
Eróde	12,330
Ongole	10,800
Karúr	10,750
Wallajah	10,485
Bimlipatam	9,827
Anantapur	6,994
Coonoor	6,049

Of the 50 towns with a population of 15,000 and upwards, all, except Sríviliputtúr and Kulasekarapatnam, both in the Tinnevely district, are under the Municipal Act. The remaining eight municipalities are given in the margin. There are nine military cantonments in the presidency, six of which are also municipal towns. These are Berhampore, Vizianagaram, Bellary, Trichinopoly, Cannanore and Mangalore; the

other three are Sámarlakóta, St. Thomas' Mount, and Wellington near Coonoor.

53. The total urban population of the presidency is 3,406,105 or 9.56

Growth of urban population.

per cent. of the whole population. In 1881 it was 3,011,674, or 9.67 per cent. of the total. The increase is thus 13.10 per cent., while the increase of the rural population is 15.85. I do not, however, consider that these figures indicate the existence of a tendency to migration from town to country, for the great increase in the rural population in some districts is due to special causes connected with the famine of 1877, which affected that class of the people much more than the dwellers in towns. Moreover, the comparison is affected to some slight extent by the difference in the definitions of a town in 1881 and 1891, which has resulted in the rejection on the present

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occasion of a number of places which would have been treated as towns ten years ago. But, although there has not, in my opinion, been any migration from town to country, it is clear that there has been but little movement in the contrary direction, taking the presidency as a whole.

54. The following table gives the ratio between urban and rural population for each district:—

Ratio between urban and rural population.

District.	Percentage on total population.	
	Urban.	Rural.
Ganjam	5.27	94.73
Visagapatam	7.50	92.50
Godávári	11.06	88.94
Kistna	7.24	92.76
Nellore	5.57	94.43
Cuddapah	6.53	93.47
Kurnool	4.99	95.01
Bellary	16.51	83.49
Anantapur	9.77	90.23
Madras	100.00	...
Chingleput	8.28	91.72
North Arcot	7.23	92.77
Salem	8.64	91.36
Coimbatore	5.50	94.50
Nilgiris	21.14	78.86
South Arcot	6.10	93.90
Tanjore	14.87	85.13
Trichinopoly	9.77	90.23
Madura	9.23	90.77
Tinnevely	17.20	82.80
Malabar	7.30	92.70
South Canara	4.56	95.44
TOTAL	9.56	90.44
Agency...		
Ganjam	...	100.00
Visagapatam	...	100.00
Godávári	...	100.00
TOTAL, AGENCY TRACTS	...	100.00
Total, British Territory	9.56	90.44

The district in which the proportion of urban population is highest is Nilgiris, where 21.14 per cent. of the inhabitants live in towns. This district differs so widely from others, both in the smallness of its area and population and in its situation that its figures are of little use for comparative purposes. The district with the next highest ratio of town-folk is Tinnevely, with 17.20 per cent. of this class, and it is followed by Bellary with 16.51 per cent. Tanjore and the Godávári are the only other districts in which the percentage exceeds 16. In the former district with its dense population we should naturally expect to find the people congregating in towns to a greater extent than elsewhere, but, as a matter of fact, Tinnevely, where the specific population is only 356 to the square mile, has a greater number of towns as well as a higher proportion of urban population, and in Bellary, with only 151 persons to the square mile, the population is more urban than in Tanjore. The differences between the various districts in this respect are indeed very puzzling, and to fully account for them, it would be necessary to enter upon a detailed analysis of the circumstances of each which would be out of place in a report of this nature.

55. In the occupation table the population following each calling in towns and rural tracts is shown separately, and in Chapter XI the different means of subsistence of the two classes will be discussed, but it may be mentioned here that, while 65.84 per cent. of the country population depend upon agriculture for a livelihood, the proportion of townspeople who follow this calling is only 19.67 per cent. From this it follows that a relatively high urban population indicates a relatively large number of persons who earn their living by occupations other than agriculture.

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56. Table V gives particulars of the religions of the town population, and from it and Table VI the following percentages are obtained :—

Religion.	Percentage of persons of each main religion.		Percentage of urban and rural population following each main religion.	
	In towns.	In villages.	Urban.	Rural.
Hindus	8.59	91.41	80.73	90.81
Muslimans	21.55	79.45	14.24	5.48
Christians	19.48	80.52	4.95	2.16
Others	0.51	99.49	0.08	1.55

From this we see that Musalmans are most partial to town life, and Christians come next, but notwithstanding the fact that a relatively low proportion of Hindus live in towns, yet no less than four-fifths of the urban population are followers of this religion. The proportions differ very much in different towns. In Kurnool and Cannanore, as well as in some smaller towns, the Musalmans outnumber the Hindus. In the Kurnool district 46 per cent. of the urban population are Musalmans, in Malabar 37 per cent. are of that religion, and in Cuddapah 29 per cent.

57. Another point in respect to which there is a distinction between town and country people is the proportion of the sexes. In towns there are 1,047 females to 1,000 males, while in villages there are only 1,020. It is worthy of note that in several of the districts in which, taking the population as a whole, the males are in excess of females, the relations are reversed in towns, but on the other hand in Malabar and Canara, although, on the total population, the females outnumber the males, yet in towns the former sex is in a minority. In Mangalore the number of females to 1,000 males is 916 and in Calicut 915.

58. There were 5.60 persons to each occupied house in towns as against 5.28 persons in villages. It is not possible to give the density of the population in towns, as trustworthy statistics of the urban area are not obtainable.

59. There were 14 towns in the feudatory states, viz., 8 in Travancore, 5 in Cochin and 1 in Pudukóta. Banganapalle and Sandúr contain no towns. The largest of the eight towns in Travancore is Trevandrum, which has a population of 27,897, Alleppey coming next with 22,768 inhabitants, and then Quilon with 15,375. In Cochin the town of largest size is Mattanchéri, which contains 17,254 people. Trichúr stands second with a population of 12,945. Pudukóta is the only town in the state of that name; it contains 16,885 inhabitants, or 9.76 per cent. more than in 1881. In the case of the Travancore and Cochin towns no comparison with the 1881 figures is possible, as no record has been preserved of the limits assigned to the various towns at the time of that enumeration. The following table gives statistics regarding the urban population of each state :—

State.	Average population of a town.	Percentage of urban on total population.	Number of persons per occupied house.		Percentage of town population following each main religion.			
			In towns.	In villages.	Hindus.	Muslimans	Christians.	Others.
Travancore	13,462	4.21	5.12	4.94	72.77	12.44	14.79	...
Cochin	10,109	6.99	5.94	5.49	58.92	10.40	28.91	1.77
Pudukóta	16,885	4.53	5.14	5.36	90.92	6.60	2.39	...

It will be observed that in Pudukóta the number of persons to an occupied house is greater in villages than in the town. The other figures do not call for any remark.

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60. Before leaving the subject of towns and villages, a few words are necessary regarding the villages with large populations. There are 208 villages with between 5,000 and 10,000 inhabitants, and these are distributed as shown in the following table. The 1881 figures are added for the purpose of comparison :—

Villages with from 5,000 to 10,000 inhabitants.

District.	1891.	1881.
Ganjam	2	...
Vizagapatam	11	6
Godáviri	15	18
Kistna	5	2
Nellore	8	3
Cuddapah	3	6
Kurnool	3	1
Bellary	3	1
Anantapur	...	...
Chingleput	7	2
North Arcot	6	9
Salem	2	1
Coimbatore	36	15
Nágiris	1	1
South Arcot	8	1
Tanjore	4	3
Trichinopoly	3	2
Madura	32	24
Tinnevely	18	6
Malabar	33	195
South Canara	8	5
Agency	...	...
{ Ganjam	...	...
{ Vizagapatam	1	...
{ Godáviri	...	...
Total	208	290

I have not asked for any information regarding the circumstances of these villages, for, as the term village is merely a unit of area and not of population groups, it follows that there may be many villages of this size which have no title to the name of town. There are, however, four villages with a population between 10,000 and 15,000, two with a population between 15,000 and 20,000, and one with a population over 20,000, and regarding these some explanation is necessary. The last mentioned is the village of Mylar in the Bellary district, which is the scene of an annual festival attended by upwards of 50,000 persons. In 1891 the festival fell on the 25th February, the day preceding the census, and about 20,000 of the pilgrims were still in the village on the evening of the 26th. This large temporary addition to its population gives the village of Mylar the appearance of a large town.

Of the two villages with a population between 15,000 and 20,000, one, Kotuváyúr, is in Malabar, and the Collector reports that its inhabitants live in scattered homesteads and not in a single collection of houses. The other one, together with the four villages containing between 10,000 and 15,000 inhabitants are situated in the Madura district, and as they consist of a number of detached hamlets, they

Chap. I. have properly been treated as villages, notwithstanding their large population.
para. 61. The explanation of the existence of so many large villages in Travancore has been given above. The figures for the other feudatory states call for no remark.

Houses.

61. The definition of a house is almost as difficult as that of a town. In 1881 the following was the definition: "House is the dwelling place of one or more families with their servants, having a separate principal entrance from the public way."

For the census of 1891 this was slightly modified and the definition taken as follows: "A house is the dwelling place of one or more families with their resident servants, having a separate principal entrance from the common way." The object of substituting 'common way' for 'public way' was to provide for houses, found in parts of Northern India, which are situated in a sort of courtyard to which the public is not allowed access. Under the old definition such buildings would form only one house, as they had not a separate entrance from the public way. Houses of this kind are of rare occurrence in Madras, and the change in the definition affected the classification of buildings very slightly in this presidency. We may, therefore, compare the statistics of houses for 1881 and 1891 with the certainty that practically the same thing was meant by a house on both occasions.

62. The total number of occupied houses is 6,709,990. The absolute increase is 1,065,657 and the relative increase 18.88 per cent. The rate of increase in the case of houses is greater than that of population, and there are now, on an average, 5.31 persons to a house as compared with 5.46 in 1881. The average district divergence from the presidency average is 0.60 or 11.30 per cent. The district average varies from 7.53 in Madras to 4.30 in the Ganjam agency. The circumstances of both Madras City and the agency tracts are, however, of a special nature, and, if these be left out of account, the maximum and minimum are, respectively, 6.88 in South Arcot and 4.54 in Tinnevely. South Arcot had the highest house-density in 1881 also, but in that year the lowest average was found in Cuddapah, where there were 4.5 persons to a house. Comparing the figures with those of 1881, it is found that the average has risen in Nellore, Cuddapah, Bellary, Coimbatore, Malabar and the agency tracts of Ganjam and Godavari, and fallen in all other districts except South Canara and the Vizagapatam agency tracts, where it remains the same. In Madras the fall is from 8.4 to 7.53, but this is the one district in which the change in the definition may have led to an appreciable increase in the number of houses, so that the real difference is probably somewhat less than this. In the case of South Arcot the average has fallen from 7.4 to 6.88, and this satisfactory decline requires no correction for change in the definition.

The average number of occupants of each inhabited house in other provinces of India is given in the marginal table; the omission of Bengal is due to the fact that complete figures for that province have not been received. It has already been stated in the section on towns that in the Madras Presidency the number of persons per house is greater in urban than in rural areas. This is what would be expected, but except in Bombay, the reverse is the case in the provinces given above.

63. The average area to a house or the areality is 13.47 acres. The proximity, or the distance from house to house on the assumption of uniform distribution, is 274 yards. There is great divergence in the statistics for the various districts, the extremes, if we exclude Madras, being found in Tanjore and the Agency Tracts. In the former there are only 5.84 acres per house and the distance between each dwelling is 181 yards.

Province.	Average number of persons per house.
Madras	6.31
Punjab	6.67
North-West Provinces and Oudh	5.70
Bombay	5.59
Burma	5.40
Central Provinces	5.00
Assam	4.89

64. The bulk of the houses of the Madras Presidency may be broadly divided into two classes—the house of the labourer and that of the ryot. The former is built of mud and has a roof of palmyra thatch; in front there is a verandah or *pyal*, also of mud, and the interior of the house consists of a single room. The ryot's house is also usually of mud, but the roof is thatched with bamboo and grass, or sometimes it is tiled. In the Ceded Districts the terraced roof is more common than either thatch or tiles. The *pyal* is raised higher above the ground, and the interior of the house consists of four or five rooms opening on to a verandah, which surrounds a small courtyard. One of these rooms is used as a kitchen, one for storing grain and other property, and the others as sleeping apartments. The cattle are not unfrequently tethered in the courtyard at night. The houses of the artisans, small traders, and men of moderate means generally, are of this class, and even those of the richer folk are much the same in form, though the rooms may be somewhat larger and more numerous and provided, perhaps, with carved doors and lintels, while the courtyard may contain a well and only too frequently a cess-pool in close proximity. On the other hand the dwellings of the poorer members of the middle class approach more nearly to the type of the labourer's hut. Houses of more than one storey are seldom found in villages and are rare even in towns.

65. In 1871 the nature of the roof of every building in the presidency was recorded, and these statistics were tabulated so as to show the number of tiled, terraced and thatched houses respectively. This information was not obtained in 1881, but since it is of some value as an indication of the prosperity of the people, it was decided on the present occasion to note the character of the roof in the building lists that were prepared as a preliminary to the house-numbering. As this particular was not entered in the enumeration books, it was not possible, without considerable difficulty, to compile separate statistics for occupied and unoccupied houses. In the building lists, however, dwelling houses were distinguished from other buildings, and the annexed statement gives particulars for each of these two classes. In 1871 statistics were prepared for all occupied and unoccupied buildings separately, and the dwelling houses of the present returns have been compared with the occupied buildings of 1871. The number of dwelling houses will, of course, always exceed the number of occupied houses, but the proportions with each class of roof will differ but little. Such difference as exists will be against the figures of 1891, for the proportion of good houses left unoccupied will be much lower than in the case of inferior buildings. I should add that these returns were compiled by the revenue establishments except in Salem, where the ordinary staff was said to be unable to do the work. The returns for the agency tracts were defective, but not more so than in 1871.

To appreciate correctly the value of these statistics, it must be remembered that a tiled house nearly always denotes prosperity, but, on the other hand, affluence is frequently found under a thatched or terraced roof. On the west coast, indeed, tiles were reserved until quite lately for temples and the houses of Brahmins. No Nayar, however wealthy, dared to violate this custom, and we therefore find the highest percentage of thatched houses in Malabar and South Canara. Again in the Deccan districts we have the lowest percentage of thatched houses, for there the flat mud-roof is customary, and it is found over the houses of poor and rich alike.

Percentage of each kind of house.	1891.	1871.
Tiled	9.39	7.18
Terraced	8.89	7.84
Thatched	81.72	84.98

Turning now to the statistics we find that the percentage of thatched houses has fallen from 84.98 to 81.72 since 1871. For all buildings, occupied and unoccupied, dwelling houses and others, the proportion of thatched roofs was 84.65 per cent. in 1871 and 79.93 per cent. in 1891. The improvement shown by these figures is perhaps not very great, but it is satisfactory to find it in all districts except Madras and Chingleput. The increase of tiled buildings in the Nilgiris is particularly noticeable, but it will not be surprising to those acquainted with the district. There is now hardly a single Badaga village in which at least half the houses are not tiled.

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District.	TILED.			TERRACED.			THATCHED.			TOTAL.			PERCENTAGE OF THATCHED HOUSES TO TOTAL HOUSES.	
	Houses.	Other Buildings.	Total.	Houses.	Other Buildings.	Total.	Houses.	Other Buildings.	Total.	Houses.	Other Buildings.	Total.	1891.	1871.
Agency and Non-agency.	8,819	1,826	10,645	10,885	1,233	12,118	379,905	10,105	390,010	399,609	13,164	412,773	96-07	97-0
Chingleput	15,280	2,282	17,571	59,168	1,280	60,407	383,431	9,638	389,559	460,888	6,149	467,037	83-84	90-6
Chingleput	40,291	3,730	44,021	510	1,760	3,270	388,142	9,412	394,554	425,943	14,902	440,845	90-42	94-7
Chingleput	44,702	5,353	50,055	38,972	4,926	43,898	277,718	6,322	284,040	361,392	16,601	377,993	78-85	83-8
Chingleput	16,961	2,160	22,121	5,769	3,530	9,299	263,910	7,528	270,438	288,640	13,218	301,858	91-09	94-3
Chingleput	2,608	312	3,010	56,264	7,560	63,824	234,639	5,963	240,602	293,601	13,895	307,496	79-92	85-6
Chingleput	20	16	36	101,773	10,684	112,457	89,449	1,682	91,131	191,242	12,962	203,604	46-77	53-4
Chingleput	543	108	651	154,764	13,403	168,167	37,377	618	37,995	192,684	14,129	206,813	27-69	30-2
Chingleput	18	23	41	98,518	8,122	106,640	59,823	825	60,648	158,369	8,970	167,339	24-25	20-8
Chingleput	37,088	16,551	53,639	6,709	5,287	11,996	14,007	3,254	17,271	57,754	25,102	82,856	75-68	73-0
Chingleput	43,467	4,190	47,657	1,853	5,308	7,141	140,634	9,556	150,490	186,234	19,054	205,288	81-38	86-7
Chingleput	57,236	5,746	62,982	10,290	7,880	18,000	294,559	6,815	301,774	362,425	20,391	382,816	86-38	89-8
Chingleput	57,097	6,671	63,768	2,853	4,870	8,487	339,332	7,719	347,051	444,172	18,080	462,202	76-40	86-7
Chingleput	101,223	5,441	106,664	3,617	4,870	8,487	339,332	7,719	347,051	444,172	18,080	462,202	81-10	86-1
Chingleput	13,521	705	14,226	207	71	338	14,406	261	14,667	28,194	1,037	29,231	89-56	90-6
Chingleput	30,982	5,437	36,419	2,382	5,529	7,911	236,109	11,089	247,198	319,473	22,055	341,528	74-95	75-8
Chingleput	102,951	14,862	117,813	5,622	8,939	14,561	324,795	12,651	337,446	433,368	36,452	469,820	91-10	92-8
Chingleput	10,870	1,846	12,716	12,546	6,543	19,089	239,665	15,189	254,854	263,081	28,528	283,609	89-79	93-9
Chingleput	29,763	8,110	37,873	25,845	10,480	36,325	489,156	26,473	515,629	544,775	40,003	584,838	89-62	94-0
Chingleput	24,241	8,113	32,354	25,368	10,433	35,791	428,001	22,137	450,138	477,690	35,703	513,393	97-37	98-0
Chingleput	12,953	9,896	22,849	1	87	88	480,475	48,371	528,846	493,429	58,354	551,783	97-22	98-8
Chingleput	5,438	3,114	8,552	2	12	14	180,214	28,122	218,336	195,654	31,248	226,902	81-72	85-0
TOTAL	659,063	96,492	755,555	693,388	123,291	816,679	5,735,465	260,477	6,005,942	7,019,416	470,260	7,489,676	84-77	96-6
Chingleput	3,864	615	4,479	429	1,186	1,615	77,717	2,022	79,739	88,010	3,823	91,833	25-82	Do.
Chingleput	103	27	130	6,644	902	7,546	2,289	136	2,425	2,720	458	3,178	36-54	Do.

The City of Madras.

66. The population of the City of Madras is 452,518. It is the third largest town in India, Calcutta and Bombay alone having a greater number of inhabitants, while in the United Kingdom there are only four larger cities, viz., London, Liverpool, Glasgow and Manchester.

In the following statement are given statistics of area, population and houses for each division of the city:—

Madras City.

DIVISION.	Area in acres.	Popula- tion, 1891.	Number of occupied houses.	POPULATION.			HOUSES.			INCREASE IN POPULATION.		
				Density per square mile.	Area in acres.	Proxi- mity in yards.	Number of persons per occupied house.	Density per square mile.	Area in acres.	Proxi- mity in yards.	Absolute.	Per cent.
I	3,491	71,509	13,310	13,110	0-049	16-52	5-37	2,440-10	0-262	38-29	7,087	11-19
II	599	84,385	7,621	90,161	0-007	6-30	11-07	8,142-64	0-079	20-96	5,128	6-61
III	773	59,457	6,144	49,227	0-013	8-52	9-68	5,086-88	0-126	26-52	6,365	12-14
IV	2,524	15,250	2,647	3,867	0-166	30-41	5-76	671-19	0-954	73-00	4,021	37-26
V	1,848	76,052	9,911	26,338	0-024	11-65	7-67	3,432-38	0-186	32-28	8,903	13-36
VI	2,711	21,590	3,457	5,097	0-126	26-49	6-25	816-11	0-784	66-20	2,369	12-46
VII	1,347	81,288	10,283	38,622	0-017	9-62	7-91	4,885-76	0-131	27-06	9,555	13-44
VIII	4,174	41,109	6,345	6,303	0-102	23-82	6-48	972-88	0-658	60-63	2,629	6-93
Miscellaneous.	1,878	385	385	...	...	...	...	...	...	...	618	8-74

At the time of the census of 1891 the area of the city was 29 square miles, but subsequently certain lands, measuring 1-71 square miles, which had been transferred from the Chingleput district in 1877, were retransferred, and in the statistics given in the above table, the area is taken as 27-29 square miles. The number of people to the square mile is 16,580, the number to the acre 25-91. The density varies greatly in different divisions. The second and third are much the most populous. The density of the former is 141 persons to the acre, that of the latter 77, but in reality the third division is nearly as crowded as the second, and the appearance of greater room is due to the inclusion in the former of the area of Fort Saint George and its glacis. The least dense quarter is the fourth division; and the sixth division, in which the majority of the European residents are found, comes next. It is indeed only in Black Town, which coincides more or less with the second and third divisions, that we find any signs of the great density which is characteristic of large cities, and even there the specific population is decidedly less than in European towns with their houses of many storeys. The other quarters of Madras are not so densely populated as many towns in the interior of the presidency, and have a suburban rather than an urban character.

The healthiness of the different divisions has no relation to the density. Thus the first and fourth divisions have the highest rates of mortality, though the latter stands last and the former fifth in the density table. The explanation is to be sought in the different classes of people and the different kinds of houses found in each division, and this is the reason why the death-rate is lower in the sixth division than elsewhere, for, as already stated, this is the quarter in which the large European houses are most numerous. The subjoined marginal table gives the number of deaths per mille in 1890 for each division, the ratios being calculated on the population given by the census; a detailed examination of the mortality rates of the city will be found in the second section of Chapter IV.

DIVISION.	Deaths per mille per annum.
I	44-2
II	37-8
III	37-9
IV	42-0
V	37-7
VI	31-3
VII	36-1
VIII	35-4

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There are 7.53 persons per occupied house, and in this particular again we find great divergences. In the second division the average number of occupants is 11.07; in the third it is 9.68, while in the first it is only 5.37 and in the fourth only 5.76, yet, as we have already seen, it is in these two divisions in which the mortality is highest. The fact is that the term 'house' covers a wide range as regards the class of buildings, and these averages, taken alone, are not of much value for a place like Madras.

In respect both of density of population and house-room, Madras is in a better position than either Bombay or Calcutta. The specific population in those two cities is more than double that of Madras, and the average number of occupants to a house for the whole of Bombay is much greater than the *maximum* divisional average in the southern capital. Yet

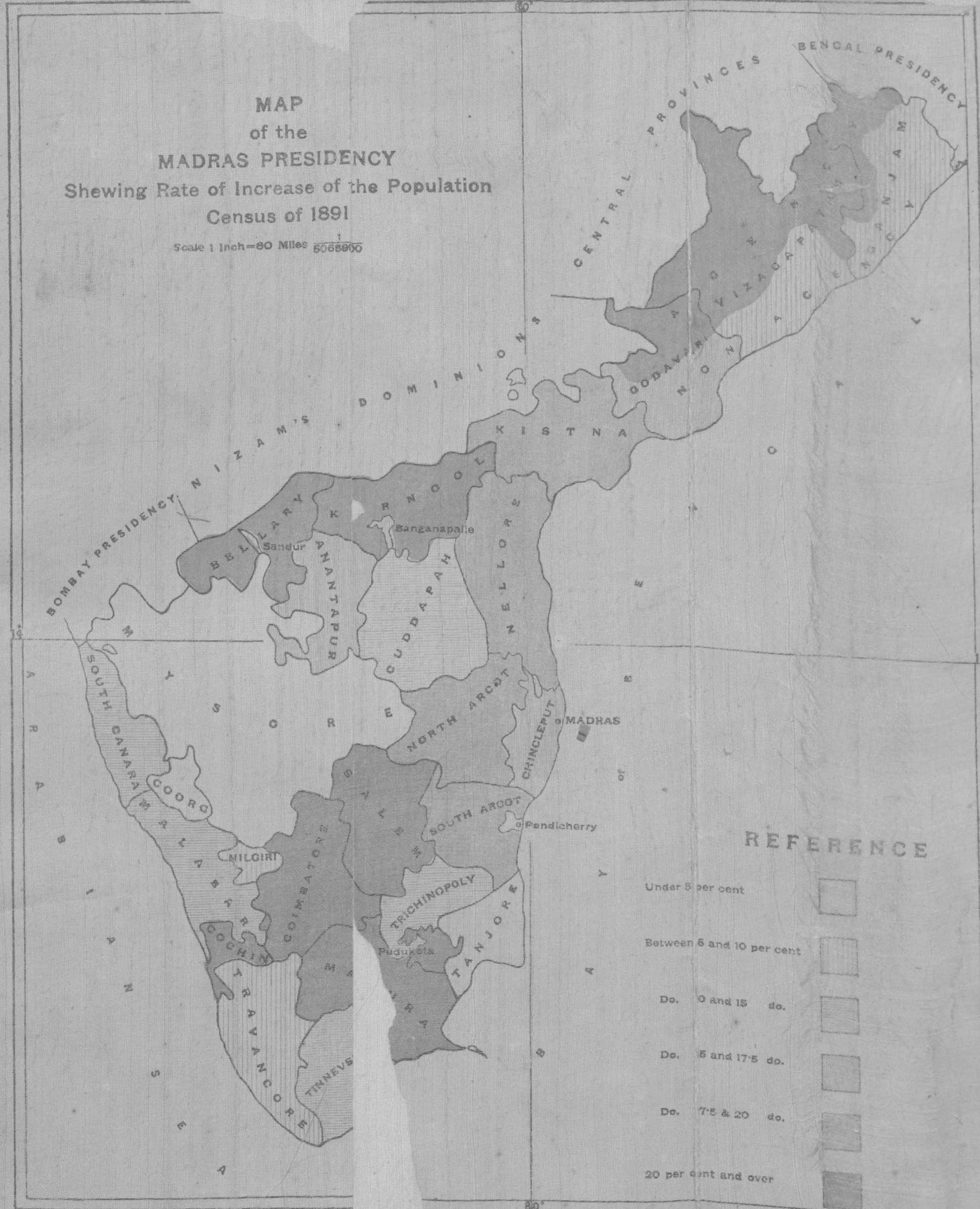
Number of persons.		
Cities.	Per acre.	Per house.
Madras	25.91	7.53
Calcutta	53.25	10.09
Bombay	58.36	14.43

notwithstanding this advantage in sanitary conditions, the death-rate is apparently much higher in Madras than in either of the sister presidency towns. I say 'apparently,' because the death-rate depends upon the degree of success attained in registering deaths, and the rate of mortality in Bombay and Calcutta is much lower than Mr. Hardy's life tables would lead us to expect. It has, however, been shown above that much reliance should not be placed on averages of this kind for the purpose of comparing different localities, and it may be that both Calcutta and Bombay are in reality in a better sanitary position than Madras, though the difference is certainly not so great as the rates of mortality imply.

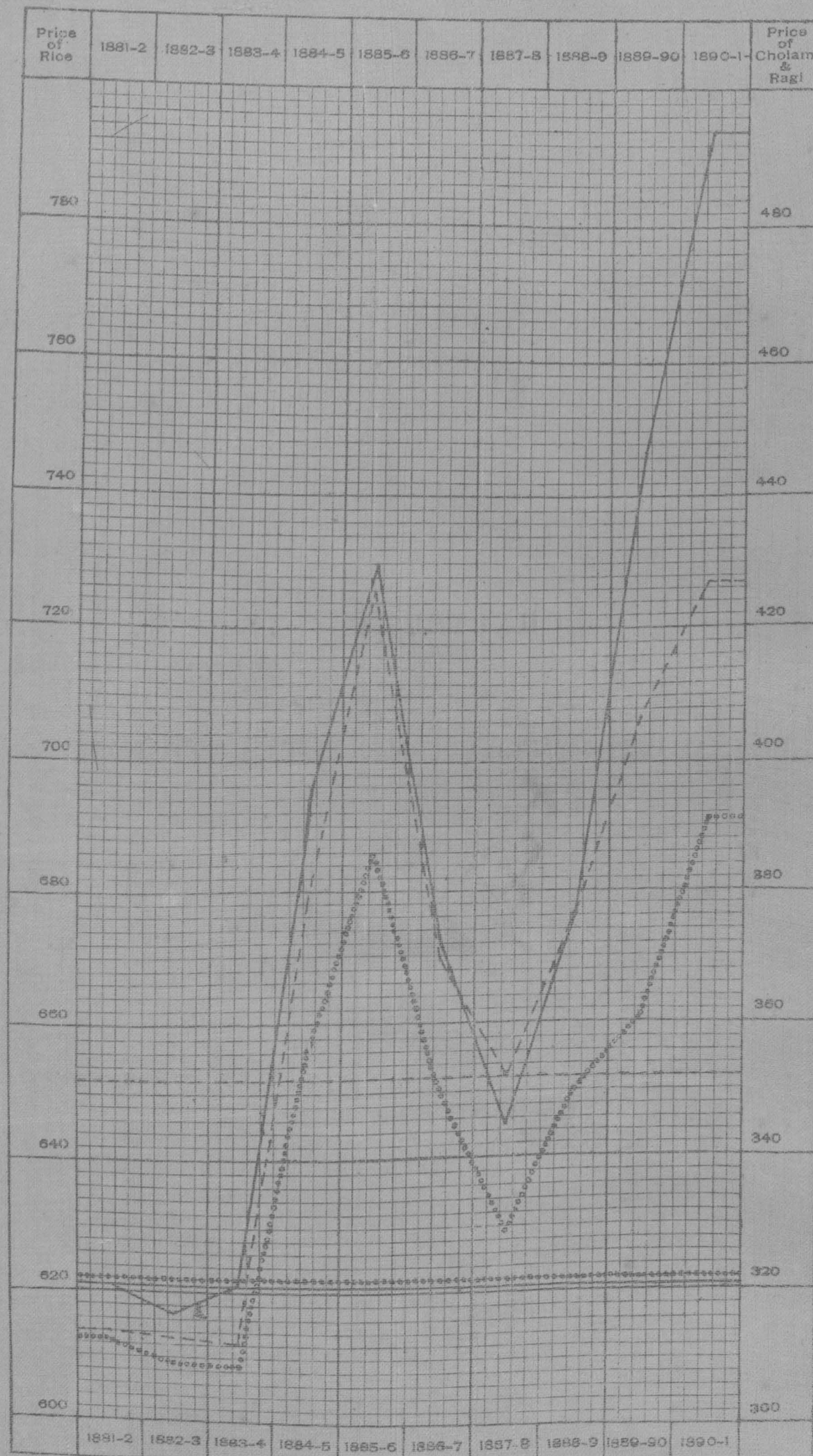
The population of Madras has increased by 11.50 per cent. since the census of 1881. The rate of growth is highest in the fourth division, where the population is least crowded, and lowest in the second division, where the density is greatest. The absolute increase is highest in the seventh division and lowest in the sixth.

MAP of the MADRAS PRESIDENCY Shewing Rate of Increase of the Population Census of 1891

Scale 1 Inch = 80 Miles $\frac{1}{6068960}$



PRICE OF FOOD GRAINS 1881-1891
In Rupees per 10,000 Govt. Seers of 20 Tolas each



REFERENCE
Rice (2nd Sort) ———
Cholam ———
Ragi ———

N. B. The horizontal lines for each grain show the average price between 1870 & 1874

CHAPTER II.

THE MOVEMENT OF THE POPULATION.

Statement showing the variation per cent. in Population and Inhabited Houses.

DISTRICT OR STATE.	PERCENTAGE VARIATION OF THE POPULATION					EMIGRATION AND IMMIGRATION BY SEA				Percentage variation in population, including net loss or gain by Emigration and Immigration.	Percentage variation in inhabited houses, 1881-91.
	Between 1871 and 1881.					Between 18th February 1881 and 28th February 1891.					
	Total.	Males.	Females.	Total.	Males.	Females.	Emigrants.	Immigrants.	Net loss or gain.		
Ganjam *	...	...	...	5.98	3.64	8.24	110,982	40,856	- 70,066	10.65	13.32
Vijayapattam *	...	...	...	8.55	7.07	10.03	69,645	71,896	+ 2,250	8.42	11.57
Godavari *	...	...	...	15.22	14.68	15.75	...	...	...	15.22	22.52
Kistna	...	5.84	7.42	13.83	20.21	13.46	...	...	...	19.63	26.45
Nellore	...	13.01	9.54	19.96	19.71	30.21	...	...	...	19.98	17.49
Cuddapah	...	17.80	16.22	13.47	13.40	13.55	...	...	...	13.47	9.28
Kurnool	...	25.80	25.09	20.62	20.43	20.62	...	...	...	20.52	20.70
Bellary	...	20.34	21.33	24.74	25.33	24.14	...	...	...	24.74	21.04
Anantapur	...	19.07	17.38	17.29	17.68	16.70	...	...	...	17.20	16.80
Madras	...	2.09	2.82	11.50	12.81	10.22	...	...	...	15.76	24.47
Chingleput	...	4.60	3.60	15.85	16.27	15.43	...	...	...	15.65	24.77
North Arcot	...	9.80	11.10	19.62	20.29	18.95	...	...	...	19.62	22.75
Salem	...	13.63	20.20	23.21	24.07	22.39	...	...	...	23.21	29.35
Coimbatore	...	5.99	7.78	20.94	21.67	20.25	...	...	...	20.94	19.62
Nilgiris	...	32.51	30.73	9.63	10.16	8.95	...	...	...	9.63	18.81
South Arcot	...	3.36	2.24	19.12	19.07	19.16	...	...	...	19.18	23.83
Tanjore	...	7.94	7.61	8.25	3.82	5.24	...	...	...	9.12	8.45
Tuticopoly	...	1.23	0.29	19.38	19.15	12.81	...	...	...	12.98	19.70
Madras	...	4.32	7.14	20.28	21.19	13.41	...	...	...	23.78	28.15
Tinnevely	...	0.34	1.27	13.73	18.03	12.45	...	...	...	10.85	15.07
Malabar	...	5.71	4.83	12.16	11.93	12.38	...	...	...	12.16	11.63
South Canara	...	4.48	2.72	19.06	8.20	11.83	...	...	...	10.06	10.69
TOTAL	...	...	...	15.28	15.20	15.36	980,114	732,488	- 227,625	18.05	18.66
Agency	Ganjam *	...	...	23.09	20.51	25.98	...	...	...	23.09	20.79
	Vijayapattam *	...	...	24.41	28.67	25.19	...	...	...	24.41	24.46
	Godavari *	...	...	33.22	25.16	25.27	...	...	...	25.22	31.40
TOTAL AGENCY TRACTS	...	...	...	24.17	23.04	25.38	...	...	...	24.17	24.12
Total, British Territory	...	...	...	15.53	15.48	15.63	980,114	732,488	- 227,636	13.32	18.88
Feudatories,...	Travancore	...	...	3.88	4.11	3.67	...	...	...	...	4.78
	Cochin	...	...	0.14	0.09	0.09	...	...	...	...	4.47
	Pudukkottai	...	...	4.60	6.00	3.31	...	...	...	...	19.23
	Bangalore	...	...	31.97	33.29	24.58	...	...	...	...	18.25
	Sandur	...	...	29.77	30.48	16.42	...	...	...	...	11.27
Total, Feudatories	...	...	...	1.69	1.68	1.69	...	...	...	...	6.06

* In the case of these districts, an exact 1871 population of the 1881 limits is not known.

CHAPTER II.

THE MOVEMENT OF THE POPULATION.

(TABLE II.)

67. Before proceeding to discuss the statistics relating to the movement of the population, that is, its increase or decrease, it is desirable to examine briefly the causes which affect the movement and to ascertain the extent to which these causes have been present during the interval between the last two enumerations.

The population at the end of any period is equal to the population at the beginning of the period, plus the gain by births and immigration, minus the loss by deaths and emigration. The number of births in any given population is affected in a varying degree by the facility with which the means of subsistence can be obtained. If the conditions of life are favourable, marriages and births are numerous; if, on the other hand, there is difficulty in obtaining those articles which are required to maintain the standard of comfort, the marriage and birth-rates both decline. Even in a country like India where marriage is a religious duty among the higher classes and a not unprofitable investment among the lower, the marriage-rate is considerably affected by variations in the prosperity of the seasons, for every marriage involves a comparatively large initial expenditure, which is not easily met in periods of agricultural depression. Among certain castes, it is true, every girl must be married, in the European sense of the word, as soon as she reaches the age of puberty, but these classes constitute only a small minority of the people, and they are not so quickly affected by a bad harvest, as the bulk of the population among whom no such rule obtains.

The number of deaths is increased by the outbreak of epidemics of disease, such as cholera and small-pox, and also by scarcity of food. When the scarcity amounts to a famine, the death-rate goes up enormously: its rise is not due so much to deaths from actual starvation as to the higher mortality from ordinary diseases resulting from the debilitated state of the people.

68. Now in the period 1881-1891, we have had in the Madras Presidency a number of good agricultural seasons, with a rainfall generally above the average and a fair immunity from widespread epidemics. There have been local scarcities, one of which, in the Ganjam district, was serious enough to be called a famine; and there have been local outbreaks of cholera, but taking the presidency as a whole, the conditions have been fairly representative of ordinary Indian existence. Prices of food grains have, it is true, risen steadily since the official year 1883-84, but this is not so disadvantageous to the growth of population as at first sight appears. To the ryots it is a distinct gain, for they hold at a money rent fixed for thirty years, and any rise in the money value of their surplus produce is, therefore, so much clear profit. The agricultural labourer and the village artisan are, as a rule, paid in grain, so that a rise in price is of advantage to them also, as they can obtain for the surplus a larger sum of money. Of course if the rise in price is due to a reduction in supplies, these advantages diminish and may disappear altogether, as there is less surplus to sell; but harvests have on the whole been favourable during the decade we are now discussing and the advance in prices must be ascribed to other causes than reduced supply. This is not the place to discuss the nature of these causes, but one of the most important is the opening up of means of communication which, by equalising prices, has brought advantage to farmer and consumer alike.

69. Another factor in the rate of growth of a population is the age of the people. If a community consists entirely of men and women at the reproductive ages, it is obvious that the

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growth from new births will be relatively greater than in a community made up of people of all ages; and the paucity of old people in such a community produces a corresponding reduction in the number of deaths, as there are not so many old people to die. In the Madras population of 1881 there were relatively few children and old people, and this fact is of importance in considering the rate of increase since the census of that year.

70. Turning now to emigration, I have obtained from Collectors of maritime districts statistics of the emigration and immigration by sea between the 18th February 1881 and the 26th February 1891:—

Number of emigrants by sea between the census of 1881 and that of 1891	980,114
Number of immigrants by sea in the same period	752,488
Net loss of population	227,626

The statistics are not complete, but the omissions are not large, and the total may be accepted as sufficiently accurate. There is a certain amount of migration by land, but this is chiefly confined to movements of the people living in border districts, and though the birth-place statistics show an appreciable net loss, I think it is safer to leave it out of account.

71. The increase in the population of each district of the presidency since 1881 is shown in Table II. The limits of several districts have been changed since the census of 1881, and the old Bellary district has been divided into two—Bellary and Anantapur. The 1881 population given in Table II is in every case the population enumerated in 1881 within the present limits. The annexed statement shows the transfers of population from district to district since 1881. The district of Anantapur was constituted before the preparation of the report on the census of 1881, and its population was there shown separately, although in the tables it was included in that of Bellary. This district is, therefore, shown in the statement, as its present limits differ from those to which the population given in the report refers.

Table showing the loss and gain of Population by transfer since the census of 1881.

District.	Population given in the Census Report of 1881.			Subsequent additions.			Subsequent deductions.			Population in 1881 of present limits.		
	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
Ganjam	1,503,301	739,423	763,878	...	...	...	* 3,473	1,816	1,657	1,490,828	737,607	762,221
Vizagapatam	1,790,468	897,416	893,052	...	...	...	† 293	161	132	1,790,175	896,955	893,220
Godavari	1,780,613	883,526	897,087	...	...	...	‡ 80,777	44,329	42,448	1,699,836	839,197	854,639
Bellary	726,275	368,650	357,625	...	...	...	§ 4,691	2,423	2,268	721,584	366,227	355,357
Anantapur	599,889	305,452	294,437	¶ 4,691	2,423	2,268	...	...	...	604,580	307,875	296,705
North Arcot	1,817,814	907,354	910,460	¶¶ 5,059	2,591	2,468	...	...	...	1,822,873	909,945	912,928
Salem	1,599,595	778,483	821,112	...	...	...	*** 6,680	3,414	3,266	1,592,915	775,069	817,846
South Arcot	1,814,738	905,771	908,967	†† 1,621	823	798	§§ 636	325	311	1,815,723	906,269	909,454
Tanjore	2,139,883	1,026,528	1,103,855	††† 636	325	311	...	...	...	2,131,019	1,026,853	1,104,166
Agency.												
Ganjam	240,303	130,042	116,261	§§§ 3,368	1,765	1,603	...	...	...	240,671	131,807	117,864
Vizagapatam	694,673	357,784	336,889	¶¶¶ 293	161	132	§§§ 3,857	1,931	1,876	691,109	355,914	335,195
Godavari	10,899	5,443	5,456	¶¶¶ 90,634	46,310	44,324	...	...	...	101,533	51,753	49,780

* 3,368 transferred to Ganjam agency and 105 to Bengal.

† Transferred to Godavari agency.

‡ Additions from Bellary.

§ Transferred to North and South Arcot.

¶ Additions from South Arcot.

¶¶ Additions from Vizagapatam non-agency.

† Transferred to Vizagapatam agency.

§ Transferred to Anantapur.

‡ Additions from Salem.

¶ Additions from Salem.

¶¶ Additions from Ganjam non-agency.

¶¶¶ Additions from Godavari non-agency and Vizagapatam agency.

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The only transfer beyond the presidency was from Ganjam to the Puri district of Bengal; the population involved was 51 males and 54 females. In 1881 the feudatory states of Banganapalle and Sandur were treated as parts of the British districts of Kurnool and Bellary respectively, and the figures for these states erroneously appear in the tables and report among the population of the British portion of the Madras Presidency. This error has been rectified in the present tables. The total population of British territory in 1881 as given in Table II is, therefore, less than the figure given in the 1881 report and tables by the populations of these two states and the 105 persons transferred to Bengal.

72. The interval between the census of 1881 and that of 1891 was 10·024

years, and the returns show that the population of the Madras Presidency has increased in that period by 4,803,327 persons, or 15·58 per cent. The males have increased by 2,361,994 or 15·48 per cent., and the females by 2,441,333 or 15·68 per cent. The annual rate of increase is 1·455 per cent., and, if this rate were maintained, the population would double itself in slightly under 48 years. The rate of increase is high in comparison with that of other provinces and states in India, except Burma, Bombay and the Mysore state. There is no doubt, too, that it is above the normal rate of increase for the Madras Presidency, for an examination of the details shows that the rate has been largely affected by the famine of 1877-78. I give below statistics of the movement of the population in the districts which were classed as famine districts by Mr. McIver in the report on the census of 1881:—

Rate of increase in other provinces.	Per cent.
Madras	15·58
Bombay	14·40
Bengal	6·89
North-West Provinces and Oudh	6·24
Punjab	10·74
Central Provinces	9·61
Burma (Lower)	24·67
Mysore	18·09
England and Wales	11·65

Bombay and the Mysore state. There is no doubt, too, that it is above the normal rate of increase for the Madras Presidency, for an examination of the details shows that the rate has been largely affected by the famine of 1877-78. I give below statistics of the movement of the population in the districts which were classed as famine districts by Mr. McIver in the report on the census of 1881:—

Famine Districts.	Variation per cent. between		Number of persons per square mile in 1881.
	1871 and 1881.	1881 and 1891.	
Nellore	- 11·37	+ 19·96	139
Cuddapah	- 17·08	+ 13·47	129
Kurnool	- 25·80	+ 29·52	90
Bellary	- 20·34	+ 24·74	122
Anantapur	- 19·07	+ 17·20	114
North Arcot	- 9·89	+ 19·52	239
Salem	- 18·68	+ 23·31	212
Coimbatore	- 5·90	+ 20·94	211
Madura	- 4·32	+ 20·28	246
Total	- 12·91	+ 20·11	170
Total of non-famine districts	+ 7·19	+ 12·85	263

73. The effect of the famine was to kill off the young and the old more than the rest of the population and to further depress the proportion of children by the check which was given to births. Thus in the famine districts a high proportion of the population was at the reproductive ages during the ten years 1881-91, while the proportion of old people was comparatively low, and as already explained, this would lead to a large addition by new births, or rather the survivors of new births; and the loss by death at the higher ages would be relatively small. The following statement shows the number at each age-period in every 10,000 of the

Chap. II. population of famine and non-famine districts, excluding the agency tracts, para. 74. according to the census of 1881:—

Statement showing age distribution in 1881 of 10,000 persons of each sex in famine and non-famine districts.

Age.	Males.		Females.	
	Famine.	Non-famine.	Famine.	Non-famine.
0-4	1,062	1,363	1,100	1,404
5-9	1,336	1,396	1,363	1,348
10-14	1,395	1,270	1,328	1,071
15-19	872	876	752	828
20-24	877	782	1,036	935
25-29	845	815	898	863
30-34	967	845	996	885
35-39	624	569	507	475
40-44	675	634	685	644
45-49	327	330	291	289
50-54	407	422	473	475
55-59	156	177	144	157
60 & over	437	521	637	626
Total	10,000	10,000	10,000	10,000

In the famine districts, out of every 10,000 males, 3,313 were between the ages of 20 and 40 in 1881, while in the non-famine districts the number was only 3,011; and out of every 10,000 females there were 3,672 between the ages of 15 and 35 as against 3,511 in the non-famine districts. If we take the period 10-30 for females, which is perhaps a better one for the present purpose than 15-35, the disparity is even greater, the numbers being for famine districts 3,904 and for non-famine 3,697. Again in the case of the old people we find that there were in every 10,000 males of the population of famine tracts only 1,000 of 50 years of age and upwards in 1881, while in non-famine areas there were 1,120. The disparity is almost equally great in the case of females, the numbers being 1,154 in the famine and 1,258 in the non-famine areas. It is, I think, clear from these figures that the great relative growth of the population of the famine districts is largely due to the age-character of that population; but the variations in the district figures point to the existence of other causes as well, and it is not difficult to show that the comparatively low specific population of these districts has been favourable to expansion under the stimulus of a series of fairly good seasons. The greatest density in the famine area was found in Madura, where there were 246 persons to the square mile in 1881. The only non-famine districts which had less than 300 persons to the square mile in 1881 are Kistna, Nilgiris and South Canara, but in Kistna the rate of increase has been very high, while Nilgiris and South Canara contain such a large proportion of mountain and forest that the density is made to appear considerably lower than it really is.

74. Among the non-famine districts, Kistna and South Arcot show high rates of increase, the population of the former having advanced by 19.83 per cent. and that of the latter by 19.12 per cent. It is significant that Kistna is the only non-famine district, except the Nilgiris, in which there were less than 200 persons to the square mile in 1881. There was, therefore, plenty of room for expansion, and the growth of the population has probably been stimulated, to

High rate of increase in some non-famine districts.

some extent, by the opening of the Bellary-Kistna State Railway and the extension of the Nizam's line to Bezvada. It is noteworthy that in this district the proportion of people at the reproductive ages was considerably below, and the proportion at the higher ages considerably above, the average for the presidency, and the high rate of increase must therefore be due in part to immigration. This conclusion is supported by the birth-place statistics.

In South Arcot there were 348 persons to the square mile in 1881, but the extent of occupied land has increased by 17.42 per cent. in the last decade, so there was evidently plenty of room. This district has reaped great benefits, of late years by the growth of the trade in ground-nuts, which paying product is now largely cultivated. There is no evidence of any migration from other districts to South Arcot.

75. The Agency Tracts show a very high rate of increase (24.17 per cent.), but this may confidently be ascribed to better enumeration, as the arrangements for the census were more elaborate and detailed on the present than on previous occasions. This area is, however, very sparsely populated, and the real rate of increase is probably a high one.

76. The district which shows the lowest rate of increase is Tanjore, where the population has advanced by only 4.56 per cent. This district has, however, lost 97,237 persons by emigration by sea in the ten years, and if these be added to the increase shown by the census, the actual rate of growth is found to be 9.12 per cent. The density of Tanjore in 1881 was 575 persons to the square mile, and by 1891 it had risen to 601 persons to that area. It is natural, therefore, that the people should be forced to emigrate, and an examination of the figures for each taluk shows that the increase is highest in those three taluks in which the density is lowest. Thus Pattukkottai taluk has only 300 persons to the square mile, and the population has increased by 15.68 per cent.; in Tirutturaipundi taluk the density is 372 and the rate of increase 8.61 per cent.; in the Tanjore taluk the figures are, respectively, 595 per square mile and 6.55 per cent.

77. Ganjam is the only other district in which the rate of increase was very low, viz., 5.98 per cent. But if the net loss by emigration (70,086) be taken into account, the rate of growth becomes 10.65 per cent. The famine which was severely felt in parts of this district in 1888-89, produced a great rise in the death-rate, the increased mortality from cholera being especially high. The following table is taken from statements specially prepared in connection with the Ganjam famine, the year adopted being from 1st October to 30th September:—

Year.	Total deaths.	Deaths from cholera.
1883-84	16,827	85
1884-85	19,917	4,231
1885-86	16,223	427
1886-87	19,464	178
1887-88	19,478	562
1888-89	18,362	1,097
Average 1883-88	38,825	14,041

It is not pretended that the figures entered in the death registers represent the absolute number of deaths, and in the Ganjam district, with its many zemindari estates (where registration is said to be practically nil), the statistics are especially defective. On the other hand "more attention is paid to registration in famine seasons than in ordinary ones, and the effect of this must be to increase the apparent death-rates in years of distress so as to render any comparison of these rates with those of other years wholly misleading." If the census statistics of 1881 and 1891 were accurate, and if the rate of increase from 1881 to the time of the famine were known, it would be possible to state precisely the loss by death and

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diminished births caused by the famine; but unfortunately we have not this necessary information, grave doubts having been thrown on the accuracy of the census of 1881. Mr. Leman, who was Collector of the district at the time, reported that the general accuracy of the census was more than doubtful. Mr. G. Stokes, the Superintendent of Census Operations, stated that the census of Ganjam had been 'the worst done in the presidency.' Mr. Horsfall, the Collector at the time of the famine, also noted the same fact in his report on the famine. "The census of 1881," he wrote, "was very imperfectly carried out in outlying portions of the district and the population much understated. The fact was repeatedly noticed by divisional officers and the truth of it verified by my personally taking the census of several villages." Taking the figures, however, as they stand, and assuming that the Ganjam population would have grown at the same rate as the average of Vizagapatam, Godavari, Malabar and South Canara, which, with Ganjam, make the five districts taken by Mr. Hardy in 1881 for the purpose of calculating the normal growth of the population of the presidency, the Ganjam population in 1891 should have been 1,674,942. The actual population, including the net loss by emigration, was 1,659,563, so, according to this calculation, the total loss due to the famine was 15,379 persons, a number which is obviously too low. If we take the rate of growth of all the non-famine districts except Ganjam and the agency tracts, we find that the population of Ganjam on the 26th February 1891 should have been 1,693,576. This gives the deficiency as 39,013, which may, I think, be accepted as the minimum loss attributable to the famine and the accompanying cholera epidemic. This loss consists partly of an excess of deaths and partly of a falling off in the number of births, but how much of it should be ascribed to each cause it is impossible to say. That the birth-rate did decline is proved unmistakably by the age returns, which will be discussed in Chapter IV.

78. The population of Cuddapah, Kurnool, Bellary and Anantapur is still below what it was in 1871. The population of Salem in 1871 was 1,966,995, and in 1891 it appears as 1,962,591, but between 1881 and 1891 certain tracts were transferred to North and South Arcot. The population of this area in 1881 was 6,620, and in 1891 it must have been something more than this. If, therefore, we take the population in 1891 of the Salem district as it was constituted in 1871, there has been a slight increase.

79. In Volume III of the Report on the Census of 1881 Mr. Gabriel Stokes gives a calculation of the normal rate of growth of the Madras population. His work is based upon the quinquennial censuses between the years 1851 and 1867. From these he finds, by interpolation, the population on the 1st May 1859, the central date of the period, and by comparing this with the population on the 1st May 1851, he finds the rate of increase to be 0.783 per cent. per annum. If, however, the populations of 1851 and 1867 be taken as the basis of the calculation, the annual rate of increase becomes 1.186 per cent. Mr. Hardy took the populations of five districts, viz., Ganjam, Vizagapatam, Godavari, Malabar and South Canara, which had suffered least from the famine, and making adjustments to meet the diminished birth-rate due to the famine, he obtained 1.18 per cent. as the normal annual rate of increase for males—a result, it will be seen, practically identical with that deduced from a comparison of the populations of 1851 and 1867. For the period between 1871 and 1881 these five districts showed an annual increase of only 0.096 per cent., and combining this with the rate for a non-famine period, Mr. Hardy gets a rate of 0.795 per cent. per annum for famine and non-famine times together. Lastly, taking the population of the whole presidency, famine as well as non-famine districts, Mr. Hardy calculated the rate of increase to be about 5½ per mille. The numbers which this gentleman finally gives are as follow:—

	Annual increase per mille.
For the whole provinces over a long period	6
Five non-famine districts	8
Five non-famine periods	12

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So much of the calculation as is based on the population of the five districts requires to be corrected for an error in the comparison of the figures for 1881 with those for 1871 which appears to have been overlooked by Mr. Hardy. I refer to the fact that the limits of the districts of Ganjam, Vizagapatam and Malabar were larger in 1871 than in 1881, while the Godavari district was larger in 1881 than in 1871. The 1871 population of Ganjam should on this account have been reduced by 22,073. Precise figures for Vizagapatam are not obtainable, but the population of the area included in 1871 but excluded in 1881 cannot have been less than 200,000. The population in 1881 of that part of Malabar which had been transferred to the Nilgiris since 1871 was 25,440, and the population of the tracts newly added to the Godavari district was 35,656. Nor was any account taken of the loss by emigration, though, judging by the figures for the past ten years, this must have been considerable. The net result of these errors must have been to reduce the difference between the 1881 male population and that of 1871 by some 100,000. The total difference between the populations (males) adopted by Mr. Hardy is only 36,550, so that the omission to make the corrections here referred to seriously affects his results. It is, therefore, somewhat remarkable that in the calculations given below, based on a comparison of the populations of 1871, 1881 and 1891, I obtain rates of increase which differ but little from his.

80. The population of the non-famine districts (excluding Ganjam, which has suffered from famine, and the agency tracts, in which the enumeration in 1881 was probably defective) was 16,696,825 in 1881 and 18,828,104 in 1891. The net loss of these districts by emigration during the ten years amounts to 81,288, and if this be taken into account, the 1891 population becomes 18,909,392. The interval between the two enumerations was 10.024 years, so we get

$$10.024 \times \log(1 + r) = \log 18,909,392 - \log 16,696,825$$

$$r = .01249$$

Thus for a non-famine period the normal rate of growth will be 12.49 per mille per annum. The relative increase of the population since 1881 has no doubt been raised even in non-famine districts by the effect of the famine, but, on the other hand, these non-famine districts are much more densely populated than the famine tracts, and I do not think that 12 per mille per annum is at all too high a figure to take for the increase of the population of the whole presidency in normal times. As already stated the quinquennial censuses, according to my calculation, give a rate of increase of 11.86 per mille per annum for a period which was by no means entirely favourable to agricultural operations.

81. I will now compare the populations of non-famine districts as enumerated in 1871 and 1891. Owing to the impossibility of ascertaining the actual limits of the Ganjam and Vizagapatam districts in 1871, I reject the populations of those districts and of the agency tracts attached to them. The taluks of Bhadrachalam and Rikapalle in the Godavari agency tracts did not form part of the Madras Presidency in 1871, so their population must be deducted. As the bulk of the remainder of the present agency area of this district was formed out of the ordinary or regulation district since 1871, I include it in the non-famine tracts. There have been minor transfers of territory from famine to non-famine districts and vice versa, but these are insignificant in their net result. The census of 1871 was defective as regards the enumeration of the floating population, the total omission being estimated by Mr. McIver at 501,329, and on the assumption that the omissions were equally distributed over all districts, the number omitted in the districts taken for comparison would be 225,837. The net loss owing to emigration by sea from these districts between the 18th February 1881 and the 26th February 1891 was 83,638. I have no statistics of the emigration from and immigration into these districts between the 15th November 1871 and the 17th February 1881, but assuming that it was at about the same rate as in the next ten years, the total net loss by emigration between the census of 1871 and that of 1891 may be safely put at 160,000. This number must be added to the population of 1891. I do not

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para. 82. of females is not great. We thus get the following results:—

Districts.	Population by census of	
	1871.	1891.
Godavari *	1,592,939	2,936,446
Kistna	1,452,374	1,855,582
Madras	897,582	452,318
Chingleput	938,184	1,136,028
Nalgonda	49,501	99,797
South Arcot	1,755,817	2,162,551
Tanjore	1,973,781	2,228,114
Trichinopoly	1,200,408	1,872,717
Tinnevely	1,093,959	1,918,096
Malabar	2,231,250	2,652,565
South Canara	918,362	1,056,051
Total	14,234,077	16,969,694
Add floating population omitted in 1871	225,837	
Add net loss by sea emigration between 1871 and 1891		160,000
Total	14,459,914	17,129,694

* Includes population of agency tracts, except Bhadrachalam and Rékapalle.

The interval between the two enumerations was 19.285 years. Thus

$$14,459,914 \times (1+r)^{19.285} = 17,129,694$$

$$19.285 \times \log(1+r) = \log 17,129,694 - \log 14,459,914$$

$$r = .00882$$

In other words the rate of increase in these districts during a period of 19½ years, in which occurred one of the most disastrous famines ever known, but which was otherwise fairly typical, was 8.82 per mille per annum. This is nearly 1 per mille above Mr. Hardy's rate for the five districts during an extended period, including the famine years 1877 and 1878.

82. Finally we may compare the population of the whole presidency as enumerated in 1871 and 1891. For 1871 I adopt Mr.

Normal rate of increase for whole presidency over a long period.

McIver's corrected population given on page 24 of the Census Report for 1881. The corrections made by him are for females and floating population, the enumeration of which classes the estimates to have been defective to the extent of 848,579 individuals. The population of 1871 thus becomes 32,446,451. From the 1891 population, the number of people enumerated in the Bhadrachalam and Rékapalle taluks must be deducted, while the net loss from emigration by sea must be added to it. Mr. Stokes calculated this loss to be 226,243 between the 1st November 1870 and the 1st November 1880, but he was not able to obtain statistics for emigration to, and immigration from, Burma, which, during the past decade, has been considerable. Between the 18th February 1881 and the 26th February 1891, the net loss from emigration by sea was, as already stated, 227,626, and seeing that the great famine must have largely stimulated emigration, it is, I think, reasonable to take the whole loss by emigration between 1871 and 1891 to be 500,000 persons. For purposes of comparison, therefore, the population of 1891 is 36,088,104. The increase in the 19½ years is accordingly 4,018,552 or 12.53 per cent., and the annual rate of growth is 6.14 per mille. This result is higher than that arrived at by Mr. Hardy on other and less complete data; he calculated the average rate of increase (for males only) during a period of about 25 years ending with February 1881 to be 5½ per mille per annum.

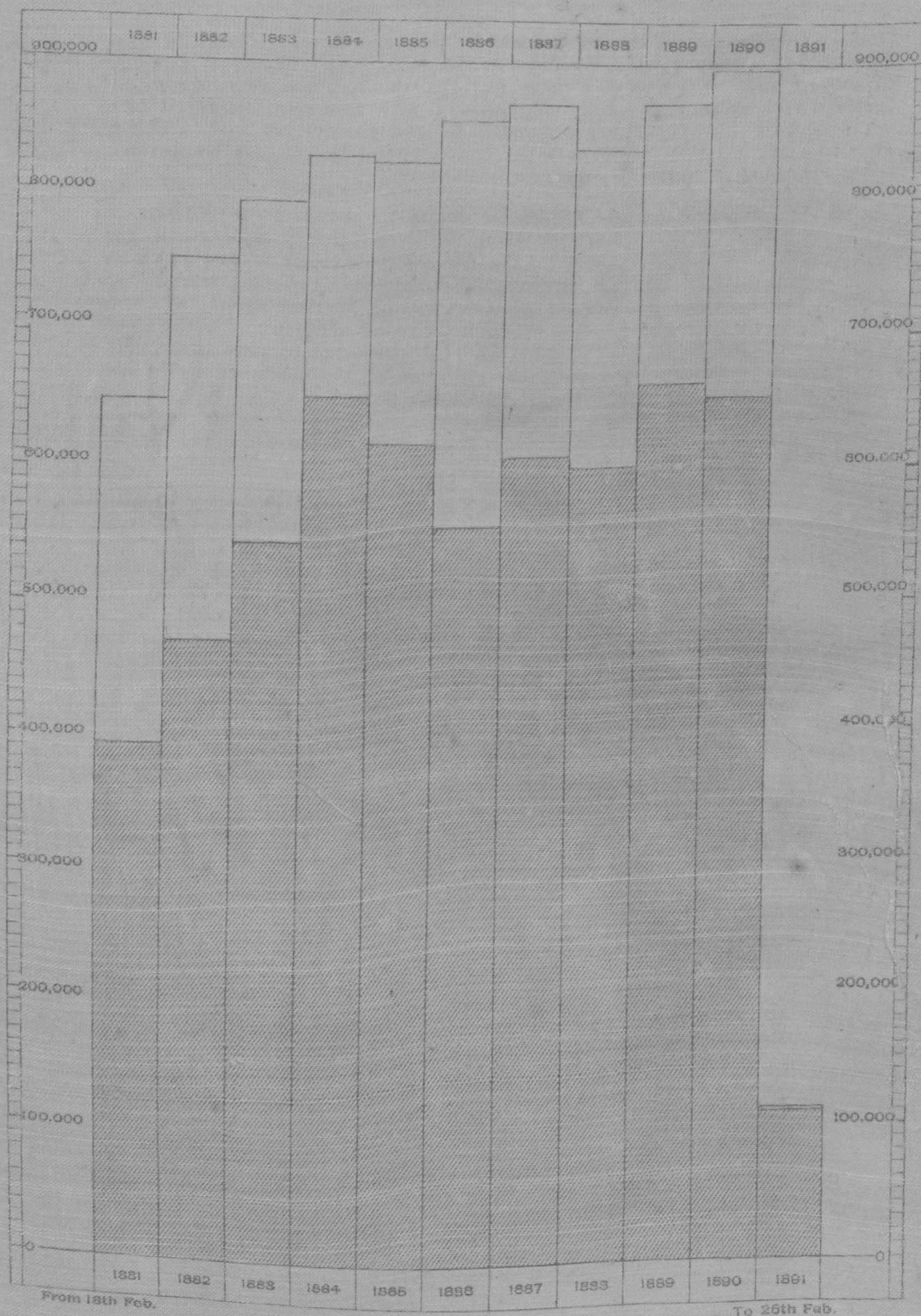
83. The results arrived at may now be summed up. In normal times, un-

Summary.

affected either by famine or the rebound from the effects of famine, the population of the Madras Presidency will increase by about 12½ per mille per annum. The occurrence of a severe

BIRTHS AND DEATHS IN THE MADRAS PRESIDENCY

Between 18th February 1881 and 26th February 1891



REFERENCE

The column for each year represents the number of births registered in that year, and the shaded portion of each column represents the number of deaths registered in the year. The unshaded portion of the column, therefore, represents the excess of births over deaths or the net gain of population in the year from new births.

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THE MOVEMENT OF THE POPULATION.

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famine would depress the rate of increase in tracts not directly affected to about 9 per mille per annum, while its effect in the area directly implicated would be to convert the increase into a decrease. But the recuperative power of the people is very great, and taking long periods, with recurring famines of more or less severity, the population is found to be a progressive one with a rate of growth of not less than 6 per mille per annum. This last, it may be observed, is the rate adopted by Mr. Hardy.

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84. In estimating the rate of increase during the decade 1891-1901 account must be taken of the fact that a considerable proportion of the fathers and mothers of that period are the survivors of the children under ten years of age in 1881, and that their numbers are below the average for their age-period owing to the especially severe effects of the famine on young children and to the check given to the birth-rate. On the other hand the proportion of wives at the child-bearing ages is rather higher now than in 1881, so the deficiency at the ages mentioned above may not be felt until late in the present decade. But the loss from deaths at the higher ages will be greater, and taking all the circumstances into consideration, it seems to me probable that the rate of increase will not exceed 10 per mille per annum.

85. In concluding this section of the report, it will be of interest to compare the census results with those supplied by the statistics obtained from the registers of births and deaths. The registration of births and deaths in municipal towns is made by the municipal authorities, and elsewhere the duty is entrusted to the village accountant. In municipal areas householders are bound by law to report births and deaths occurring in their houses, but no such obligation is imposed on the villager, and the accountant is required to obtain the information as best he can. In small villages this is not difficult, but, in those containing more than 1,000 inhabitants, there must be a number of deaths and births which never come to the notice of the registering officer, however energetic he may be in endeavouring to make his register complete and accurate; and as in a large number of cases the village accountant is actuated by no such desire, it follows that the number of omissions is large. The record is most incomplete in zemindari areas where the village accountants are under little control, but the inaccuracy is great everywhere as will appear from the following figures. The statistics for Anantapur and Bellary cannot be separated, as until the middle of 1882 these two districts formed the old district of Bellary.

Births and Deaths.

Districts.	Births.	Deaths.	Excess of births over deaths.	Increase of population by census.
Ganjam	233,452	202,255	31,197	147,304
Vizagapatam	313,220	237,860	75,360	321,708
Godavari	382,240	356,830	25,410	283,418
Kistna	506,596	390,387	116,209	307,162
Nellore	303,248	176,428	126,820	243,500
Cuddapah	337,720	227,150	110,570	151,034
Kurnool	269,519	173,778	95,741	139,260
Bellary and Anantapur	595,951	298,097	297,854	282,511
Madras	164,498	158,257	6,241	46,670
Chingleput	393,053	239,909	153,144	155,547
North Arcot	556,354	352,908	203,446	357,614
Salem	553,076	311,687	241,409	369,676
Coimbatore	480,268	293,631	186,637	347,149
Nilgiris	16,005	14,992	1,013	8,763
South Arcot	512,756	381,415	131,341	347,128
Tanjore	614,746	519,205	95,541	97,095
Trichinopoly	375,185	275,100	100,085	157,684
Madura	408,804	250,138	158,666	439,724
Tinnevely	403,054	389,720	103,334	216,348
Malabar	569,329	443,011	126,318	287,530
South Canara	290,921	214,643	76,278	93,567
Total, Madras Presidency	9,280,510	5,857,377	3,423,133	4,803,327

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In the case of Ganjam, Vizagapatam and Madura returns are not received from the whole district and the figures in those cases do not, therefore, admit of comparison with the increase shown by the census. Omitting these districts, the net excess of births over deaths is 2,167,401 and the increase according to the census is 3,894,591. The difference between these two figures is 1,727,190, which is 44.35 per cent. of the census increase. Both births and deaths have been largely under-stated, but the omission is greater in the case of births. The co-efficient of error differs in different districts, and it would be a vain task to endeavour to calculate it. The relative discrepancies are least in Chingleput, Tanjore, South Canara and Cuddapah, but it must be remembered that in this statement no account is taken of the net loss by emigration, and in Tanjore this has been considerable. According to these vital statistics the mean annual birth-rate in the Madras Presidency, excluding the agency tracts and the districts of Ganjam, Vizagapatam and Madura, has been about 28 per mille and the annual death-rate about 20 per mille. Judging by the mortality returns for the Madras City and making a liberal allowance for the slightly more healthy conditions found in rural tracts, the annual death-rate cannot have been less than 35 per mille, and the birth-rate must, therefore, have been about 50 per mille. From these figures some idea can be gathered of the minimum rate of omission in the birth and death registers.*

86. The most noticeable fact in the figures for the feudatory states is the low rate of increase in Travancore when compared with those of the adjoining state of Cochin and the British district of Malabar. The annual rate of increase of the Travancore population between 1875 and 1881 was 0.66 per cent., while the population of Cochin decreased at the rate of about 0.02 per cent. per annum during the same period, and that

Feudatory States.

States.	Increase per cent.	Annual rate of increase per cent.
Travancore	0.52	0.632
Cochin	20.43	1.872
Malabar	12.16	1.151

of Malabar increased at the rate of 0.60 per cent. per annum in the 9½ years between the census of 1871 and that of 1881. The large increase in Cochin, which the present census discloses, may possibly be due to short counting in 1881, but the census of Malabar is believed to have been equally trustworthy on both occasions, and it is certainly remarkable to find so low a rate of increase in Travancore between 1881 and 1891. In connection with this I may notice here the great change which has taken place in the proportion of the sexes in Travancore according to the census of 1891. In 1881 there were in this state 1,006 females to every 1,000 males, but the enumeration of 1891 gives only 982 females to 1,000 of the opposite sex. The local Census officer suggests that this may have been caused by a severe cholera epidemic in South Travancore but he admits that there is no evidence that this produced a greater mortality among females than among males, and I fear we must attribute the great variation in the proportion to the omission of females in 1891. In the section on the proportion of the sexes I shall give other reasons for the conclusion that females have been largely omitted. If the relation found to exist in 1881 had been maintained, there would have been 30,336 more females than the number actually enumerated at the recent census, and the increase of the population would have been 7.80 per cent. Even this rate of growth is comparatively low.

The state of Pudukóta suffered severely from the famine of 1877-78, and the high rate of increase in that state (23.49 per cent.) is due to the same circumstances as those already mentioned in connection with the Madras famine districts.

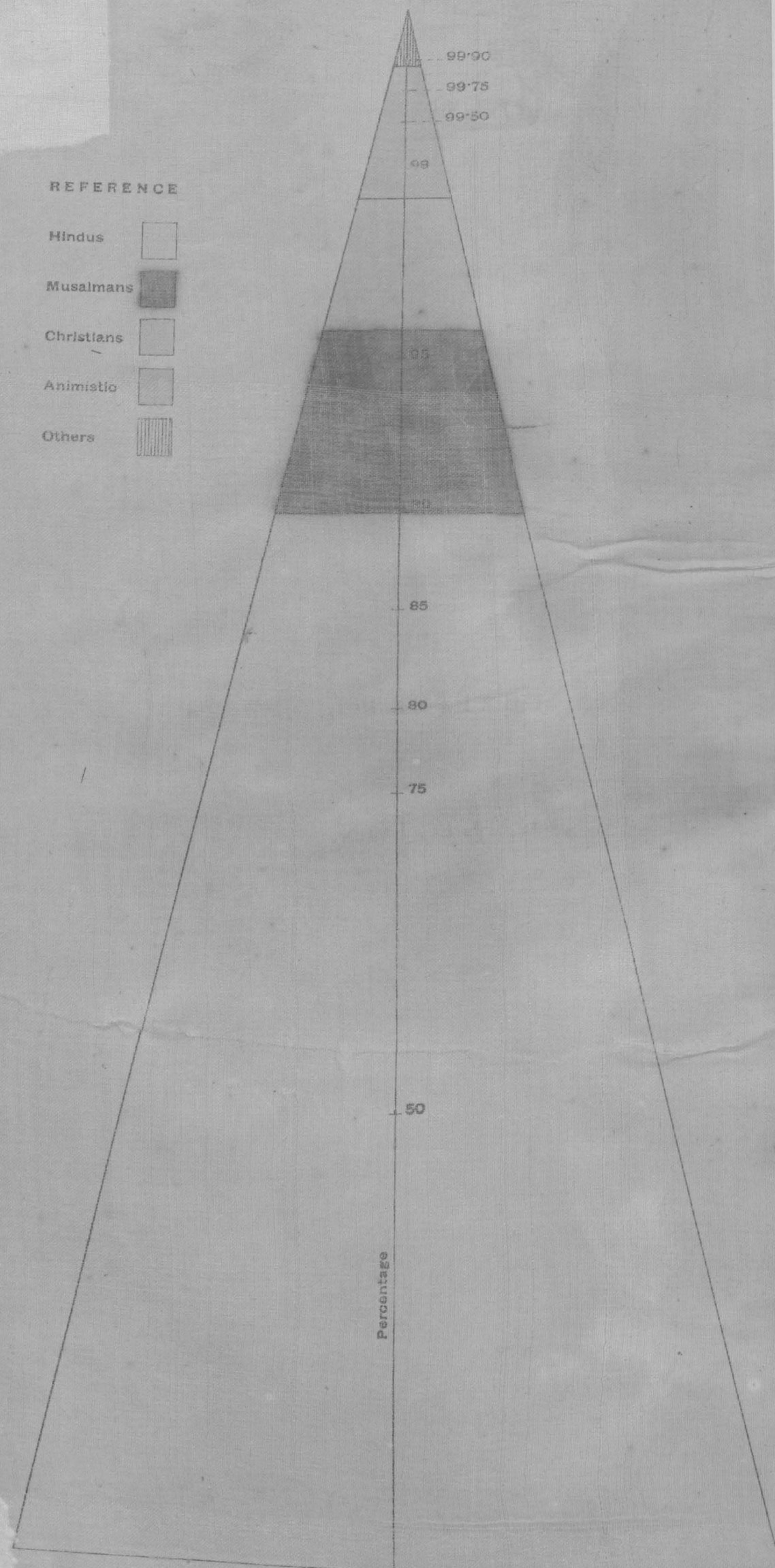
The little states of Banganapalle and Sandúr show lower rates of growth than the British districts which surround them, but the areas and populations of these states are so small that very slight changes in the absolute numbers would largely affect the relative results.

* The subject of birth and death rates is discussed in greater detail in Chapter IV.



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N. B. The triangle represents the whole population of the Madras Presidency (British Territory) and the several divisions show the proportions returning each Religion. The figures on the perpendicular line show the percentages.

CHAPTER III.

RELIGION.

Statistics of Religion.

District or State.	Distribution by Religion of 100,000 of the Population of each District or State.							District Distribution of 10,000 of each Main Religion for British Territory only.					Variation in Population returning each Main Religion.*				
	Hindus.	Musal- mans.	Chris- tians.	Jains†	Animists.	Others.	Total.	Hindus.	Musal- mans.	Chris- tians.	All Reli- gions.	Hindus.		Variation.			
												1891.	1881.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15			
Gaujam	96,517	343	144	...	2,995	1	100,000	487	24	26	446	1,581,690	1,491,774	89,916			
Vinagapatam	98,760	1,084	155	...	...	1	100,000	591	94	35	545	1,919,070	1,766,840	152,230			
Godavari	97,587	2,018	492	...	...	3	100,000	586	175	100	548	1,908,562	1,653,250	255,312			
Kistna	90,448	5,851	3,698	...	...	8	100,000	517	482	792	521	1,426,013	1,337,979	88,034			
Nellore	91,432	3,343	3,224	...	...	1	100,000	412	347	545	411	1,138,031	1,017,211	120,820			
Cuddapah	89,833	9,899	765	...	...	3	100,000	352	531	112	357	1,142,727	1,067,616	75,111			
Kurnool	85,303	11,912	2,780	...	...	5	100,000	215	433	263	230	897,616	807,597	90,019			
Bellary	89,790	9,529	567	...	...	2	100,000	249	381	61	253	807,597	748,484	59,113			
Anantapur	92,458	7,245	232	...	...	45	100,000	202	228	21	199	855,105	783,173	71,932			
Madras	79,355	11,755	8,785	...	...	104	100,000	110	236	469	137	358,987	315,527	43,470			
Chingleput	95,894	2,308	1,688	...	...	30	100,000	336	117	219	319	1,091,376	939,314	152,062			
North Arcot	94,525	4,414	688	...	...	10	100,000	635	428	173	612	2,061,105	1,722,644	338,461			
Salem	95,914	3,134	941	...	...	11	100,000	580	273	213	551	1,682,409	1,525,185	157,224			
Coimbatore	97,016	2,192	776	...	...	16	100,000	599	195	180	563	1,845,010	1,606,343	238,667			
Nilgiris	83,705	4,610	11,650	...	...	35	100,000	26	20	134	28	83,531	78,970	4,561			
South Arcot	94,491	2,712	2,335	...	...	1	100,000	629	261	634	607	2,043,679	1,723,235	320,444			
Tanjore	90,763	5,380	3,831	...	...	26	100,000	623	533	986	825	2,032,300	1,939,421	82,879			
Trichinopoly	92,083	2,788	5,129	...	...	...	100,000	389	170	814	386	1,264,037	1,119,434	144,603			
Madras	90,007	6,140	3,850	...	...	3	100,000	723	712	1,160	732	2,347,697	1,942,820	404,877			
Tinnevely	87,373	5,007	7,618	...	...	2	100,000	516	426	1,087	536	1,674,150	1,468,977	205,173			
Malabar	69,153	29,023	1,796	...	...	28	100,000	365	8,421	550	744	1,824,298	1,669,271	155,027			
South Canara	81,577	10,604	6,747	...	...	6	100,000	268	498	823	296	862,573	797,430	65,143			
Total	90,715	6,545	2,517	...	...	11	100,000	9,608	9,985	9,987	9,637	31,194,841	27,143,646	4,051,195			
Agency { Gaujam Vinagapatam Godavari	28,235	23	170	...	71,572	...	100,000	94	1	6	86	306,724	249,295	57,429			
	75,548	177	16	...	24,259	...	100,000	260	7	2	241	844,435	689,781	154,654			
	98,357	1,255	848	...	...	...	100,000	38	7	5	36	125,043	99,337	25,706			
Total, Agency Tracts	66,456	251	86	...	33,905	...	100,000	392	15	13	353	1,276,212	1,038,413	237,799			
Total, British Territory	89,842	6,318	2,430	...	71	1,328	100,000	10,000	10,000	10,000	10,000	32,471,053	28,181,959	4,289,094			
Travancore	73,184	6,210	20,601	...	...	5	100,000	...	...	...	...	1,871,864	1,755,610	116,254			
Cochin	69,379	6,417	24,046	...	...	158	100,000	...	...	...	...	501,544	429,324	72,220			
Pudukota	93,268	3,080	3,702	...	...	...	100,000	...	...	...	...	347,978	281,809	66,169			
Bangalore	79,853	13,986	161	...	...	...	100,000	...	...	...	...	28,344	24,793	3,551			
Sandur	83,254	16,403	343	...	...	...	100,000	...	...	...	...	9,481	9,000	481			
Total, Feudatories	74,561	6,093	19,311	...	...	35	100,000	...	...	...	...	2,765,211	2,500,536	264,675			

* For the purpose of this statement Animists have been treated as Hindus.

† The Jains shown in Table VI, in districts other than Bellary, North Arcot, South Arcot and South Canara are included under Others in this statement.

Statistics of Religion—continued.

VARIATION IN POPULATION RETURNING EACH MAIN RELIGION—contd.*										PERCENTAGE VARIATION UNDER EACH MAIN RELIGION.				
District or State.	Muslims.			Christians.			All Religions.	Hindus.	Muslims.	Christians.				
	1891.	1881.	Variation.	1891.	1881.	Variation.								
	16	17	18	19	20	21	22	23	24	25				
Gujarat ...	5,443	5,710	273	2,332	1,534	798	+	6.03	-4.78	49.41				
Vinagapatam	21,058	19,372	1,686	8,014	3,402	388	-	15.14	8.70	133.86				
Godavari	39,386	36,816	2,570	8,132	2,687	4,335	+	17.78	7.01	89.32				
Kistna	108,567	87,161	21,406	33,234	20,734	32,330	+	19.83	24.56	126.87				
Nellore	78,186	61,344	16,841	47,476	2,007	36,382	+	13.47	27.45	60.29				
Cuddapah	119,564	97,749	21,815	9,725	11,455	3,658	+	18.00	22.32	98.47				
Kurnool	87,413	75,875	11,538	22,735	11,280	30,53	+	24.54	25.87	27.95				
Bellary	85,770	68,143	17,627	5,483	4,129	1,154	+	17.20	27.24	108.05				
Anantpur	51,833	40,342	10,391	1,763	857	926	+	11.50	5.71	0.28				
Madras	53,184	50,298	2,886	39,631	16,774	111	+	15.85	4.80	13.10				
Chingleput	28,238	25,034	3,204	18,971	16,774	2,197	+	19.65	16.73	49.76				
North Arcot	61,505	62,448	933	15,063	10,018	4,886	+	23.21	11.47	16.81				
Bellary	43,947	51,682	6,423	1,468	16,567	1,901	+	20.94	16.09	36.97				
Coimbatore	4,800	37,855	1,066	1,568	13,326	3,240	+	9.63	5.78	30.27				
Nilgiris	53,631	3,531	10,373	11,626	8,488	3,138	+	19.12	21.48	38.59				
Tanjore	119,384	48,239	7,306	39,571	78,258	15,270	+	4.27	6.97	9.09				
Trichinopoly	38,271	51,104	4,167	85,371	7,113	7,113	+	12.92	12.22	14.58				
Madras	160,144	140,946	19,198	70,401	8,961	15,531	+	20.84	13.62	18.29				
Tinnevely	95,951	89,797	6,154	100,431	84,946	15,531	+	19.73	6.89	3.56				
Madhar	763,887	653,198	110,689	145,962	43,196	4,456	+	12.16	18.04	10.27				
South Canara	111,993	93,632	18,361	1,259	58,215	13,044	+	8.17	19.57	22.41				
Total ...	2,247,172	1,913,783	333,390	804,426	698,448	161,977	+	14.93	17.42	23.69				
Agency ...	71	357	286	521	17	504	+	23.04	80.11	2,964.71				
{ Ganjam	1,490	1,027	463	139	8	131	+	22.42	45.67	1,637.50				
{ Vinagapatam	1,647	1,936	289	442	206	236	+	25.88	17.07	114.56				
Total, Agency Tracts ...	3,214	3,370	156	1,102	231	871	+	22.90	4.63	377.06				
Total, British Territory	2,250,390	1,917,132	333,258	805,528	698,680	165,848	+	15.58	17.36	23.70				
Travancore	189,423	146,803	42,620	636,911	493,542	28,369	+	6.52	6.62	5.69				
Cochin	43,339	33,744	9,595	173,831	136,361	37,470	+	20.43	16.82	27.48				
Pudukota	11,204	8,946	2,258	13,313	11,372	2,441	+	23.49	26.36	21.47				
Bangalore	7,084	5,952	1,132	9	9	48	+	14.32	19.19	53.33				
Sander	1,868	1,521	347	57	11	28	+	5.34	22.81	254.55				
Total, Feudatories	225,476	186,672	38,804	714,651	646,295	68,356	+	10.64	14.65	10.58				

* For the purpose of this statement Animists have been treated as Hindus.

CHAPTER III.

RELIGION.

(TABLES VI AND A.)

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para. 87.

87. Before proceeding to discuss the statistics relating to religion, I propose to give an account of the principal creeds that have been returned, and, in particular, to endeavour to

indicate what is meant by the term 'Hindu.' I shall begin with an examination of the religious ideas of those people who have been shown in the census tables under the head of Animistic, and then pass on to a consideration of the various elements—of which the most important is closely allied to animism—of the religion which goes by the very wide name of Hindu. A short notice of the Musalmans, the chief Christian missions, including that remarkable outpost of Christianity, the so-called Syrian Church of Malabar, and of the Jews of Cochin will conclude the first section of the chapter. In the second section the statistics of each religion will be discussed in detail, and in the concluding section I shall deal with the figures relating to the sects of Hindus and Christians.

Section I.—Account of the Chief Religions.

88. The term 'Animistic' was suggested by the Census Commissioner to denote the religion of those forest and hill tribes whose religious beliefs show no trace of orthodox

Hinduism. In 1881 this religion was called 'aboriginal,' an expression to which objection has been taken on the ground that there are many aboriginal tribes who are recognized to be Hindus by religion.* But the term 'animistic' is equally open to the objection that there are many people, invariably regarded as Hindus whose real religion is almost pure animism. I take 'Animism' to mean a belief in the existence of souls, with the addition that after death the soul remains in the neighbourhood in which it dwelt when incarnate and is active for good and evil. The souls of dead ancestors must be worshipped and provided with sacrifices of animals and offerings of other kinds of food, or otherwise evil will befall the living members of the family to which the soul belonged. Put more concisely Animism may be said to be the belief which holds the souls of the dead to be the gods of the living. Another definition, quoted by Mr. H. H. Risley from Tiele's *Outlines of the History of Ancient Religions*, is as follows: "The belief in the existence of souls or spirits of which only the powerful—those on which man feels himself dependent, and before which he stands in awe—acquire the rank of divine beings and become objects of worship."† This hardly goes far enough, for the propitiation of all the spirits of the dead to prevent their doing evil, is clearly a feature of Animism. The propitiation may, and generally does, take the form of a single set of ceremonies shortly after death and not of continuous worship, but it is believed that if the propitiation were omitted the spirit would bring trouble and misfortunes on the living.

In the 1881 census tables for Madras no record is found of persons of aboriginal religion, and this fact was animadverted upon by the Census Commissioner, who wrote as follows:—

"Madras . . . does not show a single aboriginal in the religious classification, but it is unquestionable that in the Nilgiris there are races who, if they profess any religion at all, are nature worshippers, and not Hindus, Muhammadans or any one of the religions shown in the Madras tables."‡

* Bombay Census Report, 1881, p. 46.

† The Tribes and Castes of Bengal, by H. H. Risley, vol. ii, p. 18.

‡ Report on the Census of British India, 1881, p. 18.

The following direction was accordingly issued for the guidance of super-
visors in instructing enumerators how to fill up the religion column of the
schedule:

"In the case of forest or hill tribes who are not Hindus, Muhammadans, &c., the name of the tribe should be entered, as *Chentzu, Toda, Malayati, Khond, Savara, &c.*"

As a result of this instruction we have 472,808 persons whose tribal name was entered in the religion column and whose religion has, therefore, been shown in the tables as Animistic. In every case a considerable proportion of these tribes has returned Hindu as the religion and I, therefore, give in the marginal statement the numbers shown under Animistic and Hindu respectively. It will be seen that the bulk of the persons shown as Animistic are Khonds, Savaras and Játapus, and that a strong minority of each of these tribes, in the case of the last named amounting to nearly one-half, are returned as professing the Hindu religion. This is no doubt correct, as

Name of Tribe.	Number returned as	
	Animistic	Hindu.
Khond	286,100	32,820
Savara	146,314	35,946
Játapu	39,551	39,069
Others	843	4,854,179

Hinduism is gradually attracting these wild races and will in time become the religion of all of them. This fact has been discussed at length in Sir Alfred Lyall's *Asiatic Studies* and in the Census Reports of 1881, and it is therefore sufficient to merely mention it here.

It must not be supposed that the above figures really represent the number of persons who might properly be classed as Animistic, or as not belonging to any of the recognized religions of the Empire. The list does not include the Tódas, who were returned as Hindus, nor any of the wild races living in the forests of the Western Ghâts. The out-caste classes again—the Paraiyans, Pallans, Málas, Cherumans, Holeyas, &c.—who are not allowed access to Hindu temples, have, notwithstanding, all returned themselves as Hindus. And even many whose claim to the title of Hindu would be universally admitted, hold beliefs which are much nearer Animism than Hinduism, as will be shown in the account of the latter religion. It is, in fact, almost impossible to draw the line between the two religions, and I doubt whether any useful purpose is served by the attempt to do so.

89. A full account of the religion of the Khonds is given by Major Macpherson, who served among them in connection with the suppression of the custom of human sacrifices; but General Campbell, whose experience of these people was quite as extensive as Macpherson's, declares that the latter was deceived by his Hindu informants and that the religious system of the Khonds is by no means so elaborate as that described by him. This is the view taken by the writers of the Ganjam and Vizagapatam Manuals, and it is supported by the account of the Khond religion given by Mr. Stevenson, Commissioner of Gumsur in 1837.* The Khond deities, as enumerated by Mr. Stevenson, are (1) *Savari-pennuga*, a forest goddess; (2) *Jacari-pennuga*, the village goddess; (3) *Jara-pennu*, their favourite god; (4) *Dharma-devata*, whose rain goddess; (5) *Tada-pennuga*, the earth goddess; and (6) *Bura-pennu*, whose particular position is not described.† These differ considerably from the deities mentioned by Macpherson, but distinct evidence of nature worship is furnished by both lists. *Jara-pennu* and *Tada-pennuga* appear to be the same as *Bura-pennu*, the sun god, and *Tári*, the earth goddess. It is to the latter that human sacrifices were made, and though the votaries of *Bura-pennu* professed abhorrence of this rite, they were but little more humane themselves, for the practice of female infanticide was common among them. To all observers of the Khond religion the barbarous rite of human sacrifice loomed so large that but little notice was taken of the lesser gods and their worship. I am not able, therefore, to give an account of the origin of these gods, or to say whether any of them are the deified spirits of departed Khonds. Colonel Dalton, following Macpherson, says these gods "are

* Madras Journal of Literature and Science, 1837, vol. iv, pp. 17-46.

† *Ib.*, p. 41.

Chap. III. para. 90. the descendants of human beings who resisted evil," but this statement must be received with caution. "They are now," he goes on to say, "the presiding spirits over villages, hills, streams, tanks, fountains, houses, forests, ravines and orchards."* There is, however, a distinct trace of animism, in its wider sense, in the funeral ceremonies. The day after the body is burnt a little cooked rice is placed on the site of the pyre and an incantation is then pronounced requesting the spirit of the deceased to eat and enjoy itself, and not to change itself into a devil or a tiger and thus bring trouble to the survivors in the village.†

90. An excellent account of the Savaras' religion, by Mr. Fred. Fawcett of the Madras police, was recently published in the *Journal of the Anthropological Society of Bombay*,‡ and in the opinion of that careful observer the Savara deities are of undoubted animistic origin.

"The Saora deities and ancestral spirits are considered to cause all ills, and though the Saoras will not admit that the deities and ancestral spirits are the same, there is little doubt that the deities are just further removed ancestral spirits. The deities are the more powerful of the two. The huts or temple erections for both are generally almost identical, and there is but one way to appease, by sacrifice.

"Of nature spirits the Saoras know nothing. They have no nature myths. The wind or the rain may be used by certain deities to hurt people, but there is no personality attached to them, and they have no power in themselves.

"Indeed there is nothing to be found among these people in favour of the hypothesis that through nature-worship religious ideas arose; but, on the other hand, there is much in favour of the hypothesis that awe for the dead, who though dead are still present, was what their religious ideas grew out of."§

The Savaras, it should be remembered are a Kolarian, not a Dravidian race.

91. Of the religion of the Játapus, I have not succeeded in obtaining any account, nor is any information regarding this tribe to be found in the Manuals of Ganjam or Vizagapatam.

Other Animistic tribes.

The remaining persons tabulated as Animistic number only 843, and it is obvious that they should properly have been classed as Hindus, with the vast majority of the castes to which they belong.

92. The difficulty of obtaining a satisfactory definition of Hinduism was discussed at length in the reports on the census of 1881, but no satisfactory solution was arrived at. In the

Hinduism.

Punjab, "every native who was unable to define his creed, or described it by any other name than that of some recognized religion, or the sect of some such religion, was held to be a Hindu;"|| and a similar rule was adopted in the North-West Provinces. This, of course, would bring all the so-called Animistic hill tribes under the head of Hindus, and the only way to avoid their inclusion is to assert that a person is of the Hindu religion if he worships any of the recognized gods of the Hindu pantheon. This solution leaves much to be desired; but in practice there would be no difficulty, so far as this presidency is concerned, in deciding whether any particular deity was or was not a member of the Hindu pantheon. The Khonds, the Savaras, the Tódas do not worship these gods and they are, therefore, not Hindus. The Paraiyans and other similar castes, on the other hand, do worship them. We frequently find representations of the god Ganésa in Paraiya temples. In the town of Tirupati, which is situated at the foot of the sacred hill of that name, there is a temple to Perumáswami which is frequented by Paraiyans, and the god is, therefore, called Para Perumál; and no doubt similar instances could be found elsewhere. Even the majority of the hill and forest races pay homage to some Hindu deity and call themselves Hindus, although their principal gods would not be recognized by an orthodox Bráhma.

* Dalton's *Descriptive Ethnology of Bengal*, p. 297.

† The Saoras of Madras, by Fred. Fawcett, *Journal of the Anthropological Society of Bombay*, vol. i, pp. 206-272.

‡ *Journal of Anthropological Society of Bombay*, p. 245.

§ Ganjam District Manual, p. 71.

|| Punjab Census Report, 1881, p.

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This brings me to a discussion of the real religion of the vast majority of the people who call themselves Hindus. In the first place they give a nominal allegiance to some one or more of the orthodox gods, the incarnations of Vishnu or Siva or their spouses, Lakshmi and Párvati, or their offspring, Ganésa, Subramaniam, &c.; and they attend the temples of these gods at times of festival and present offerings. But the ordinary villager thinks that these august deities concern themselves but little with his affairs, and his real worship is paid to Máriaṃman, the dread goddess of small-pox and cholera, and to the special goddess of his village. Misfortunes are the work of evil spirits or devils, and his religious efforts are directed to their propitiation.

93. The beginnings of Dravidian religious ideas can be traced, with but little doubt, to a belief in spirits and the fear of the evils they inflict. As to their origin and nature I cannot

Devil-worship.

do better than quote the following from an article on *Demonolatry in Southern India* by the late Bishop Caldwell:—

"The majority of the devils are supposed to have been originally human beings, and the class of persons most frequently supposed to have been transformed into devils are those who had met with a sudden or violent death, especially if they had made themselves dreaded in their life time. Devils may, in consequence, be either male, or female, of low or high caste, of Hindu or foreign lineage. Their character and mode of life seem to be little, if at all, modified by difference of this nature. All are powerful, malicious and interfering, and all are desirous of bloody sacrifices and frantic dances. The only differences apparent are in the structure of the altar or image built to their honour, the insignia worn by their priests, the minutiae of the ceremonies observed in their worship, the preference of the sacrifice of a goat by one, a hog by another, and a cock by a third, or in the addition of libations of ardent spirits, for which some low caste demons stipulate. As for their abode, the majority of the devils are supposed to dwell in trees, some wander to and fro, and go up and down in uninhabited wastes, some inhabit old wells, and some skulk in shady retreats. Sometimes they take up their abode in the rude altars erected to their honour or in houses. Some inhabit palmyra palms, the leaves of which have never been cut."*

Many diseases, especially severe or obstinate maladies, are ascribed to 'possession' by devils; hysteria is always attributed to this source. These devils also cause cattle disease, failure of crops, accidents, and in fact misfortunes generally. They are believed to beat people, to throw stones on houses, to fire the thatch. Sometimes they content themselves with frightening the timid. "In short the demons do much evil, but no good. They often cause terror, but never bestow benefits, or evince any affection for their votaries. They must be placated by sacrifice, because they are so mischievous; but there is no use in supplicating their favour. If, in any case, the hope of obtaining a benefit seem to be their votary's motive in worshipping them, further inquiry proves that it is under the supposition that the demon's malignity stands in the way of what would otherwise be obtained as a matter of course."†

When the 'doctor' attending a sick person finds that the malady is unknown to him or will not yield to his remedies, he certifies that it is a case of possession, and the exorciser is then called in to expel the demon by his charms and incantations. After expulsion a sacrifice of a fowl or a goat is frequently made to the devil to placate him, or as a species of compensation for disturbance. From time to time, sacrifices are made to the demons to induce them to abstain from inflicting calamities or to remove evils which they have already inflicted. The usual victim is a goat, which must be black. To ascertain whether it is acceptable, water is thrown on it, and if it shakes itself it is regarded as fit for sacrifice.‡ The object of the devil-dances, which are so common in parts of this presidency, is not to propitiate

* On *Demonolatry in South India*, by the Right Rev. R. Caldwell, DD., LL.D., Bishop of Tinnevely, in the *Journal of the Anthropological Society of Bombay*, vol. i, p. 96.

† Caldwell, *op. cit.*, p. 100.

‡ Caldwell, *op. cit.*, p. 103. The existence of a similar practice amongst the Thugs is mentioned in Lyall's *Asiatic Studies*, p. 14, and in a footnote he refers to the use of this test among the Greeks at the sacrifice of a goat which preceded the interrogation of an oracle.

Chap. III. para. 94. the devil, but to consult it. After the dancing and music have proceeded for some time the devil enters into the body of the dancer, and is interrogated by the persons attending the performance respecting their present ills or their desires for the future. I give below the names of a few of the principal devils:—

Káttéri.—A female devil, who sets fire to houses.

Muniscaran.—A male demon, said to be the husband of *Káttéri*.

Ratta Chámundi, i.e., Bloody Chámundi.—A female; frequents the burial ground of the low castes.

Shudalaimádan.—The devil of the burning-ground.

Sháluimádan.—The 'furnace devil,' particularly dreaded by potters, as he breaks their pottery while it is being burnt in the kiln.

Mallan.—The Giant.

Muchandimáppan, 'the old man of the three roads,' said to lie in wait for people at places where three roads meet.

Madurnicéran, described to me as 'the Inspector of the devils.'

The roll of devils, however, is by no means closed, and the spirit of any person who died a violent or sudden death or was of a malevolent disposition is believed to haunt the place of his dissolution and to do as much injury as possible to living people.* As the memory of the death fades away, the ghost or devil is forgotten, and his place taken by the spirit of some one more recently deceased.

94. The earliest form of the belief in the spirits of the dead was that they were all evil spirits, but it is easy to understand how the idea arose that some of the souls of the departed

became good spirits, willing to ward off evil, provided they received due attention. Hence we get the tutelar deities, who seem to be merely deified mortals, and in some cases it is difficult to draw the line between these gods and the demons or devils.† The majority of these tutelar deities are females and are called 'Ammans' or mothers. The local deity of every village (the *Grāmadevata*) is always one of these Ammans; it is to her that the villagers look for protection from the malevolence of the demons; those who are believed to be 'possessed' are sent to her temple; and it is usually her priest who exorcises the devil. These 'Mothers' have, however, even greater powers for evil than the demons, and plague, pestilence and famine are almost invariably ascribed to the anger of the village goddess, produced by the neglect of her votaries. The temples of these deities are small, rude buildings and the goddess is usually represented by a black stone. The priest, called *Pandāram* or *Pújári*, is a man of one of the lower castes, sometimes an artisan, sometimes a husbandman. He receives the offerings of the worshippers and daily anoints the symbol of the goddess. When a villager passes the temple in the morning on his way to his work, he usually pays some mark of respect to the idol and will perhaps offer a flower, a little camphor or some such slight tribute. Offerings of greater value are made in fulfilment of vows, and a festival on a large scale is held periodically, the expenses being defrayed by subscriptions. On these occasions many animals are sacrificed, and the ceremonies are frequently very costly. In the Telugu country the buffalo seems to be the favourite animal for a sacrifice, but in the southern districts the usual victim is a goat, though buffaloes are occasionally offered. In the case of both animals the head is placed before the goddess with the right fore-leg, severed from the body, inserted in the mouth. The margosa tree also plays an important part

* Man-eating tigers are always believed to be 'informed' by the souls of human beings, generally those who have died from violence. Shortly after the Rampa disturbances of 1880, man-eating tigers caused many deaths in a part of the neighbouring district of Vizagapatam, to which the Rampa rebellion had extended, and I was frequently informed that these dreaded beasts were the spirits of men who had been killed fighting or executed by the authorities, and who had taken this form in order to be revenged on the human race for their misery.

† The human origin of the gods of the Khonds and the Savaras has already been noticed. Among the Tódas there are traces of the same evolution of divine beings in their gods En and his son and grandson, Dirikih and Pétakan: En is believed to have been the first Tóda. The Pálal, the ascetic custodian of the sacred *mand*, is regarded as a god while living and none may touch his holy person. Several of the Badaga gods are admittedly only deceased members of the clan (*Nilgiri Manual*, p. 220). The human origin of many of the Ammans or village goddesses is also well known.—See *Kurnool Manual*, pp. 152, 153. *Madras Census Report*, 1871, p. 106.

in these ceremonies, and people of both sexes who are under vows appear before the idol clothed in nothing but margosa leaves.* Chap. III. para. 96.

Some of these village goddesses have much more than a local reputation. This is especially the case with *Máriamman* or *Máriátha*, the goddess of small-pox and cholera, who is always propitiated with sacrifices when these diseases are raging. Small-pox is indeed called 'the sport of the Amman' in Tamil and by somewhat similar names in the other Dravidian languages. *Máriamman* is also sometimes a village goddess, but where this is not the case a temple to her is usually found in addition to that of the purely local deity. *Pidáriamman* is another goddess who is not merely a village deity. Her temple will be found in many villages, and she is worshipped equally with *Máriamma* and the village goddess. She is sometimes called *Yellai Pidári*; the first word means 'boundary' and she was probably originally the goddess of boundaries. I have found this deity mentioned in an inscription dated A.D. 1033.† Some purely village goddesses again have won a repute which brings thousands to their annual festivals. Among these may be mentioned the goddess of *Periapalam* in the Chingleput district. Her name is *Ponniamma* (golden mother), and her annual festival is very numerously attended.

The only male among the tutelar deities is *Aiyauár*, who is also called *Sátta* in the south. He is the guardian of boundaries and of agriculture and is supposed to ride about at night slaying the demons that molest mankind. For this reason the usual offerings to him consist of pottery horses, numbers of which will always be found in the court-yard of his temples. This deity seems to be of a more benevolent disposition than the Ammans, and he is the favourite object of the vows of women desirous of offspring.

95. The devils and tutelar deities that have been described above are believed in by all classes of Hindus, from the Bráhman downwards. A Bráhman, it is true, will not attend the festivals of the village goddess, but if misfortune befall him, he will send an offering of grain and fruit, though not of any animal for sacrifice. His belief in the Puranic gods is more real than that of the ordinary cultivator, but both alike ascribe misfortunes to devils and small-pox to *Máriamma*, and the difference in their religious ideas is one of degree only, and not of kind. The Hindu religion is, in fact, a mixture of Brahmanical and aboriginal beliefs, and the position which either holds in the religion of any particular caste varies with the position of the caste. Thus among the lowest classes the devils and village deities are almost everything, but even pariahs profess some allegiance to Brahmanism, and claim to belong to one of the two main orthodox sects—Saivism and Vaishnavism. As we rise in the scale, we find Brahmanic influences becoming more and more powerful; but the number of Hindus who are altogether free from demonolatry and put no trust in the village goddesses must be very small indeed.

96. Another element in the religion of the people which calls for brief notice is serpent worship. According to Fergusson‡ serpent worship is foreign to the Dravidian races, but it is difficult, on this supposition, to account for its wide prevalence in Southern India at the present day. It is especially common in South Canara and Malabar, and in the latter district a 'poison shrine' or 'snake shrine,' as it is variously called, is to be seen in the garden of every respectable Hindu,§ while in the former is found one of the most famous serpent temples in India. A serpent shrine consists of one or more representations in stone of the cobra placed on a platform of earth surrounding a *pipal* tree, and it is a common sight to see women walking round and round the tree in fulfilment of a vow. The living serpent is also worshipped and offerings of milk, eggs, fruit, &c., are made to it. The usual object of serpent worship

* See *Kurnool Manual*, pp. 150-153; Article On some Festivals to Village Goddesses, by Mr. Fred. Fawcett, in the *Journal of the Anthropological Society of Bombay*, vol. II, p. 271; *North Arcot Manual*, pp. 213-230. I have not come across any account of the custom of putting the right fore-leg in the mouth in the case of goats, but I am credibly informed that it is the practice.

† *South India Inscriptions*, vol. II, part I, inscription No. 5.

‡ *Tree and Serpent Worship*, p. 53. See also *Manual of the Administration of the Madras Presidency*, p. 82.

§ *Malabar District Manual*, p. 183.

Chap. III. is to obtain children, but offerings are also made for relief from leprosy, skin
para. 97. diseases, &c.

97. There is very little nature worship in the present religion of the Hindus of Madras, and it is the absence of this element that marks the distinction between the religion of the Dravidians and that of the primitive Indo-Europeans. In the case of the latter the origin of religious ideas can be traced to the worship of the powers of nature, and it was probably not until a period subsequent to the departure of some of the Aryan races from their primeval home that any clear ideas arose of an existence continued after death.* Among the Dravidians, on the other hand, religion seems to have commenced with a belief in ghosts, and all gods of undoubted Dravidian origin may be ascribed to the development of this idea.

98. I have dwelt upon the Dravidian element in the religion of the Hindus of Madras, because its importance is generally overlooked in the accounts of the religious beliefs of the people contained in the District Manuals and other similar works.† It would indeed be gathered from these notices that the Hinduism of the presidency is the creed of the purānas, and that the gods of the people are all of Brahmanic origin. In my desire to bring out the prominent part played by much humbler deities in the religious life of the people I may have unduly minimized the position held by the greater gods. I do not, however, propose to further prolong this section by any detailed description of the Brahmanic divinities and their worship, and such an account is rendered the less necessary by the fact that the work has already been most ably done by Dr. Cornish in the *Madras Census Report* of 1871.

99. There is very little connection between the religion and the morality of the people of the Madras Presidency. The former concerns itself with the ways to avoid or remove evil, but the idea that wicked conduct will be punished or good conduct obtain its reward in a future state is hardly to be found at all in the purely Dravidian religion. The fear of hell and the hope of heaven appear in the purānic beliefs, but this doctrine has very little currency beyond the Brāhmans and a few of the higher castes, and even among these classes the moral code of their religion is but vaguely known and of no great influence. Nearly every Hindu pays allegiance to some *guru* or spiritual teacher, but the energies of these instructors are for the most part confined to teaching *mantras* that are unintelligible to the pupil and not always understood by the master, to performing ceremonial acts, such as the stamping of the sacred marks on the arms of Vaishnavites, and lastly to the collection of funds. The functions of the domestic priests are entirely ceremonial, and little, if any, religious instruction is ever given by parents. The morality of the Hindus, indeed, is an affair of caste and not of religion, and misconduct is punished by the caste council and not by the spiritual teacher.

100. The Muhammadans of this presidency are mostly of Dravidian origin, but a few are descendants of Pathān and Moghal immigrants and present the unmistakeable type of features found in those races in Upper India. These and a small proportion of the indigenous Musalmans speak Hindustāni or Deccani, but the majority retain the vernacular of their ancestors, Tamil in the case of the Labbais, and Malayālam in the case of the Māppillas.

The religious practices of Musalmans in Madras do not differ materially from those of their co-religionists in other parts of India, and the influence of their Dravidian origin is not so great as might be expected. The adoration of saints and the veneration of relics are said to be more pronounced than among other Musalmans, but the Punjab Census Report of 1881 and Sir Alfred Lyall's writings show that these additions to orthodox Islam are prevalent to a great extent in the north

* *Pre-historic Antiquities of the Aryan Peoples*, by O. Schrader, translated by F. B. Jevons.

† I must except the *Manual of the Administration of the Madras Presidency*, which contains an excellent account of the real beliefs of the people.

of India also. Many of the Māppillas retain the Hindu law of inheritance, but they are, notwithstanding, rigid observers of the ceremonial of their adopted religion. Chap. III. para. 101.

101. The oldest of the Christian churches, not only in Madras, but in the whole of India, is the Syrian church of Malabar. It is claimed for this church that it was founded by St. Thomas the apostle, but such evidence as is adduced in support of the statement has been controverted by scholars like the late Dr. Burnell, and the whole question has recently been examined at length by the Rev. G. Milne Rae.*

The first definite mention of the church of Malabar occurs in the writings of Cosmas, surnamed Indicopleustes, an Alexandrian merchant who visited India in A.D. 522. He states that he found a church of Christians in Ceylon, and also in Malabar, "and in the town of Calliena," he adds, "there is also a bishop consecrated in Persia." Calliena is either Quilon or a place near Udipi in South Canara, and the conclusion Mr. Milne Rae comes to is that the church was of Nestorian origin and that it was founded some time about the beginning of the sixth century. The Nestorian heresy was condemned by the Council of Ephesus in A.D. 431, but it was not until 498 that the Nestorians finally broke with the Western Church. Their head assumed the title of Patriarch of Babylon, and the fact that he was in the direct apostolic succession from St. Thomas would account for the members of the Malabar church being known as Christians of St. Thomas. Another Nestorian church existed at Mylapore, now a suburb of Madras, and a Persian cross was discovered at St. Thomas' Mount, near Mylapore, in 1547. This cross bears the same inscription as a similar cross in a church at Kōttayam in Travancore, where there is also another Persian cross of a later date. Further proof of the fact that this Syrian congregation was an outpost of the Nestorian church is afforded by the arrival of two bodies of immigrants of that sect, one under a merchant called Thomas of Cana in the eighth century, and another in 822 under two Nestorian Persians named Mar Sapor and Mar Peroz. In a bull of Pope John XXII, dated 1330, the Malabar Christians are described as Nascarini,† and in the sixteenth century the Roman Catholics discovered many evidences of Nestorian doctrine and ritual. It is to their use of the Syrian rite that their name of Syrian Christians owes its origin, and not to any descent from a band of Syrian colonists. There may be some faint trace of Syrian blood in a few families, but the vast majority of Syrian Christians are of pure Dravidian race, and in language, dress and other customs they do not differ from their Hindu neighbours.

Dr. Burnell suggested that the early Christians of Malabar were Manichæans, basing his argument upon the name of their chief settlement, Manigramam, and there is a tradition among themselves regarding the arrival in their midst "of a Persian heretic of the School of Manes."‡ But, however, this may have been, there can be no doubt that from the sixth to the sixteenth century the Malabar church was a Nestorian church. As regards the existence of any earlier Christian body, all that I feel competent to assert is that no satisfactory evidence has been adduced in support of it.

The Syrian church continued to grow in numbers and importance, obtaining high favours from the rulers of the land, until the fourteenth century. On the arrival of the Portuguese in the fifteenth century, the Syrians made advances to them for support and protection against the Zamorin of Calicut and his Muhammadan allies. This was readily given, but the alliance eventually proved fatal for a time to the independence of the Syrian church. The Portuguese soon discovered that the ritual and dogmas of the Syrians differed in many respects from those of Rome, and the existence of many abuses and heathenish practices was brought to light. Endeavours were, therefore, made to bring the churches under the rule of the Pope and to substitute the Latin rite and dogmas for the Syrian. At first

* *The Syrian Church in India*, by G. Milne Rae, M.A.; see also the *Manual of the Malabar District*, by W. Logan, M.C.S., which gives an excellent summary of the arguments. Dr. Burnell's views will be found in the *Indian Antiquary*, vols. iii and iv. Much interesting information is contained in a judgment by Mr. W. E. Ormsby, Barrister-at-Law, Judge of the High Court of Travancore, in appeal case No. 3 of 1861 M.E.

† *The Syrian Church in India*, p. 194.

‡ *Malabar Manual*, p. 204.

Chap. III. colleges were started for the training of orthodox priests, but the Syrian congregations refused to receive them, and, after half a century's experience had resulted in the failure of this plan of operations, it was abandoned in favour of a method of direct attack. An able leader was found in Aleixo de Menezes, Archbishop of Goa and Primate of the Indies, a man of great force of character and indomitable will. The Syrian Bishop, Mar Abraham, having died in 1597, the opportunity was seized by Menezes to assert the authority of Rome. After a careful tour through the country, he summoned a synod of priests and laymen at Diamper (Udayampérur) in 1599 and succeeded in passing decrees that had the effect of completely handing over the Syrian church to the domination of Rome, a domination which lasted for over sixty years.

It is not clear whether any bishop was sent from Babylon to succeed Mar Abraham; but in 1653 Alhatalla, a Nestorian bishop, arrived in Madras and at once opened communications with the Malabar Syrians. He was, however, seized by the Portuguese, and, according to Paoli, burnt by the Inquisition at Goa. This roused the Syrians to a high pitch of excitement, though nothing was done by them immediately beyond swearing a solemn oath to pay no allegiance to Rome. The expulsion of the Portuguese by the Dutch soon gave the opportunity to carry this vow into practical effect, and the dominion of the Pope over the Malabar church ceased in 1663. A strong minority, however, was content to remain under the Roman jurisdiction, and these were and are still called *Romo-Syrians*. In the tabulation of Christian sects they have been treated as Roman Catholics.

Upon the expulsion of the Roman clergy the administration of church affairs fell on Archdeacon Thomas, whom the Syrians had elected to be their metran or bishop in 1653, but it was not until twelve years later that he succeeded in obtaining the rite of consecration. He appears to have been anxious to procure consecration from any Eastern church, and the first opportunity that presented itself happened to be in the arrival of Mar Athanasius, patriarch of Jerusalem and subordinate to the Jacobite patriarch of Antioch. This was the origin of the connection with Antioch, a connection which has produced in recent years a serious split in the Malabar church. From the time of Mar Thomas I to the beginning of the present century we find a succession of native metrans of the family of Palokalamattam, with occasional foreign bishops who endeavoured to exercise joint authority and succeeded in stirring up faction and dissensions. One of these foreign bishops was a Nestorian, but he met with a cold reception, and the connection with the patriarch of Babylon, which was destroyed by Menezes in 1599, has never been resumed. Mar Thomas VI, the last metran of the family of Palokalamattam, died in 1803, and shortly after this the custom of appointing the bishop by election or lot appears to have arisen. This opened a door for discontent, and we find the disappointed candidates making frequent appeals to the patriarch of Antioch. The claims of this ecclesiastic were, however, successfully resisted until 1852, when Mar Athanasius Mathew, a native of Travancore, who, after being educated in the Syrian college at Kóttayam and in the Church Missionary Society's institution at Madras, proceeded to Mardin in Armenia and was there consecrated by the patriarch. He returned to Malabar in 1843, but it was not until nine years later that he succeeded in obtaining recognition from the Travancore Government. Meanwhile the patriarch had sent another bishop, Mar Stephanos, to supersede Mar Athanasius, but the latter found no difficulty in retaining his office. In 1865 the patriarch again attempted to interfere and consecrated Mar Dionysius Joseph, also a native of Travancore, as metran of the Syrian church. He met with no more success than Stephanos, and in 1875, after a visit to London to enlist the sympathy of the authorities there, in which he failed, the patriarch of Antioch himself arrived in Travancore. He divided the church into seven dioceses and appointed six metrans as colleagues of Mar Dionysius, but he was unable to dispossess Mar Athanasius, and the latter remained in office until his death in 1877, having previously consecrated his cousin Thomas and appointed him his successor. A long bitter struggle now commenced between this Mar Thomas and Mar Dionysius Mathew. It was terminated only in 1889 by a judgment of the highest court of appeal in Travancore, Mr. Justice Ormsby dissenting, in favour of Mar Dionysius, on the ground that consecration by the patriarch of Antioch was a necessary

condition to the succession to the metranhip. "A case of disputed succession," says Mr. Milne Rae, "in the bishopric of a Christian church running the gauntlet of a series of law courts in which most of the Judges are non-Christians is a phenomenon of considerable historical as well as legal interest."*

Although Mar Dionysius has succeeded in the courts, there are still many Syrians who refuse to acknowledge him, but persist in their allegiance to Mar Thomas, or as he is more generally called, Mar Athanasius. These constitute the party of reform and favour the innovations which, emanating from the suggestions of Christian missionaries in the first quarter of the century, were vigorously carried out by Mar Athanasius Mathew. They may also be said to represent the idea of a national as distinguished from a foreign church. It is not possible to gather from the census returns the exact numbers of each division, but such figures as have been obtained will be discussed in the third section of this chapter.

102. Although we find traces of the visit of missionaries of the Church of Rome to India as early as the fourteenth century, it was not until the beginning of the sixteenth that any real progress was made in the Madras Presidency. Work on a large scale first commenced on the West Coast with the advent of the Portuguese. In 1532 a deputation of the Paravas or fishing caste of the south-east coast went to Cochin to solicit the aid of the Portuguese against the Muhammadans and were there baptized by Michael Vaz, the Vicar-Général. He and other priests accompanied the fleet that was sent against the Musalmans and at once set about baptizing the Paravas all along the coast, from Cape Comorin to Ramésvaram. This work was carried on by Francis Xavier, the greatest of Roman Catholic missionaries, who came to Tinnevely in 1542. He belonged to the Society of Jesus and that active body gradually extended its operations over the whole of the south of the peninsula. In 1606 the Madura mission was established by Robert de Nobili, and from Goa and Cochin in the west, St. Thomé in the east, and Tuticorin and Madura in the south, the Roman Catholics continued their efforts for the propagation of Christianity. Beschi, who was born in Italy in 1680, arrived in Tinnevely about 1708, and, after working there for seven years, went to Trichinopoly, where he remained for upwards of 20 years. This remarkable man acquired a mastery of the Tamil language such as was found among few natives, and composed a religious epic in classical Tamil, setting forth the history of the Christian religion in an Indian garb. This work, which he called the *Tembávani*, is admittedly one of the finest poems in the language. Beschi, who is also the author of other Tamil works, both in poetry and prose, died in Tinnevely in 1746. During the remainder of the eighteenth century the Jesuit missions encountered many troubles. In 1773 the Society of Jesus was suppressed, but on its revival in 1814 fresh contingents of missionaries began to arrive from Europe and its operations are now extensive throughout the south. As regards the Telugu country, we find the Jesuits in North Arcot, Bellary and Anantapur early in the eighteenth century, and in 1733 there were 16 stations of which the most remote was at Bukkapuram in Nellore.† When the French obtained possession of Guntúr in 1752, a number of Christian converts from the Nellore, Bellary and Kurnool placed themselves under their protection. The Jesuits of these districts seem to have suffered even more severely than those of the south from the troubles that befell their order, but they are now in a fairly flourishing condition, especially in North Arcot and Kistna.

The missionaries under the Archbishop of Goa have not been so successful as the Jesuits in this presidency, and I have no space for an account of their operations.

103. The earliest Protestant mission was that of the Lutherans, with headquarters at Tranquebar. It was started in 1706 by Frederick IV of Denmark, who sent out two ministers named Plütschau and Ziegenbalg, of whom the latter laboured indefatigably till his death in 1719. Schultze became head of the mission in 1720, and by him the work was extended to Madras and the city of Tanjore. Schwartz, the most illustrious

* *The Syrian Church in India*, p. 827.

† *Kistna District Manual*, p. 276.

Chap. III. para. 104. member of this mission, landed in India in 1750, being then 24 years old. He worked for eleven years at Tranquebar, started the mission at Trichinopoly in 1762, settled at Tanjore in 1778, and died there in 1798. Schwartz was on excellent terms with Tulsaji, the Raja of Tanjore, who, on his death-bed, entrusted the care of his son to him. This son erected a noble monument to Schwartz's memory in the shape of a statue by Flaxman, which is in the little Fort Church at Tanjore. The Tranquebar mission languished on the death of Schwartz, and its work and churches were taken over by the Society for the Promotion of Christian Knowledge, the precursor of the Society for the Propagation of the Gospel. The Tanjore mission was continued by Gericke and others, and the Lutheran Church is still fairly strong in that district.

104. The mission work of the Church of England was first vigorously undertaken by the Society for the Promotion of Christian Knowledge, and in the district in which it has been most successful (Tinnevely) it was commenced by Jænicke, who was sent by Schwartz from Tanjore in 1791. He was driven away by fever in the following year, and resided for the most part at Ramnad until his death in 1800; but he continued to exercise supervision over the Native pastors left in charge of the Christians of Tinnevely. It was not until 1820 that we find another European missionary in that district. Rhenius was then sent by the Church Missionary Society, and from that time forward both that society and the Society for the Propagation of the Gospel have continued the work with great success, the latter body having had the good fortune to number among its missionaries the late Bishop Caldwell, whose memory will long be revered by the people among whom he laboured for over fifty years. The missionary work of the Church of England has not been confined to Tinnevely, for though it is there that its first great effort was made, we now find its missionaries in almost every part of the presidency from the fever-laden tracts of the Upper Godavari to the shores of Travancore.

105. Another important missionary body is that of the American Baptists. Commencing their work in Nellore in 1840, they have met with great success both in that district and in Kistna, and have also established themselves in Kurnool. The number of conversions made during the great famine was enormous, and although these converts were, for the most part, uninstructed in the doctrines of Christianity at the time of their baptism, and, therefore, without much in the way of spiritual conviction, the statistics of the present census show that they have remained faithful to their new religion.

106. Among other missionary societies may be mentioned the London Mission, which works chiefly in Cuddapah and Kurnool, the Basel Mission on the West Coast, the American Mission in Madura, the American Lutheran Mission in Kistna, the American Reformed Church Mission in Arcot, and the Missions of the Church of Scotland, the Free Church of Scotland and the Wesleyans. The returns also show the presence of 105 members of the 'Salvation Army,' a body whose mode of operations bears a close resemblance to that of the Jesuits as described in the following extract from a letter written in 1700 by Father Martin of the Madura Mission:—

"C'est donc en menant parmi eux une vie austère et pénitente, parlant leur langue, prenant leurs usages, tout bizarres qu'ils sont, et s'y naturalisant, enfin ne leur laissant aucune soupçon qu'on soit de la race des Français, qu'on peut espérer d'introduire solidement et avec succès la religion chrétienne dans ce vaste empire des Indes."

107. There are two bodies of Jewish settlers in India—one the Beni-Israels of Kolaba and Poona, the other the Jews of Cochin. Nothing definite as to their origin is known. The south of India was visited by the fleets of Solomon, and there are traditions among the Cochin Jews which put the time of their arrival on the coast in the sixth century B.C. They possess a deed, engraved on copper, by which they were granted considerable privileges by the ruler of Malabar, but the earliest date that can be assigned to this deed is A.D. 700, though the Jews themselves declare it to have

been drawn in the year 490.* The community must have been settled in Malabar for some time before they succeeded in obtaining from the sovereign the lands and rights recited in the deed, but it is impossible to say how long a time had elapsed since their arrival.†

The Jews are divided into two bodies, the white and the black. The latter are said to be the descendants of 500 slaves assigned to the Jewish settlers. Another theory is that they are the descendants of an earlier body of colonists.‡ The white Jews have maintained the purity of their race by obtaining husbands for their daughters from Europe and Asia. They will neither intermarry nor eat with the black Jews, who are also confined to their own synagogues. The language of all is Malayalam, but the religious services are conducted in Hebrew, and both sections have Hebrew copies of the Jewish Scriptures. The Beni-Israels of Bombay are also divided into white and black divisions, and in many respects resemble the Jews of Cochin. The census tables do not distinguish between white Jews and black Jews.

Section II.—Statistics of Religion.

108. The following statement shows the number of persons returning each religion in 1881 and 1891:—

Numbers returning each religion.

Statement showing number of persons returning each Religion.

Religion.	Number of persons returning it.	
	1891.	1881.
Hindu	31,993,245	28,181,959
Musalman	2,250,386	1,917,152
Christian	965,528	699,680
Animistic	472,808	24,962
Jain	27,425	1,546
Buddhist	1,036	143
Parsi	246	132
Brahmo	64	30
Jew	42	1
Sikh	128	1
Agnostic	12	13
Atheist	5	5
Theist	4	2
Deist	4	69
None	4	1,419
Kodagu	14,503	
Others §		
Not stated		
Total	35,630,440	30,827,113

§ Details not given.

|| Shown under 'Others' in Table VI.

The people now shown as Animistic are hill tribes of Ganjam and Vizagapatam, who, in 1881, were treated as Hindus. In that year again, all the inhabitants of the Agency tracts were taken to be Hindus whether religion was returned

* The earlier date is accepted in the *Manual of the Administration of the Madras Presidency*, p. 17, but no reasons are assigned. The later date is that arrived at by Dr. Burnell and Dr. Gundert. There is a curious error in the *Manual of Administration* on the page quoted, where it is stated that the Jews of Malabar 'amount to about 30,000.' Their numbers do not in reality amount to 2,000.

† The Rev. G. Milne Rae fixes the sixth century A.D. as the probable date of their arrival (*The Syrian Church in India*, p. 142), but this is little more than conjecture.

‡ *Manual of Administration*, p. 17.

Chap. III. or not, and the number under 'Not stated' was, therefore, much less than in 1891. If the Agency tracts be excluded, the number of people who did not return their religion in 1891 was 787 only.

109. Practically it is only the followers of the first five of the above religions who are natives of Madras, and the numbers of the adherents of the other creeds are relatively insignificant. This appears very clearly in the marginal table.

Relative numbers.

Religion.	Number of followers of each religion in every 10,000 of the population.	
	1891.	1881.
Hindu	6,984	9,142
Musalman	632	622
Christian	242	227
Animistic	133	
Jain	8	8
Others		1

It will be seen that the Hindus greatly predominate in the Madras Presidency. There are 14 Hindus to every Musalman, 37 to every Christian, and 68 to every person shown as holding animistic beliefs. The Hindus out-number the adherents of all other religions together in the proportion of nearly 9 to 1. The Musalmans and Christians are to one another in the ratio of 26 to 10. To every square mile of the presidency there are 252 persons: if the followers of each creed were uniformly distributed we should have in each square mile 227 Hindus, 16 Musalmans, 6 Christians and 3 Animists.* I give below a statement showing the relative numbers of each religion in the chief provinces of India:—

Statement showing the distribution, by Religion, of 10,000 of the population in each Province.

Province.	Hindus.	Musalmans.	Christians	Buddhists.	Jains.	Sikhs.	Animists.	Parsis.	Others.
Madras	9,984.98	681.88	242.02	0.29	7.70	0.03	132.76	0.07	0.04
Assam	5,472.27	2,709.55	30.76	14.05	2.50	0.15	1,770.67		0.05
Bengal	6,338.21	3,285.28	25.75	26.51	0.99	0.00	321.62	0.02	0.56
Bombay	7,772.79	1,857.06	84.20	0.36	127.51	0.43	113.28	39.21	5.14
Burma	225.00	332.60	158.79	9,056.60		4.16	221.48	0.13	0.46
Central Provinces	8,188.94	275.96	12.03	0.30	45.11	0.16	1,476.36	0.72	0.42
Mysore	9,384.05	511.72	77.14	0.01	26.83	0.06		0.07	0.09
North-West Provinces	8,698.91	1,353.08	12.46	0.20	18.04	2.42		0.07	4.72
Punjab	3,710.90	5,575.44	25.68	2.76	18.92	666.10		0.17	0.03

110. A statement showing the relative distribution by districts is prefixed to this chapter. From this it appears that Hindus form over 95 per cent. of the population in Ganjam, Vizagapatam, Godavari, Chingleput, Salem, Coimbatore and the Godavari Agency, and that the proportion is over 80 per cent. in every district, except Madras, Malabar, and the Agencies of Ganjam and Vizagapatam. The Musalmans are relatively most numerous on the West Coast, and in Madras and the central districts. In Ganjam the proportion is only 0.34 per cent., and in Vizagapatam just over 1 per cent. The Christians are relatively most numerous in Nilgiris, Madras, Tinnevely, South Canara and Trichinopoly, but their absolute numbers are highest in Tinnevely and Madura, the number being in the former 145,962 and in the latter 100,431. In the

Distribution by districts.

Percentage of Musalmans.

District.	Per cent.
Malabar	23.02
South Canara	10.60
Madras	11.76
Cuddapah	9.40
Kurnool	11.91
Bellary	9.53
Anantapur	7.25

Percentage of Christians.

District.	Per cent.
Nilgiris	11.65
Madras	8.79
Tinnevely	7.62
South Canara	6.75
Trichinopoly	5.13

* The exact proportion of Hindus is 226.6, and that of the followers of religions other than the four specified is 0.2 per square mile.

Nilgiris, although the proportion is so high, there are only 11,626 Christians. In the three northern districts and in Cuddapah, Bellary and Anantapur, there are comparatively few Christians, nor are they numerous in North Arcot, Salem and Coimbatore.

The people shown as holding Animistic beliefs are found only in Ganjam and in the Agency tracts of that district and Vizagapatam. The Jains are found in every district, except Nilgiris and Tinnevely, but their numbers are so small that in the distribution statement it is not possible to show them in any districts, except Bellary, North and South Arcot and South Canara. They are most numerous in the last-mentioned district.

111. The following statement shows the variation in the numbers returning each of the chief religions since 1881. For the purpose of this comparison those now shown as Animistic have been added to the number of Hindus, as they appeared under that religion in the 1881 tables:—

Increase per cent. since 1881.

Religion.	Inclusive of Agency tracts.	Exclusive of Agency tracts.
Hindu	15.22	14.98
Musalman	17.38	17.42
Christian	23.70	22.59
Jain	9.87	9.87
Total population	15.58	15.28

The Musalmans and Christians have increased at a greater rate than the population taken as a whole, while the rates for Hindus and Jains are below the average. The interesting question arises whether the higher rates of growth in the case of Christians and Musalmans are due to conversion or to the fact that a high proportion of the people of these religions is found in the districts which show the greatest relative increase of the total population, or to immigration, or to higher natural growth. The district particulars which are given in the statement at the beginning of this chapter throw much light on the subject.

112. In the case of Musalmans the rate of increase is not much greater than that of Hindus, but it seems probable that a good deal of the difference is due to conversions from Hinduism to Islam. No less than 34.21 per cent. of the Musalmans of the presidency are found in Malabar, and they have increased in that district by 18.04 per cent., while the increase of the Hindus is only 9.89 per cent., of Christians 10.27 per cent. and that of the whole population of the district is but 12.16 per cent. It is well known that large numbers of converts to Islam are made from the lower classes of Hindus on the west coast, but as it is not safe to assume that the people of each religion have the same rate of natural growth, it cannot be stated how much of the increase in Musalmans is due to conversion. The circumstances of the Mappillas of Malabar are not, however, of such a special character as to render it probable that they multiply much faster than their neighbors. If, therefore, we take their rate of increase in Malabar for the ten years as 15 per cent., it is probably an outside estimate of the natural growth.* This rate gives an addition of 97,830, which is 19,829 less than the actual increase shown by the census. It may be asserted then, I think, with some confidence, that not less than 20,000 of the Musalmans of Malabar are people who were converted to Islam during the decade, or the children of such converts. If the Hindus and Musalmans continue to increase at the same rates as between 1881 and 1891, their numbers will be equal in 121.6 years from February 1891.

* Mr. Logan in the *Malabar Manual*, vol. i, p. 196, says the Mappillas "are apparently not so prolific as the Hindus." But see para. 113 on next page.

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115. Christians have been classified as Foreign, Eurasian and Native, and a summary of the figures is given in the margin. The corresponding statistics for 1881 are so defective that no useful comparison is possible, but the broad fact appears in both sets of figures that the high proportion of Christians in the Madras Presidency, as compared with other provinces, is not due to any excessive foreign or Eurasian population, but represents a greater diffusion of Christianity among the natives of the country.

Foreign, Eurasian and Native Christians.		
Nationality.	Number.	Per cent.
Foreign ...	13,462	1.55
Eurasian ...	26,642	3.08
Native ...	825,424	95.37
Total ...	865,526	100.00

116. The Jains have increased by only 9.87 per cent., and in the district in which they are most numerous they have barely advanced at all. In Bellary, on the other hand, their numbers have nearly doubled, but this great variation must be largely the result of more successful enumeration. The figures for the other districts, and especially those for Canara, suggest the conclusion that the Jains are slowly forsaking their religion for either Hinduism or Christianity.

Rate of increase among Jains.

District.	Number of Jains.		Increase per cent.
	1891.	1881.	
Bellary ...	1,457	749	94.53
North Arcot ...	7,923	7,696	2.95
South Arcot ...	5,639	5,184	8.78
South Canara ...	10,199	10,044	1.54

117. The census tables give for each religion separately statistics relating to sex, urban population, age, civil condition, education and caste, and in the chapters relating to each of these subjects any special features found among the followers of the different creeds are discussed in detail.

118. The most noticeable features in the statistics for feudatory states are the high proportions of Christians in Cochin and Travancore and of Musalmans in Banganapalle. The former is due to the presence of Syrian Christians (including Romo-Syrians) in large numbers, while the latter may be ascribed to the fact that the ruler of Banganapalle is of the faith of Islam. The Jews of Cochin number only 1,142, and there are 125 of this religion in Travancore. In all five states the Musalmans have increased at a faster rate than the total population, and the rate for Christians also exceeds the average in all cases except Travancore, where the addition is only 5.69 per cent. as compared with 6.62 per cent. for Hindus and 8.11 per cent. for Musalmans.

Percentage of Christians.

State.	Per cent.
Travancore ...	20.60
Cochin ...	24.05

Percentage of Musalmans.

State.	Per cent.
Banganapalle ...	19.99

Section III.—Sects of Hindus and Christians.

119. Information regarding the sects of Hindus has been specially compiled in this presidency, and in the annexed table the results are given under the five heads of Saiva, Vaishnava, Lingayat, Mádha and Others, those who returned no sect being also included in the last item. Before passing to an examination of these statistics it is advisable to point out that to a large majority of Hindus sect has very little meaning. Thus the Paraiyans call themselves Saivites, but they know next to nothing of the tenets of Saivism and of course are not admitted to Saivite temples. The sectarian feeling of the cultivating classes is almost equally vague, and it is only among the highest castes that the terms Vaishnava and Saiva have a real significance. Among others the difference does not usually go beyond a preference for the pictures of one or other class of divinities, and the wearing of the mark peculiar to the sect they affect. I ought, perhaps, to except the Lingayats from this statement, for among them sect is considered of great importance.

Hindu sects.

Sects of Hindus, 1891.

District.	TOTAL, HINDUS.		SAIVITES.		VAISHNAVITES.		MÁDHVAS.		LINGAYATS.		OTHERS INCLUDING NOT STATED.	
	Total.	Males.	Total.	Males.	Total.	Males.	Total.	Males.	Total.	Males.	Total.	Males.
Ganjam ...	1,534,086	736,218	797,798	188,434	1,388,008	689,554	696,149	458	8,877	1,810	24,814	16,680
Vizagapatam ...	1,919,070	948,432	970,637	338,333	1,411,518	694,547	716,966	1,489	3,433	1,633	14,297	7,764
Godavari ...	1,908,563	938,704	969,858	378,511	1,498,574	738,031	760,543	1,953	20,889	10,262	14,897	7,772
Kistna ...	1,676,333	847,901	828,432	341,397	1,105,190	534,682	595,508	1,604	25,855	12,934	8,687	2,140
Nellore ...	1,437,973	727,454	710,519	337,113	699,330	343,293	344,337	1,108	25,855	12,934	1,488	735
Cuddapah ...	1,142,727	579,384	563,343	244,631	595,367	277,615	298,008	1,899	1,455	654	1,543	539
Kurnool ...	697,618	352,956	344,662	147,083	320,874	137,915	158,450	1,477	4,240	2,089	1,537	561
Bellary ...	807,697	410,531	397,166	182,749	320,874	137,915	158,450	1,477	4,240	2,089	1,537	561
Anantapur ...	685,105	334,753	350,352	147,083	320,874	137,915	158,450	1,477	4,240	2,089	1,537	561
Madras ...	338,997	173,624	165,373	75,448	353,268	171,089	165,900	1,353	15,365	7,771	1,673	706
Chingleput ...	1,091,376	549,544	541,832	208,202	603,887	254,880	249,607	1,102	4,302	2,113	1,618	730
North Arcot ...	2,061,166	1,035,316	1,025,850	422,454	1,003,907	506,353	497,554	4,691	24,557	12,118	1,618	730
Salem ...	1,882,499	922,254	960,245	422,454	603,887	254,880	249,607	1,102	4,302	2,113	1,618	730
Coimbatore ...	1,948,010	953,053	994,957	422,454	603,887	254,880	249,607	1,102	4,302	2,113	1,618	730
Nagris ...	83,531	47,094	36,437	15,448	1,003,907	506,353	497,554	4,691	24,557	12,118	1,618	730
South Arcot ...	2,043,679	1,019,657	1,024,022	422,454	603,887	254,880	249,607	1,102	4,302	2,113	1,618	730
Tanjore ...	2,023,800	973,013	1,050,787	422,454	603,887	254,880	249,607	1,102	4,302	2,113	1,618	730
Tichinopoly ...	1,384,037	610,897	773,140	321,177	603,887	254,880	249,607	1,102	4,302	2,113	1,618	730
Madras ...	2,347,697	1,131,751	1,215,946	422,454	603,887	254,880	249,607	1,102	4,302	2,113	1,618	730
Tinnevely ...	1,674,160	810,088	864,072	321,177	603,887	254,880	249,607	1,102	4,302	2,113	1,618	730
Malabar ...	1,834,238	902,491	931,747	321,177	603,887	254,880	249,607	1,102	4,302	2,113	1,618	730
South Canara ...	862,573	414,125	448,448	173,624	1,003,907	506,353	497,554	4,691	24,557	12,118	1,618	730
Total ...	31,147,237	15,379,448	15,767,789	6,363,181	12,627,361	6,264,181	6,363,180	100,710	308,563	154,152	101,799	50,020
Ganjam ...	86,774	44,276	42,498	1,417	58,599	29,767	28,742	94	956	472	26,848	13,111
Vizagapatam ...	839,191	325,765	513,426	1,417	58,599	29,767	28,742	94	956	472	26,848	13,111
Godavari ...	129,043	63,731	65,312	33,642	95,533	44,555	50,988	19	313	164	32,363	13,796
Total, Agency ...	851,003	433,770	417,233	84,317	422,966	214,368	207,592	113	1,371	636	34,747	15,152
Total, British Territory ...	31,998,245	15,813,216	16,185,029	6,363,181	12,627,361	6,264,181	6,363,180	100,710	308,563	154,152	101,799	50,020
Travancore ...	1,871,824	941,995	929,829	414,672	208,583	103,904	103,679	1,504	770	338	1,324,403	656,178
Cochin ...	501,544	240,666	260,878	103,436	131,266	65,904	65,360	1,504	770	338	1,324,403	656,178
Putukota ...	347,978	166,002	181,976	306,147	145,553	70,993	70,562	1,504	770	338	1,324,403	656,178
Banganapalle ...	23,344	14,423	8,921	4,462	6,437	2,132	4,305	12	269	127	1,324,403	656,178
Saothir ...	9,461	4,789	4,672	4,462	2,132	1,132	1,057	186	87	4	1,324,403	656,178
Total, Feudatories ...	2,759,211	1,376,826	1,382,385	594,274	247,148	123,152	123,996	2,668	49,41	2,025	2,210,134	1,060,624

Chap. III. The proportion of Hindus returning each of the main sects in 1871, 1881 and
para. 120. 1891 is shown in the following statement:—

Sect.	Percentage of Hindus returning each sect in		
	1871.	1881.	1891.
Saiva	56.31	54.04	56.54
Vaishnava	40.10	36.88	41.10
Mádhva	0.53	0.23	0.97
Lingáyats	3.06	8.00	1.39
Others and Not stated			
Total	100.00	100.00	100.00

In 1871 and 1881 Mádhvas were not shown separately, and it is to be presumed that they were included among Vaishnavas.

Saivites and Vaishnavites.

120. Of the 1881 figures Mr. McIver writes as follows:—

"It is clear that this return is of little value, and the high proportion of 'Others' and 'Not stated' shows that the enumeration in this respect was inferior to that of 1871."

This conclusion is supported by the results obtained from the present census, which approximate closely to those of 1871 so far as the two principal sects are concerned. The proportion of Saivites is practically the same, that of Vaishnavites (including Mádhvas) is just 1 per cent. higher, that of Lingáyats is nearly double, and that of Others and Not stated has fallen by more than one-half.

Vaishnavism is the prevailing sect in the Telugu and Saivism in the Tamil districts. In the three northern districts the Vaishnavites far outnumber the Saivites, and in Kistna there are slightly over two of the former to one of the latter. In the central area the proportions become more nearly equal, the Vaishnavites having the advantage in Nellore, Cuddapah and Anantapur, while the Saivites predominate in Kurnool, Bellary, North Arcot and Chingleput. As we go further south, the superiority in numbers of the Saivites begins to rapidly show itself. In South Arcot there are about $9\frac{1}{2}$ Vaishnavites to 11 adherents of Siva; in Salem the proportion is 2 to 1, in Coimbatore and Trichinopoly 3 to 1, in Tanjore and Tinnevely 6 to 1 and in Madura 5 to 1. In South Canara there are 7 Saivites to 1 Vaishnavite, and in Malabar the proportion is no less than 100 to 1; in that district, however, there is in reality little sectarian feeling, and the people worship indifferently at the shrines of Siva or Vishnu, the latter being, if anything, the more popular, although the sectarian mark worn by the majority of the population is that of the Saiva sect. Vaishnavism has made a great advance in the Kistna district since 1871. In that year there were 7 Vaishnavites to 6 Saivites, but the proportion is now about 2 to 1. In Kurnool, the most northerly district in which Saivism predominates, Vaishnavism has made a slight advance since 1871. In North Arcot, on the other hand, which was the southern outpost of Vaishnavism in 1871, the rival cult has made considerable progress, and the Saivites now outnumber the Vaishnavites, the proportions being 104 to 100, although in 1871 there were 10 followers of Vishnu to 9 Saivites. Both sects, indeed, seem to be advancing from their bases, and it will be of interest to watch the struggle and see which will drive the other back. Saivism has its foundations in Dravidian beliefs, and it offers much that appeals to the religious instincts of the people. The village goddesses are, indeed, usually considered to be forms of Párvati, the wife of Siva, and even Siva himself is supposed to be of Dravidian origin. It seems not improbable, therefore, that Saivism will long retain its pre-eminence. On the other hand, Vaishnavism is in many respects the higher form of belief, and as education advances it may vanquish the more sombre cult of Siva.

121. In writing on this subject in 1881 Mr. McIver observed that "a Hindu sect classification, which takes no account of Mádhvas, Smártas and Sátánis can hardly be of sufficient

Mádhvas.

accuracy for scientific use." Having this in mind I tabulated Mádhvas separately on this occasion, but they number altogether only 100,823, so that their inclusion among Vaishnavas in 1871 and 1881 can have affected the results but little. The term 'Mádhva,' however, does denote a sect, but 'Smárta' and 'Sátáni' do not. Smárta literally means one who follows the Smritis, but it is used in this presidency to denote a Bráhmaṇ of the Saiva sect, a follower of Sankarácári. As regards Sátáni, I doubt if the term ever denoted a sect and its alleged connection with Chaitanya * seems to me improbable. In any case, at the present time, Sátáni is merely a caste, the members of which are for the most part temple-servants; they are all of the Vaishnava sect. The Mádhva sect was founded by Mádhvácári, otherwise called Anantatírta, who is said to have been born in Malabar in the year A.D. 1199. Originally a Saivite, he became a convert to Vaishnavism, but of a type distinct from that of the generality of this sect. While Sankarácári, the reformer of the Saiva sect, had taught that there was but one true substance, Mádhvácári maintained that the principle of life and the principle of the deity were distinct. His system is, therefore, known as Dvaitam (duality) as distinguished from that of Sankarácári, which is called Advaitam. The chief seat of the Mádhvas is at Udipi in South Canara, and all Mádhvas are Bráhmaṇs. Mádhvácári's original connection with Saivism led him and his followers to show much more tolerance towards the members of that sect than is met with among Vaishnavas generally.

122. The enormous increase in the number of Lingáyats cannot be real, but must be ascribed to greater success in enumeration. Mr. McIver pointed out that it was unlikely that Lingáyats had lost $58\frac{1}{2}$ per cent. of their members between 1871 and 1881, and it is

Lingáyats.	
Year.	Number.
1871	155,658
1881	64,580
1891	309,836

154,178, and the increase in Bellary and

Number of Lingáyats.		
District.	1891.	1871.
Godávari	20,989	10,210
Kistna	25,855	39,534
Bellary and Anantapur	166,711	57,410
Chingleput	4,302	542
North Arcot	8,018	2,778
Coimbatore	20,620	5,015
South Arcot	14,207	5,490
Tanjore	10,077	5,993
Trichinopoly	4,089	533

also fairly numerous in Godávari, Kistna, Coimbatore, South Arcot and Anantapur, but outside Bellary they constitute only an insignificant proportion of the population. In none of the districts of Madura, Tinnevely, Malabar or South Canara do they number 1,000 souls. A full account of the tenets and customs of the Lingáyats will be found in C. P. Brown's article already referred to and an excellent summary of this was given in the Madras Census Report of 1871. *I shall, therefore, content myself with the statement that they are a sect of reformed Saivites fore, deny the authority of Bráhmaṇs and maintain there is only one God; they also declare themselves free from the bonds of caste, but their liberation is in practice

* See Census Report of 1871, p. 101, and Manual of Administration, p. (77).

† Paper on the Creed, Customs and Literature of the Jangams, by C. P. Brown, Madras Journal of Literature and Science, vol. xi, p. 174.

Chap. III. only partial. They are distinguished from other sects by their custom of always
para. 123. wearing a small lingam, the symbol of Siva, on their persons. Basava, the founder of the sect, is believed to have borrowed some of his doctrines and ideas from the principles and practices of the Christians residing on the western coast.*

123. Excluding the Agency tracts, the number of Hindus who returned sects other than the four which are shown separately, or who did not return any sect, is only 101,799. The

Other Hindu sects.

District.	Others.	Not stated.
Ganjam	7,168	27,145
Vizagapatam	578	13,719
Malabar	168	18,387
South Canara	7,813	992

numbers are high only in Ganjam, Vizagapatam, Malabar and South Canara, and for these districts I have separated the 'Not stated' from persons who returned other sects. It is only in Ganjam and South Canara that the numbers returning other sects are large. Of the 7,168 who come under this category in Ganjam, no less than 3,452 have returned themselves as of the Sakti sect. Of the rest many have returned tribal or caste names, as Savara (621), Játapu (612), Gadaba (71), Odia (49), &c. Of the Savaras again 394 have returned their sect as Bhíma, one of the Pándava brothers.† It is also found that 211 Hindus have returned Bauddha (Buddhist) as their sect. In South Canara 7,813 persons are found under the head of 'Others,' and of this number 7,653 have returned their sect (or had it returned for them) as *Bhútárádhika* or Devil-worshippers. Of the remainder 41 are Sáktis and 81 have returned their caste name as their sect. This is a common practice, and the bulk of the entries which in other districts have not been classed under one of the four sects given in the table are of this nature. The number of persons for whom no entry at all is found in the sect column of the schedule is large only in Ganjam, Vizagapatam, Malabar and the Agency tracts. In these two northern districts and the Agencies the explanation is to be found in the fact that many of the so-called Hindus are hill people, who have only recently come within the fold of Hinduism and to whom the refinement of sect is as yet unknown. In Malabar, as already stated, the people are indifferent to sect and this perhaps accounts for the comparatively large number in that district who have made no return at all.

124. There is one sect included among 'Others,' which deserves a brief notice.

Sáktis.

I refer to the Sáktis, the worshippers of *Sakti* or the female principle. This sect has been returned by 5,819 persons in British territory and by 9 inhabitants of the feudatory states. Their distribution is shown in the marginal statement. The total number of *Sakti*-

Statement showing the number of *Sakti*-worshippers.

District.	Total.	Males.	Females.
Ganjam	3,452	1,793	1,659
Vizagapatam	521	270	251
Godavari	37	19	18
Kistna	53	35	18
Nellore	5	1	4
Cuddapah	1	1	...
Kurnool	45	22	23
Bellary	929	500	429
Anantapur	519	266	253
Salem	108	55	53
South Canara	41	14	27
Ganjam Agency	108	60	48
Total	5,819	3,036	2,783
Banganapalle	3	1	2
Cochin	6	3	3
Grand Total	5,828	3,040	2,788

worshippers must, however, greatly exceed this. The cult is common in Tinnevely, Malabar and Travancore, yet not a single person has there been returned as a Sákti. The reason probably is that worshippers of *Sakti* usually belong to one of the well-known sects of Hindus and they return this as their sect, being more or less ashamed of their special and peculiar tenets. The principle of *Sakti* worship is that desire is conquered by indulgence, and its votaries are divided into two sections, one of which practises rites that are licentious to the last degree, consisting of the worship of a naked woman, followed by indulgence in animal food and spirituous liquors and the gratification of sensual passion.

* C. P. Brown, p. 145; A. C. Burnell, letter in *The Academy*, dated 12th May 1873.

† It is interesting to note in this connection that the Pándavas are held in great respect by the Kóyas or Kois, a section of Gonds found in the Godáva district, the southern part of the Vizagapatam agency. See *Indian Antiquary*, vol. v, p. 359.

125. In the matter of the proportions of the various sects, Pudukóta, Banganapalle and Sandúr occupy much the same position as the neighbouring British districts and the figures call for no special notice. In Travancore no less than 1,324,402 Hindus did not return any sect, and as statistics of sect were not tabulated in 1881, there is little to be said here on this subject. So far as the figures go they show that the Saivites are to the Vaishnavites in the ratio of about 3 to 1. In Cochin the Census officer was more successful in getting this column of the schedules filled up, and we find there nearly 8 Saivites to 1 Vaishnavite. In Malabar, as we have already seen, the ratio is 100 to 1.

126. Particulars of Christian sects will be found in Table A, which gives the number and the distribution of each sect. In preparing this table I have grouped certain sects together, and as it may be of interest to missionaries and others to know exactly what has been done in this direction, a statement is appended to this chapter showing under what head those sects which do not appear separately in Table A are included. In some cases the mission to which the individual belonged was given instead of the real sect. The most frequent of such entries were 'London Mission' and 'American Mission'; the former has been taken as the equivalent of Congregationalist and latter as denoting American Presbyterian, which is shown in the table as Presbyterian. We have such entries as Heathen, Jew, Free-thinker, &c., as the sect of Christians. Every entry of this kind was verified by reference to the schedule, and if it was actually found there it was retained in the table, for, however erroneous it might be, it was not possible to correct it. The number of persons making such returns is, of course, relatively infinitesimal.

127. The number of persons returning each of the principal sects is given in the annexed statement and the figures for 1881 are added for purposes of comparison. This statement shows some remarkable variations, but these are chiefly due to the entries in the

Statement showing strength of the principal Christian sects in 1881 and 1891.

Sect.	Strength in		Variation per cent.
	1891.	1881.	
Roman Catholic	565,159	462,642	+ 22.16
Church of England	118,966	41,496	+ 186.69
Baptist	28,887	18,325	+ 567.77
Lutheran	25,813	4,324	+ 789.38
Presbyterian	17,690	1,237	+ 974.53
Protestant	12,761	140,298	- 90.90
Congregationalist	5,564	3,041	+ 32.97
Wesleyan	2,376	1,230	+ 33.17
Syrian	2,106	2,890	- 27.13
Episcopalian	1,164	88	+ 1,087.76
Others	1,311	3,032	- 56.76
Not Stated	10,751	25,389	- 57.65
Total	865,528	690,700	+ 23.70

ant. Adding these to the other Protestant sects and distributing the Not stated between the Roman Catholic and Protestants rateably, we get the total numbers under each of these two main divisions of Christians:—

Sect.	1891.		1881.		Variation per cent.
	Number.	Percentage.	Number.	Percentage.	
Roman Catholics	572,292	66.12	480,152	68.62	+ 19.19
Protestants	290,264	33.54	210,547	30.88	+ 34.36

128. The Protestants have increased at a greater rate than the Roman Catholics, but the latter still outnumber the former by 2 to 1. In the west and south, except in Tinnevely,

Chap. III.
para. 125.

Chap. III. para. 129. the preponderance of the Catholics is very marked. In Tinnevely the Christian population is about equally divided between the Church of England and the Church of Rome. In the Telugu country the Roman Catholics are not very numerous, except in Kistna, where there are over 10,000 of them. But there are comparatively few Christians of any sect in the majority of the northern districts.

129. The number actually returning this sect is 118,966, and 71,703 of them are found in Tinnevely. There are over 8,000 in The Church of England. Madras and about 7,000 in Kistna, but in no other district does the Church of England number 5,000 members. It is probable, however, that many of the 12,761 Protestants belong to this church.

130. The Baptists number 88,967 and are most numerous in Nellore, where 40,000 out of the 47,000 Christians are of this persuasion. In Kistna this mission numbers 31,000 out of a total of 68,000, and in Kurnool 13,000 out of 23,000.

131. The Lutherans come next with a strength of 38,813, found chiefly in Kistna (18,000), Tanjore (6,000), South Canara (4,000), Malabar (2,000) and Godavari (2,000).

132. The number of Presbyterians according to Table A is 17,063, but if we include, as in the above statement, those who returned themselves as belonging to the Church of Scotland and the Free Church, the total amounts to 17,590. They are most numerous in Madura (8,500), where the majority belong to the American Presbyterian Church. There are about 2,000 in Nellore and nearly the same number in North Arcot.

133. This sect numbers only 5,564; about half of these are found in Cuddapah and over 1,000 of the remainder in Kurnool. The Congregationalist missionaries are, for the most part if not entirely, members of the London Mission.

134. The most numerous of the smaller sects are the Wesleyans with 2,376 persons. Then come the Syrians, represented by about 2,000 individuals in Malabar and Canara and a few others scattered over various districts. The Episcopalians number only 1,164 and include Methodist Episcopalians as well as members of the Churches of England and Ireland. The 1,311 'Others' are made up of 240 Methodists, 105 Salvationists, 101 Unitarians, 671 Unsectarian Christians, 83 Non-conformists, 55 Armenians, 11 of the Greek Church, 4 Quakers, 10 members of the Christian Advent Society, 3 members of the National Church of India, 1 Swedenborgian, 15 Jews, 11 Heathens and 1 Free-thinker.

135. In Ranganapalle and Sandur there are only 96 Christians. Of these, 52 are Congregationalists, 16 Roman Catholics, 14 Lutherans, and 9 Episcopalians. In Pudukota, out of 13,813 Christians, no less than 13,422 are Roman Catholics. The figures for Travancore

Travancore Christians.

Sect.	1891.	1881.
Roman Catholic	279,197	153,815
Syrian	176,574	287,409
Church of England	16,468	...
Protestant	25,739	57,318
Not stated	28,796	...

are, until explained, of a very striking nature. I give the principal sects in the marginal table, and it will be seen that the Roman Catholics have increased by 81.51 per cent., while the Syrians have decreased by 38.56 per cent. On turning, however, to the report on the census of 1881,* it will be found that Syrians in that year included Romo-Syrians, who are, in reality, Roman Catholics and have been so treated in the tables of 1891. The strength of these Romo-Syrians in 1881 is not known, so no comparison can be instituted. The Roman Catholics now form 56.05 per cent. of the total Christian population that

* Report on the Census of Travancore, 1881, p. 157.

have returned some sect, while the Syrians constitute 35.45 per cent. As many as 25,739 persons, however, are shown as Protestant, and it is probable that many of these are members of the Syrian Church, for the following instructions were issued for filling up the sect column: "In the case of Syrian Christians enter whether (1) Protestant, (2) Roman Catholic of the Latin rite, (3) Roman Catholic of the Syrian rite, or (4) Jacobite Syrian under the Patriarch of Antioch." The returns of Syrians, as reported by the Census officer of Travancore, are Roman Catholic Syrian 75, Jacobite Syrian 49,706, Jacobite 3,344, and Syrian Christian 123,524. I am unable to offer any opinion as to the probability of a large number of Jacobite Syrians being included under the general expression 'Syrian Christian.' As the figures stand the Jacobites form only 30.04 per cent. of the total non-Romanist Syrians, so that, if the statistics are complete, the nationalist party are in a majority of over 2 to 1. The Romo-Syrians, with 75 exceptions, appear to have returned themselves as Roman Catholics. In addition to the large number under such a general term as Protestant, the returns are further defective, in that over 28,000 persons have failed to return any sect.

For Cochin the returns are much more satisfactory, as only 698 individuals have failed to return their sect and the general term 'Protestant' does not occur at all. The Roman Catholics have increased by 24.24 per cent. and constitute 86.77 per cent. of the total number of Christians. The Syrians have nominally increased by 55.23 per cent. and form 12.53 per cent. of the Christian population. The instructions did not provide for the distinction of Jacobites from other Syrians, but 12,436 persons returned themselves as Jacobite Syrians

Cochin Christians.

Sect.	1891.	1881.
Roman Catholic	150,229	120,919
Syrian	21,764	14,083
Church of England	1,113	...
Presbyterian	7	1,409
Protestant	698	...
Not stated	...	...
TOTAL	173,831	136,361

and only 9,348 as Syrians simply. The Romo-Syrians number 56,826, or nearly three times as many as the Syrians proper.



APPENDIX TO CHAPTER III.

Statement showing the classification of Christian sects which do not appear separately in the tabulated returns.

Sect returned in the schedule.	Sect with which incorporated in Table A.
American	
American Church }	Presbyterian.
American Episcopalian	Episcopalian.
American Mission	
American Presbyterian }	Presbyterian.
Anglo-Syrian	Church of England.
Christian Advent Society	Others.
Church Mission	Church of England.
Church of Ireland	Episcopalian.
Dissenter	Non-conformist.
England Protestant	Church of England.
English Mission	Church of England.
Free Church Mission	Free Church of Scotland.
Free-thinker	Others.
Goanese	Roman Catholic.
Heathen	Others.
Independent	Non-conformist.
Jacobite Syrian	Syrian.
Jesuit	Roman Catholic.
Jew	Others.
London Mission	Congregationalist.
Lutheran Mission	Lutheran.
Methodist Episcopalian	Episcopalian.
National Church of India	Others.
Nazarene	Syrian.
Portuguese Church	Roman Catholic.
Puritan	Non-conformist.
Reformed American Church	Presbyterian.
Romo-Syrian	Roman Catholic.
Scotland Church Mission	Church of Scotland.
S.P.C.K. Mission	Church of England.
St. Thomas' Syrian	Syrian.
Swedenborgian	Others.
Swiss Reformed Church	Lutheran.
Zwinglian	Lutheran.

NOTE.—American and American Mission have been taken to mean members of one of the Presbyterian Churches of America, but in the case of Nellore the term more probably means American Baptist. In that district 766 persons returned their sects as American and 1,073 as American Mission. In Kistna again there are at least two non-Presbyterian American Missions, viz., the Baptist and Lutheran; but in that district the number of persons who returned American or American Mission as their sect was insignificant.

CHAPTER IV.

AGE AND SEX.

STATEMENT B.—Number of Persons of each Age in 10,000 of each Sex (1881).

District or State.	Total Population.				Age-period.								Total 0-4.				5-9.		10-14.	
	Under 1 year.		1 year.		2 years.		3 years.		4 years.		Males.		Females.		Males.	Females.	Males.	Females.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Ganjam ...	10,000	10,000	294	295	234	237	232	257	343	375	328	340	1,441	1,504	1,557	1,474	1,292	1,044		
Vijayapattam ...	10,000	10,000	265	262	185	193	175	201	302	342	313	330	1,240	1,337	1,491	1,444	1,404	1,089		
Godavari ...	10,000	10,000	327	326	175	194	254	277	362	380	303	305	1,431	1,482	1,420	1,390	1,356	1,077		
Kistna ...	10,000	10,000	327	334	140	150	213	225	288	311	292	296	1,290	1,335	1,389	1,385	1,324	1,191		
Nellore ...	10,000	10,000	301	213	155	168	150	160	175	201	217	240	998	1,082	1,258	1,268	1,207	1,232		
Cuddapah ...	10,000	10,000	350	265	105	117	96	101	132	154	165	183	748	820	1,258	1,347	1,504	1,366		
Kurnool ...	10,000	10,000	219	227	75	82	88	92	113	123	151	169	646	690	1,254	1,286	1,458	1,468		
Bellary ...	10,000	10,000	253	264	94	100	117	124	142	158	182	195	788	841	1,301	1,391	1,494	1,406		
Anantapur ...	10,000	10,000	253	262	94	99	92	97	120	140	167	185	793	843	1,293	1,398	1,523	1,432		
Madras ...	10,000	10,000	243	250	193	201	231	235	248	245	222	218	1,140	1,149	1,145	1,138	1,124	1,018		
Chingleput ...	10,000	10,000	303	317	285	304	279	302	259	291	277	301	1,406	1,516	1,308	1,359	1,237	1,133		
North Arcot ...	10,000	10,000	332	340	230	240	187	196	196	227	236	254	1,181	1,250	1,331	1,374	1,377	1,197		
Salem ...	10,000	10,000	339	334	181	181	167	167	188	201	229	226	1,104	1,109	1,337	1,341	1,450	1,278		
Coimbatore ...	10,000	10,000	313	314	233	233	218	218	261	277	274	271	1,305	1,313	1,401	1,372	1,343	1,174		
Nifgrisa ...	10,000	10,000	269	261	200	200	175	252	213	286	178	211	1,098	1,403	1,058	1,310	1,149	1,131		
South Arcot ...	10,000	10,000	321	335	261	271	221	241	244	278	295	318	1,845	1,443	1,256	1,321	1,255	1,101		
Tanjore ...	10,000	10,000	280	281	218	214	226	230	287	324	303	283	1,395	1,377	1,364	1,300	1,163	949		
Trichinopoly ...	10,000	10,000	348	337	213	212	226	230	287	292	286	278	1,320	1,312	1,335	1,303	1,208	1,028		
Madras ...	10,000	10,000	276	256	214	202	233	217	277	276	297	279	1,381	1,230	1,528	1,459	1,259	992		
Tinnevely ...	10,000	10,000	313	304	232	233	258	256	297	300	290	279	1,380	1,363	1,402	1,331	1,190	1,032		
Malabar ...	10,000	10,000	311	318	248	251	277	285	314	318	303	298	1,453	1,468	1,415	1,303	1,288	1,119		
South Canara ...	10,000	10,000	317	314	213	219	243	250	288	303	286	276	1,447	1,362	1,439	1,378	1,223	1,063		
TOTAL, AGENCY TRACTS	10,000	10,000	301	301	207	207	212	222	261	280	271	276	1,246	1,286	1,350	1,354	1,319	1,132		
Ganjam ...	10,000	10,000	...	217	23	435	...	435	51	217	26	217	103	1521	51	652	103	435		
Vijayapattam ...	10,000	10,000	...	77	152	188	192	243	202	254	374	365	981	1,127	1,255	1,271	1,225	1,138		
Godavari ...	10,000	10,000	...	313	...	...	...	...	173	312	86	...	844	655	431	1,875	845	987		
Kistna ...	10,000	10,000	...	91	167	183	127	244	161	264	351	245	793	1,126	877	1,261	864	1,099		
TOTAL, BRITISH TERRITORY	10,000	10,000	301	301	207	207	212	222	262	280	271	276	1,246	1,286	1,350	1,354	1,319	1,132		
Travancore ...	10,000	10,000	154	...	210	226	248	251	265	281	278	284	1,136	1,193	1,484	1,540	1,310	1,330		
Cochin ...	10,000	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Pudukotta ...	10,000	10,000	558	241	183	179	218	...	277	284	286	287	1,925	1,209	1,475	1,884	1,167	940		
Bangalore ...	10,000	10,000	168	178	64	73	62	66	79	111	126	105	489	583	1,125	1,134	1,688	1,587		
Sandur ...	10,000	10,000	227	257	54	54	93	105	111	141	179	172	574	739	1,531	1,441	1,540	1,456		

NOTE.—Age details for Cochin are not available.

STATEMENT B.—Number of Persons of each Age in 10,000 of each Sex (1881)—continued.

Age-period—cont.																				
15-19.		20-24.		25-29.		30-34.		35-39.		40-44.		45-49.		50-54.		55-59.		60 & over.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	
District or State.																				
Ganjam ...																				
Vijayapattam ...																				
Godavari ...																				
Kistna ...																				
Nellore ...																				
Cuddapah ...																				
Kurnool ...																				
Bellary ...																				
Anantapur ...																				
Madras ...																				
Chingleput ...																				
North Arcot ...																				
Salem ...																				
Coimbatore ...																				
Nifgrisa ...																				
South Arcot ...																				
Tanjore ...																				
Trichinopoly ...																				
Madura ...																				
Tinnevely ...																				
Malabar ...																				
South Canara ...																				
TOTAL ...																				
Agency. { Ganjam ...																				
Vijayapattam ...																				
Godavari ...																				
TOTAL, AGENCY TRACTS ...																				
Total, British Territory.																				
Tirunelveli ...																				
Cochin ...																				
Pudukkotta ...																				
Banganapalle ...																				
Saurur ...																				

STATEMENT C.—Showing the number of persons living at each age in 100,000 of the total population.

Age.	Total.	Males.	Females.	Age.	Total.	Males.	Females.
Infant ...	3,267	1,636	1,631	53 ...	89	60	29
1 ...	1,679	777	902	54 ...	137	84	53
2 ...	3,183	1,548	1,635	55 ...	1,119	581	538
3 ...	3,470	1,616	1,854	56 ...	203	105	98
4 ...	3,106	1,492	1,614	57 ...	59	32	27
5 ...	3,182	1,590	1,592	58 ...	195	110	85
6 ...	3,020	1,519	1,501	59 ...	79	37	42
7 ...	2,512	1,215	1,297	60 ...	2,600	1,129	1,471
8 ...	3,204	1,661	1,543	61 ...	44	23	21
9 ...	1,551	799	752	62 ...	134	73	61
10 ...	3,955	2,076	1,879	63 ...	62	43	19
11 ...	766	374	392	64 ...	69	27	42
12 ...	3,077	1,738	1,339	65 ...	456	227	229
13 ...	896	472	424	66 ...	80	49	31
14 ...	1,494	824	670	67 ...	39	20	19
15 ...	2,068	1,121	947	68 ...	82	35	47
16 ...	2,090	1,093	997	69 ...	29	15	14
17 ...	643	312	331	70 ...	952	406	546
18 ...	2,769	1,379	1,390	71 ...	17	10	7
19 ...	551	271	280	72 ...	43	26	17
20 ...	5,428	2,338	3,150	73 ...	16	12	4
21 ...	370	181	189	74 ...	25	16	9
22 ...	1,768	869	894	75 ...	186	79	107
23 ...	640	331	309	76 ...	23	12	16
24 ...	1,049	540	509	77 ...	8	5	3
25 ...	5,262	2,508	2,774	78 ...	20	11	9
26 ...	974	512	462	79 ...	14	2	12
27 ...	618	336	280	80 ...	339	143	196
28 ...	1,419	711	708	81 ...	4	3	1
29 ...	341	184	157	82 ...	10	6	4
30 ...	6,819	3,210	3,609	83 ...	4	2	2
31 ...	173	111	67	84 ...	7	6	1
32 ...	901	460	441	85 ...	36	20	16
33 ...	273	160	113	86 ...	4	3	1
34 ...	376	220	156	87 ...	2	1	1
35 ...	3,581	1,953	1,628	88 ...	6	4	2
36 ...	707	397	310	89 ...	3	1	2
37 ...	266	160	126	90 ...	62	26	36
38 ...	788	449	339	91 ...	...	...	...
39 ...	211	113	98	92 ...	...	...	...
40 ...	5,577	2,765	2,812	93 ...	...	...	...
41 ...	108	65	43	94 ...	2	1	1
42 ...	604	296	208	95 ...	10	7	3
43 ...	199	114	85	96 ...	...	...	...
44 ...	203	123	80	97 ...	1	...	1
45 ...	2,307	1,248	1,059	98 ...	2	...	2
46 ...	302	185	117	99 ...	1	1	...
47 ...	148	91	57	100 ...	1	...	1
48 ...	454	257	197	112 ...	1	1	...
49 ...	109	59	50	Not stated ...	19	12	7
50 ...	3,943	1,846	2,097				
51 ...	73	37	36				
52 ...	229	133	96	Total ...	100,000	49,941	50,059

STATEMENT D.—Showing the number of persons returned as living at each age in 10,000 of the population of the Madras City.

Age.	Total.	Males.	Females.	Age.	Total.	Males.	Females.
Infant ...	337	176	161	53 ...	14	7	7
1 ...	137	73	64	54 ...	16	13	3
2 ...	258	119	139	55 ...	118	66	52
3 ...	282	137	145	56 ...	21	8	13
4 ...	260	119	141	57 ...	4	2	2
5 ...	330	158	172	58 ...	18	11	7
6 ...	226	124	102	59 ...	7	2	5
7 ...	249	128	121	60 ...	304	137	167
8 ...	250	122	128	61 ...	9	2	7
9 ...	159	84	75	62 ...	12	9	3
10 ...	365	174	191	63 ...	4	2	2
11 ...	81	34	47	64 ...	6	4	2
12 ...	279	168	110	65 ...	37	23	14
13 ...	108	49	59	66 ...	13	10	3
14 ...	160	74	86	67 ...	8	6	2
15 ...	189	101	88	68 ...	7	6	1
16 ...	166	76	90	69 ...	4	2	2
17 ...	105	53	52	70 ...	110	56	54
18 ...	256	119	139	71 ...	3	...	3
19 ...	107	58	49	72 ...	3	3	...
20 ...	498	224	274	73 ...	1	...	1
21 ...	54	29	25	74 ...	1	1	...
22 ...	223	107	116	75 ...	16	8	8
23 ...	82	51	31	76 ...	2	2	...
24 ...	84	56	28	77 ...	...	...	...
25 ...	553	243	310	78 ...	...	...	...
26 ...	82	49	33	79 ...	3	2	1
27 ...	83	42	41	80 ...	52	24	28
28 ...	155	74	81	81 ...	...	...	...
29 ...	51	26	25	82 ...	3	1	2
30 ...	693	358	335	83 ...	3	3	...
31 ...	21	11	10	84 ...	1	1	...
32 ...	95	51	44	85 ...	3	1	2
33 ...	33	22	11	86 ...	1	1	...
34 ...	31	15	16	87 ...	2	2	...
35 ...	404	226	178	88 ...	2	2	...
36 ...	44	31	13	89 ...	12	2	10
37 ...	31	17	14	90 ...	...	...	...
38 ...	58	26	32	91 ...	...	...	...
39 ...	33	16	17	92 ...	...	...	...
40 ...	622	304	318	93 ...	...	...	...
41 ...	16	12	4	94 ...	...	...	...
42 ...	55	28	27	95 ...	1	...	1
43 ...	18	7	11	96 ...	...	...	...
44 ...	15	7	8	97 ...	...	...	...
45 ...	255	136	119	98 ...	...	...	...
46 ...	23	16	7	99 ...	1	...	1
47 ...	28	14	14	100 ...	...	...	...
48 ...	38	21	17	Not stated ...	1	1	...
49 ...	34	16	18				
50 ...	418	194	224				
51 ...	9	6	3	Total ...	10,000	5,024	4,976
52 ...	32	23	9				

CHAPTER IV.

AGE AND SEX.

(TABLE VII.)

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para. 136.

136. This chapter is divided into three sections. The first relates to the ages of the people; the second, for which I am indebted to my brother, Mr. G. H. Stuart, contains a life-table together with an account of the manner in which it was compiled; in the third the proportion of the sexes is discussed.

Introductory.

Section I.—Age.

137. In connection with the subject of returns of age at a census, the following extract from the report on the census of 1881 in England and Wales will be read with interest:—

Causes of mis-statement of age.

"As regards ages, there can be no doubt that the returns made by individuals are in a very considerable proportion of cases more or less inaccurate. In the first place, very many persons, especially among the illiterate classes, do not know what their precise age may be. They keep their date of birth in mind for the earlier part of their life up to 20 years or so, but after this they lose reckoning, and can only make an approximative statement. Such persons have a strong tendency to return their age as some multiple of 10—30, 40, 50, 60, &c., as the case may be, though in reality they may be a year or two on one or the other side of that precise age. There is also a similar tendency, though in a far less degree, to return the unknown age as 35, 45, 55, or other uneven multiple of five. In consequence of this, when the ages of a considerable number of persons, as returned by themselves or their friends, are abstracted by single years, there is always found to be a marked excess for the years that terminate the decades, and a less marked, but distinctly recognisable, excess for the years that terminate the intervening quinquennia."

The errors in the returns that are found in England exist to a much greater extent in the Madras schedules. A birth-day is more or less an important occasion in England, but in India, or at least in this part of it, the anniversary of a person's birth is not marked in any way. Again, the people of Madras are much more ignorant than those of England and Wales, and have but the vaguest ideas of time. They divide life into childhood, youth, manhood or womanhood and old age. Every old person is 60, an adult is 25, 30 or 40; a youth is 18, while for children a somewhat more particular approximation is attempted. The current year of life is always given as the age,* but the error due to this cause is trifling, when it is remembered that fully nine-tenths of the population are ignorant of their exact ages. Moreover, the instructions to the enumerators were to enter in the age column the number of years completed, so that when an individual did know his exact age it was probably entered correctly.

138. The number of persons at each of the first five years of life, and after that at each quinquennium up to 60, is given in Table VII, while statements A and B prefixed to this chapter give a similar distribution of 10,000 males and 10,000 females of the population of each district in 1891 and 1881; statement C gives the numbers at every year of life out of a total of 100,000 of both sexes, and statement D contains the same information for 10,000 of the inhabitants of the City of Madras.

Description of age tables and statements.

* Mr. G. Stokes denies this (*Census Report*, 1881, vol. iii, p. 10), but I made careful inquiries in every district in the presidency and found the custom to be universal. He instanced South Canara as the district in which he was confident that the practice did not exist, but my inquiries there did not show the custom to be different from that followed in the rest of the presidency.

139. The numbers as they stand are obviously inaccurate. In a population that is either increasing or stationary, the numbers living at each age steadily diminish as the age advances.

Inaccuracy of the returns.

But in the age returns of this census we find in the case of males a violent drop at age 1, then an almost equally sudden rise at age 2, continued to age 3, and then a fall at age 4. Moreover, the number of children of 3 years of age is greater than the number of infants below one year. Again, taking the numbers in each quinquennial period, we find in the case of males a steady decrease up to the 20—24 period, then a slight rise at 25—29, with a further rise at 30—34. From this period onward the partiality for multiples of ten is very marked, the numbers in the periods containing those multiples being considerably greater than those in the preceding periods. In the case of females there is a very sudden rise at the age-period 20—24, and the preference for multiples of ten is even more marked than among males.

140. These inaccuracies in the returns of age are not confined to Madras or to this census, as will appear from the following statement:—

Inaccuracies common to all provinces.

Age.	Number at each age in a total of 10,000.											
	Madras.				Bombay.		Bengal.		N.W. P. and Oudh.		Punjab.	
	1891.		1881.		1891.		1881.		1891.		1891.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
0 ...	830	838	301	301	948	374	234	235	342	359	409	405
1 ...	171	178	201	207	159	181	234	248	148	165	292	319
2 ...	315	327	212	222	300	345	292	321	247	281	301	335
3 ...	352	365	262	280	312	358	350	381	294	335	302	320
4 ...	314	316	271	276	320	340	320	320	277	295	328	332
TOTAL 0—4 ...	1,482	1,524	1,247	1,286	1,440	1,598	1,430	1,505	1,308	1,436	1,632	1,771
5—9 ...	1,391	1,346	1,380	1,354	1,394	1,378	1,549	1,488	1,327	1,299	1,406	1,391
10—14 ...	1,084	953	1,218	1,132	1,056	877	1,139	902	1,186	941	1,040	898
15—19 ...	828	768	875	798	794	765	757	763	838	792	1,041	1,081
20—24 ...	620	973	619	974	635	929	711	840	856	899	923	940
25—29 ...	621	965	627	873	948	931	882	935	667	897	941	999
30—34 ...	628	685	692	679	867	869	856	892	909	646	598	609
35—39 ...	592	505	691	488	628	556	631	554	565	544	648	609
40—44 ...	670	661	650	690	627	626	631	634	703	722	349	322
45—49 ...	366	305	329	290	371	333	356	319	341	321	462	490
50—54 ...	427	460	416	474	429	437	409	442	483	517	196	192
55—59 ...	177	157	168	152	172	157	165	168	152	150	364	354
60 and over ...	515	613	488	592	434	544	491	644	600	642	325	295
TOTAL ...	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

141. For the first three quinquennial totals the numbers diminish as the age advances, but the degree of diminution is probably inaccurate, the difference between the periods 0—4 and 5—9 being insufficient, while that between 5—9 and 10—14 is too large. In the case of children who are about 5 there is a tendency to state the age as 5 exactly, and thus a number is lost to the 0—4 period and added to the 5—9 period. The latter period again loses a considerable number of children of 8 or 9, whose ages are

Statistics for quinquennial periods.

Chap. IV. returned as 10, but the numbers being greater at the lower ages, it gains more than it loses. In the same way the 10—14 period gains and loses, but the gains do not exceed the losses in this case. The numbers in this period are relatively small, but it must be remembered that those now aged 10—14 are the survivors of those aged 0—4 in 1881, and their numbers were much below the normal owing to the famine of 1877-78. A reference to statement A, prefixed to this chapter, will show that it is in the famine districts that this falling off in the numbers at 10—14 is most marked.

142. For the ages above 14, decennial periods with the multiple of ten in the centre give results which approximate more closely to accuracy than those furnished by the quinquennial periods of the tables. The numbers out of a total of 10,000 living in each decennial period are shown in the marginal statement.

Decennial periods.

Age.	1891.	
	Males.	Females.
15—24	1,648	1,756
25—34	1,649	1,750
35—44	1,292	1,166
45—54	792	765
55 and over	692	770

The first point that calls for notice is the relatively large number in the 25—34 period, for in the case of males it exceeds the number in the previous period by 1, while among females there is a decrease of 6 only. In 1881 the figures were even more remarkable; for, the numbers at the later period, were, in the case of both sexes, appreciably greater than at the earlier age. The numbers now living at these two periods are the survivors of those who in 1881 were at the ages 5—14 and 15—24. I give below the numbers at the two enumerations:—

Age.	1881.	
	Males.	Females.
15—24	1,694	1,772
25—34	1,719	1,800

Age.	Census of 1891.		Census of 1881.	
	Males.	Females.	Males.	Females.
5—14	2,903,676	3,162,740	2,984,325	3,755,522
15—24	2,905,438	3,151,933	2,500,387	2,678,328
25—34	2,905,438	3,151,933	2,537,939	2,720,501

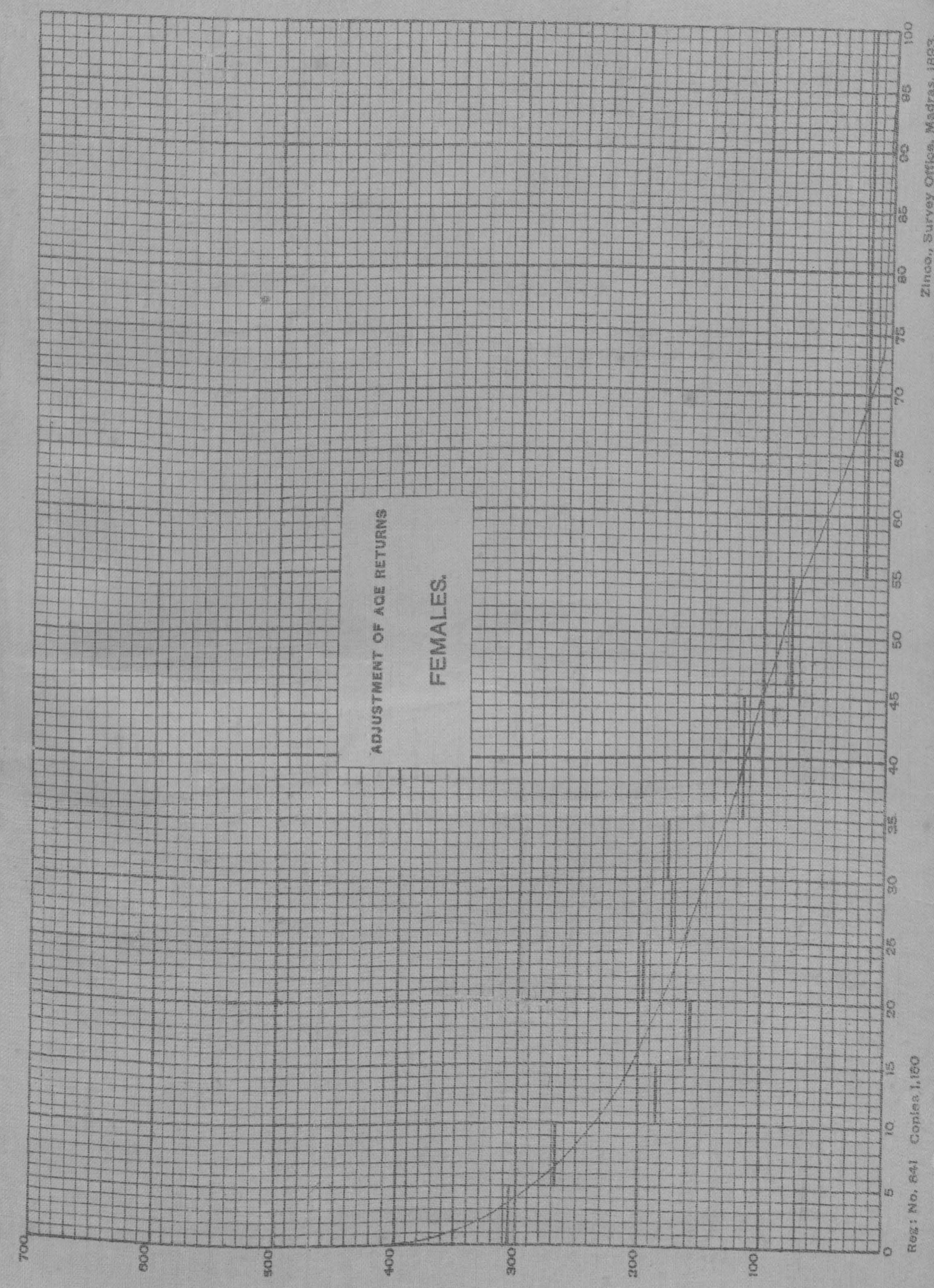
The numbers at the 25—34 period in 1891 actually exceed those at the 15—24 period in 1881, the difference being 405,051 in the case of males and 473,605 in the case of females. The under-statement in the one case and the over-statement in the other are presumably due to the preference for the ages 25 and 30 by young men and women, a preference which is shown by statement C prefixed to this chapter. The addition to this period must have been made chiefly from the 15—24 period, and there can be no doubt that the numbers in the latter decennium are greatly understated.

143. An attempt has been made to correct the inaccuracy in the returns by means of what is known as the graphic method. In the accompanying diagrams rectangles are drawn to represent the numbers returned in each quinquennial period from 0 to 34 and in each decennial period from 35 to 54, while the numbers returning ages of 55 and upwards are represented by a rectangle, which has, as its base, the line denoting the age-period 55—99. A curve is then drawn freely so as to descend in a fairly regular manner and to include an area equal to the sum of the areas of the rectangles. In the following statement the numbers at each age-period in 10,000 of each sex as given by these diagrams and as actually returned are compared. I have also added Mr. Hardy's adjusted numbers based on the census returns of 1871 and 1881, and the proportions obtained from the life-table given in the second section of this chapter. It must be remembered that the life-table figures

Adjustment of the figures.

represent the numbers returned in each quinquennial period from 0 to 34 and in each decennial period from 35 to 54, while the numbers returning ages of 55 and upwards are represented by a rectangle, which has, as its base, the line denoting the age-period 55—99. A curve is then drawn freely so as to descend in a fairly regular manner and to include an area equal to the sum of the areas of the rectangles. In the following statement the numbers at each age-period in 10,000 of each sex as given by these diagrams and as actually returned are compared. I have also added Mr. Hardy's adjusted numbers based on the census returns of 1871 and 1881, and the proportions obtained from the life-table given in the second section of this chapter. It must be remembered that the life-table figures





late to a stationary population, and that the proportions at the early ages are higher and those at the late ages higher than they will be in an increasing population :—

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Age-period.	Males.				Females.			
	Census of 1891.		Mr. Hardy's adjusted numbers.	Life-table.	Census of 1891.		Mr. Hardy's adjusted numbers.	Life-table.
	Actual.	Adjusted.			Actual.	Adjusted.		
0	330	370	...	318	333	380	...	327
1	171	330	...	269	178	340	...	282
2	315	307	...	246	327	320	...	269
3	352	295	...	232	365	305	...	246
4	314	283	...	223	316	290	...	237
TOTAL 0—4 ...	1,482	1,585	1,634	1,288	1,624	1,635	1,621	1,351
5—9	1,391	1,275	1,293	1,045	1,346	1,285	1,313	1,108
10—14	1,084	1,110	1,166	983	923	1,085	1,134	1,024
15—19	828	975	1,042	930	782	990	1,048	954
20—24	820	870	913	872	973	890	906	875
25—29	821	770	793	813	865	770	777	793
30—34	828	690	693	750	885	700	662	716
35—39	592	615	593	619	661	645	475	579
40—44	670	545	492	546	305	455	399	514
45—49	365	465	330	465	400	375	331	444
50—54	427	385	257	372	157	290	266	367
55—59	177	300	206	331	613	420	456	631
60 and over ...	515	415	406	...	...	...	...	...
TOTAL ...	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

The results obtained from the diagrams are nothing more than rough approximations, but it may at least be claimed for them that they are much nearer the truth than the census figures. The numbers of both males and females at the 0—4 period are considerably larger than the actual numbers returned, and they are possibly too high, as the life-table requires a steeper curve at this part of the diagram, but this would involve a still further reduction in the numbers at 5 to 9 and a wide departure from the census statistics. Again, the numbers at 60 and over are possibly too low, but elderly people in this country are very prone to over-state their ages, and I have no hesitation in saying that the census figures for this period are too high. The proportion at this age for males is higher than that given by Mr. Hardy, but in the case of females Mr. Hardy has 456 against my 420.

144. In dividing the population into the useful and dependent, the supporters and supported, it is first necessary to determine at what age youths and girls cease to be dependent, and what age youths and girls cease to be dependent, and at what period men and women cease to be 'workers.' The ages suggested by the Census Commissioner are 18 or 19 and 59 for males, and 15 and 44 for females. The period of 'useful' life-time varies a good deal in different classes, and among the agricultural and labouring population, which forms over 60 per cent. of the people of this presidency, boys and girls begin to contribute to the family income, either directly or indirectly, at a very early age; but taking the population as a whole a boy or girl may be assumed to be self-supporting at 15. For the upper limit 59 for men and 44 for women is near enough. On this assumption, the proportion of workers is 55.28 per cent. of the males and 46.72 per cent. of the females. The proportions in other provinces are given in the marginal statement. If we take the adjusted age figures the proportions of the useful are 56.15 per cent. for males and 44.55 per cent. for females. In England and Wales the proportions are 55.66 per cent. and 44.92 per

Percentage of Supporters.

Province.	Males.	Females.
Madras	55.28	46.72
Bombay	56.74	46.76
Bengal (1881)	54.01	45.82
N.W.P. and Oudh	53.99	47.03
Punjab	55.97	46.39
Assam	53.94	46.05
Mysore	58.78	46.79

the proportions of the useful are 56.15 per cent. for males and 44.55 per cent. for females. In England and Wales the proportions are 55.66 per cent. and 44.92 per

chap. IV. cent., but in that country 20 must be taken as the beginning of the period.
para. 145. useful life, while the end of it may be raised to 64 for males and 49 for females. This will reduce the proportions of workers, so that as regards the percentage of supporters to total population, Madras is in a better position than England and Wales.

145. The mean age of the living is 24.78 years, being 24.56 years for males and 24.98 for females. This calculation is based on figures as returned. If we take the adjusted figures as returned. If we take the adjusted figures as returned.

Mean age.

the mean age is 24.12 years for males and 23.99 years for females. In England and Wales the mean age is 26.4 years for both sexes, 26.0 years for males and 26.8 years for females. The lower mean age of the Madras population is the result of the high birth and death-rates, which give relatively more children and fewer old people. The mean age of the living, however, is not of much value in life statistics as the same average may be the result of several very different sets of circumstances.

146. To obtain statistics regarding the duration of life we must turn to the life-table given in the second section of this chapter.

Expectation of life.

That table is based on the mortality statistics of the City of Madras, but the conditions of life there do not differ greatly from those found in ordinary towns and villages, and it is improbable that the death-rate is much, if at all, higher than that for the presidency as a whole. According to this table the expectation of life, or mean after life-time, at birth is 24.40 years for males and 24.66 years for females. In the life-table which was prepared by Mr. G. Stokes after the census of 1881, the corresponding figures are 28.72 and 29.52 years, but in Mr. G. F. Hardy's table for Madras the expectation of life is only 22.35 years for males and 24.18 for females. Now in England the mean after life-time at birth is as high as 41.92 years for males and 45.25 years for females.* These figures bring out very clearly the marked difference in respect of the duration of life between the population of England and Madras. Every child born in the former country will,

Expectation of life in England and Madras.

Age.	Males.		Females.	
	Madras.	England.	Madras.	England.
0 ...	24.40	41.92	24.66	45.25
5 ...	30.68	51.47	37.06	53.65
10 ...	36.02	48.16	35.55	50.82
15 ...	34.98	43.94	32.95	46.15
20 ...	31.90	33.86	30.40	42.10
25 ...	28.96	26.05	28.13	38.96
30 ...	23.10	28.88	23.41	31.12
35 ...	17.25	22.34	17.89	24.21
40 ...	11.93	16.09	12.25	17.37
45 ...	7.95	10.79	7.39	11.55
50 ...	4.92	6.52	3.84	7.04

on an average, live nineteen years longer than one born in Madras, and this is chiefly due to the very high mortality in childhood, though at every age the death-rate is higher than in England. In Madras about 28 per cent. of the children born die before the completion of the first year of life, and one-half of them are dead before they reach the age of nine in the case of males, and before they are fourteen in the case of females. In England the population is not reduced to one-half until the forty-fifth year for males and the forty-seventh year for females. In Madras up to age 5 the death-rate is higher for males than for females. From the age of 6 to that of 40 the positions are reversed, from 41 to 66 the females have again better lives, at 67 the rates are the same and from 68 to the end of life the male death-rate is the lower. For these higher ages, however, the figures are of doubtful accuracy, and it is probable that from the age when child-bearing ceases female life is better than male.

147. The death-rate for all ages given by the life-table is 40.99 per mille per annum for males and 40.54 per mille for females.

Birth and death-rates.

For persons of both sexes, the proportion being 1,022 females to 1,000 males, the death-rate is 40.76 per mille per annum. If this is applicable to the whole presidency then, since the population increased by 14½ per mille per annum, the birth-rate must have been about 55 per mille between 1881

* These figures are taken from Mr. Noel Hamphreys' modification of Farr's 3rd English Life-table. See Journal of the Statistical Society for June 1883.

and 1891, and even, if the average death-rate were only 37 per mille, the birth-rate must have been nearly 52 per mille. Mr. Hardy gives 40.9 as the death-rate and 53.0 as the birth-rate in a non-famine period. Mr. G. Stokes adopts much lower rates, viz., 33.70 for deaths and 42.45 for births, but I think there can be no doubt that these are too low. In every 1,000 of the population there are 164 wives of child-bearing ages, and Mr. Stokes' birth-rate gives only 259 births annually to a thousand wives of reproductive ages, which is considerably lower than the fertility in England where the proportion is about 290 per thousand. Considering the much greater infant mortality which prevails in India and the stronger desire for offspring the ratio of births to wives must be greater in Madras than in England. Mr. Hardy's birth-rate of 53 per mille gives 323 births to 1,000 wives of reproductive ages, while a birth-rate of 52 per mille represents 317 annual births per 1,000 wives. I think these figures afford valuable evidence in support of the conclusion that the birth-rate is a very high one and certainly not less than 50 per mille.*

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148. The defects in the registration of births and deaths have been referred to in Chapter II, but it will be of interest to compare here the rates given by the registers with those stated in the preceding paragraph. I accordingly append a statement showing the birth and death-rates of the last five years. I also give the district extremes and the rate as corrected for the difference between the population of 1881, upon which the Sanitary Commissioner's calculations are based, and that of the middle of each year as it would be on the assumption of a uniform rate of increase of 1.45 per cent. per annum:—

Year.	Number of births per mille per annum.				Number of deaths per mille per annum.			
	Mean ratio.	District extremes.		Corrected mean.	Mean ratio.	District extremes.		Corrected mean.
		Maximum.	Minimum.			Maximum.	Minimum.	
1886 ...	30.4	42.0	17.8	28.14	19.7	36.1	15.4	18.24
1887 ...	31.0	42.5	18.4	28.29	21.6	39.4	15.8	19.71
1888 ...	29.9	40.8	19.1	26.89	21.4	37.3	12.5	19.25
1889 ...	30.9	42.2	18.1	27.39	23.5	42.6	15.6	20.83
1890 ...	31.3	43.6	18.2	27.35	22.8	42.7	13.4	19.92

It will be seen that both the birth and death-rates are very much under-stated, and that this under-statement is considerably greater if the estimated population of the year instead of that of 1881 be adopted as the basis of the calculation. The district divergences from the mean are very large, much larger than they would be if the returns were even approximately correct. On the other hand the ratios remain fairly constant from year to year and probably afford a fair index of the relative number of births and deaths.

149. The mean age at death deduced from these imperfect vital statistics is 25.52 years for persons, 25.23 years for males and 25.84 years for females. That these figures are too high is obvious from the fact that they are higher than those given by the life-table for a stationary population. On *a priori* grounds too we may confidently conclude that the rate of omission by the registering officers would be much greater for infants and young children than for adults, and this view is confirmed by the statistics for the five years 1886-90, upon which the averages have been calculated. The result of this omission is that the mean age at death as given by the registration statistics is unduly raised. It is unnecessary, however, to pursue this subject

* The proportion of wives of reproductive ages to the total population is calculated on the uncorrected age rates, but for this period (1886-90) the figures are approximately correct. Moreover such error as exists is more than counterbalanced by the whole of the births being assumed to be legitimate and by the further assumption that the mothers are in no case below 15 or over 39.

Chap. IV. para. 150. further, for the mean age at death is a very fallacious index of the conditions of life and is only useful in comparing two populations, of which the age constitution is practically the same.

150. In the marginal statement the age statistics of 1891 are compared with those of the previous census. The differences are considerable in the first and third periods. In 1881 12.47 per cent. of the males were under 5 years of age: in 1891 the proportion was 14.82 per cent. For females the percentages were 12.86 and 15.24 respectively. At the 5 to 9 period the proportion in 1891 was for males slightly higher and for females slightly lower than in 1881. At the next quinquennium (10 to 14) the divergence is very great. The males of these ages formed 13.18 per cent. of the total male population in 1881 and only 10.84 per cent. in 1891. The females constituted 11.32 per cent. of the female population in 1881 and 9.23 per cent. in 1891. The above proportions are based on the uncorrected figures, but this does not greatly affect the comparison, as the causes and the results of the errors in the returns must have been much the same on both occasions. An examination of the district figures shows that while the direction of the variation in the two sets of figures is the same in every district except Ganjam, the divergence is much greater in the famine than in the non-famine districts. The following figures for two famine and two non-famine districts, one pair being taken from the Telugu and the other from the Tamil country, afford a striking illustration of this feature:—

Comparison with 1881.

Age.	Madras.			
	Males.		Females.	
	1891.	1881.	1891.	1881.
0 ...	330	301	338	301
1 ...	171	201	178	207
2 ...	315	212	327	222
3 ...	352	262	365	280
4 ...	314	271	316	276
TOTAL 0-4.	1,482	1,247	1,524	1,286
5-9 ...	1,391	1,380	1,346	1,354
10-14 ...	1,084	1,318	923	1,132
15-19 ...	828	875	783	798
20-24 ...	820	819	973	974
25-29 ...	821	827	865	878
30-34 ...	828	802	885	927
35-39 ...	592	591	505	458
40-44 ...	670	650	681	600
45-49 ...	365	329	305	290
50-54 ...	427	416	450	474
55-59 ...	177	168	157	152
60 and over.	515	488	613	592
TOTAL ...	10,000	10,000	10,000	10,000

Statement of number in a total population of 10,000 at each of the first three Age-periods in two Famine and two Non-famine Districts in 1881 and 1891.

District.	Year.	0-4.		5-9.		10-14.	
		Males.	Females.	Males.	Females.	Males.	Females.
Godavari (non-famine) ...	1881	1,431	1,482	1,420	1,330	1,355	1,077
	1891	1,464	1,505	1,456	1,354	1,338	1,075
Cuddapah (famine) ...	1881	748	820	1,288	1,347	1,504	1,366
	1891	1,285	1,401	1,300	1,325	832	723
Tanjore (non-famine) ...	1881	1,396	1,377	1,364	1,300	1,165	949
	1891	1,443	1,389	1,331	1,267	1,167	943
Salem (famine) ...	1881	1,104	1,109	1,337	1,341	1,430	1,278
	1891	1,667	1,681	1,448	1,393	890	763

The low proportion of children under five which was found in all famine districts in 1881 was due to the effect of the famine which not only killed off young children but also exercised a powerful check on births. The children of the 10-14 period of 1891 are the survivors of those who were under 5 in 1881, and we, therefore, find at the recent census a low proportion in the 10-14 quinquennium.

151. The figures for the Ganjam district show the mark of the famine of 1888, for the proportion of children under five is much lower than in 1881, and this is due partly to the famine mortality and partly to the check on births, which is one of the most noticeable effects of severe scarcity. The increase in the proportions at the other age-periods indicates that the population was increasing at a fairly rapid rate prior to the famine, but of course all these proportions are raised somewhat by the decline in the numbers under five.

Ganjam: Proportion in 10,000 of each sex.

Age.	Males.		Females.	
	1891.	1881.	1891.	1881.
0-4 ...	1,323	1,441	1,332	1,504
5-9 ...	1,664	1,557	1,642	1,473
10-14 ...	1,414	1,292	1,173	1,044

152. Another important difference between the age constitution of the people in 1881 and 1891 is the greater proportion of persons of 60 years old and upwards which is found in the latter year. The percentage has increased from 4.88 to 5.15 in the case of males and from 5.92 to 6.13 in the case of females. The increase in the proportions is most marked in the famine area, but it is found in all districts except Godavari, Kistna and Madras, though in the case of females the proportion has decreased in Ganjam and Malabar also.

Percentage of useful ages.

Year.		Males.	Females.
1891 ...		5,628	4,672
1881 ...		5,567	4,720

The proportions at the useful ages, viz., 15 to 59 for males and 15 to 44 for females, were much the same in 1881 as in 1891, such difference as existed being in favour of the former year. The district variations in the proportion will be noticed below.

153. The proportions at each age-period vary very widely from district to district, and it is not always easy to account for the divergences. In the famine districts, as we have already seen, the proportion of children is generally higher and that of old people lower than in non-famine areas, but the variations in each of the two groups are of considerable magnitude and the extremes overlap one another; thus the proportion of males under five is highest in Salem, Coimbatore and Madras, three famine districts, but it is also very high in South Arcot and Malabar, which were not appreciably affected by the famine; and, excluding the Nilgiris and Madras, it is lowest in Cuddapah—a famine district. It is, however, of little use to study, in this connection, the proportions of 1891 alone: to appreciate them at their proper value it is also necessary to take into account the proportions in 1881, for the majority of the people who were then alive were still living in 1891. We find for example that the relative increase in the proportion under five is in fact greater in Cuddapah than in Salem, though the one has the lowest and the other the highest proportion in the presidency. The proportion of children under ten is lowest in the Nilgiris and Madras. The proportion of old people is also lowest in the Nilgiris, and these two features are due to the population being largely composed of immigrant adults. In Madras, too, the low ratio of children is probably due to the immigration of adults, but the relatively high number of people over 60 indicates that these immigrants become permanent settlers. It will be observed that the number of old people is comparatively small in the two West Coast districts.

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154. The following statement shows the percentage of the population at the useful ages in each district. The cause of the high proportion in the Nilgiris and Madras has already been noticed. The low ratio in Ganjam may be ascribed in part to emigration, but this explanation is not applicable to Godávári, and I cannot account for the low percentage in that district:—

Statement showing the Percentage of Males and Females at the useful Ages.

District.	Males (15—59).		Females (15—44).	
	1891.	1881.	1891.	1881.
	PER CENT.	PER CENT.	PER CENT.	PER CENT.
Ganjam ...	51.31	52.45	45.59	45.74
Vizagapatam ...	53.53	54.29	46.54	47.11
Godávári ...	51.99	52.00	46.26	45.82
Kistna ...	53.64	51.91	45.23	44.17
Nellore ...	56.06	56.48	46.65	47.44
Cuddapah ...	60.52	60.39	49.81	50.64
Kurnool ...	59.50	60.81	49.97	51.40
Bellary ...	58.09	60.55	48.30	50.43
Anantapur ...	59.00	60.58	48.37	50.21
Madras ...	60.23	59.71	50.60	50.29
Chingieput ...	54.10	54.60	44.58	45.27
North Arcot ...	56.56	56.68	47.01	48.07
Salem ...	55.76	57.74	46.95	49.17
Coimbatore ...	54.71	55.65	46.28	47.32
Nilgiris ...	55.23	55.43	51.00	53.39
South Arcot ...	56.69	56.16	46.34	47.00
Tanjore ...	54.92	55.05	45.93	45.98
Trichinopoly ...	55.25	55.93	45.86	46.59
Madura ...	55.29	55.40	46.94	47.60
Tinnevely ...	55.42	55.30	45.23	45.47
Malabar ...	54.56	54.79	47.31	47.14
South Canara ...	53.98	55.40	46.10	47.21
TOTAL ...	55.26	55.67	46.64	47.20
Agency Tracts { Ganjam ...	53.49	57.17	46.84	56.52
{ Vizagapatam ...	57.53	62.05	51.20	58.56
{ Godávári ...	53.84	58.30	46.39	59.38
TOTAL, AGENCY TRACTS ...	55.97	73.23	49.41	58.51
Total, British Territory ...	55.28	55.67	46.72	47.20

155. I give below a statement showing the age distribution of the population returning each of the chief religions. As age has been imperfectly returned in the Agency tracts, I have excluded the population of that area in the case of Hindus, Musalmans and Christians.

It is, however, included in the statement for the Animistic religion, as the majority of this section of the people are found in the Agencies:—

1891.

Age-period.	Hindus.		Musalmans.		Christians.		Animistic.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
0 ...	331	339	332	335	331	335	280	319
1 ...	168	176	209	210	206	210	131	140
2 ...	314	327	355	350	340	344	243	278
3 ...	353	366	361	356	373	376	299	361
4 ...	313	314	386	327	333	328	316	356
TOTAL 0—4 ...	1,479	1,522	1,593	1,578	1,583	1,593	1,269	1,454
5—9 ...	1,379	1,335	1,454	1,380	1,470	1,438	1,693	1,696
10—14 ...	1,071	910	1,163	978	1,141	1,021	1,267	1,163
15—19 ...	835	771	855	852	853	861	841	900
20—24 ...	821	971	832	1,000	796	931	707	879
25—29 ...	822	865	791	852	792	847	823	811
30—34 ...	829	888	773	836	748	797	880	952
35—39 ...	594	507	569	478	596	521	642	572
40—44 ...	672	667	596	621	594	582	737	618
45—49 ...	371	310	330	279	382	320	297	228
50—54 ...	423	468	390	425	381	393	383	301
55—59 ...	181	181	161	135	189	107	84	65
60 and over ...	623	623	498	586	492	529	350	341
TOTAL ...	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

The figures for the first four years of life present the same anomalies in the case of each religion as have been noticed already in the returns for the whole population, but for subsequent years the statistics for Musalmans and Christians are much less irregular than those for Hindus, which of course approximate closely to the proportions for the total population. The proportion of young children under five years of age is highest amongst Musalmans and lowest amongst the Animistic. In the case of the latter religion, however, it is obvious that the numbers at 5—9 have been largely overstated. Taking the period 0—9 we find the proportion of males is higher for Animistic than for Hindus, while for females the proportion is higher in the case of Animistic than any other religion. A curious feature in the Musalman figures is that the proportion of females under 5 is lower than that of males. The proportion of Musalman males continues higher than that of the Hindus up to the age-period 25—29, where the Hindu males, instead of continuing to decrease begin to rise. The Christian males decrease steadily throughout the whole series of age-periods, and the partiality for multiples of ten is less marked than in the case of other religions. In the statistics for females, however, the general superiority of the Musalman and Christian figures is less pronounced. The proportion of persons of 60 years and over is highest among Hindus and lowest among the Animistic. In the latter case the old people form only about $3\frac{1}{2}$ per cent. of the total, while among Hindus the percentage is $5\frac{1}{4}$ for males and $6\frac{1}{4}$ for

Numbers at Age 0—9.		
Religion.	Males.	Females.
Hindus ...	2,858	2,857
Musalmans ...	3,047	2,958
Christians ...	3,063	3,031
Animistic ...	2,967	3,150

Chap. IV. females. Both percentages are almost certainly too high, but the relation between para. 156. the two proportions is probably about right, as the comparative paucity of old men and women in the hill tracts is a fact well known to officers who have served there.

The proportions of the useful and dependent in the people returning each religion are shown below:—

Religion.	Percentage of Useful.		Percentage of Dependent.	
	Males.	Females.	Males.	Females.
Hindu	55.48	45.69	44.52	53.31
Musalman	53.02	45.39	46.98	53.51
Christian	53.24	45.39	46.76	54.61
Animistic	54.11	47.32	45.89	52.68

The following statement shows the average age of the living for each of the four religions:—

	Average age of the living.			
	Hindus.	Musalmans.	Christians.	Animistic.
Males	24.68	23.59	23.71	23.29
Females	25.14	24.19	23.83	22.22

It will be observed that among the Animistic the mean age of the females is less than that of the males, and a reference to the table given at the beginning of this chapter will show that from the age 35 upwards the proportion at each age-period is lower for females than for males.

156. The annexed statement shows the age-constitution of the urban and rural population separately. The urban population comprises the people living in municipal towns containing 20,000 inhabitants and upwards; the rest of the population of the presidency is treated as rural. The total urban population according to this definition is 1,796,043, of which 885,839 are males and 910,204 are females. The townspeople show a lower proportion of children under ten and a slightly higher proportion at the period 10—14. This may be ascribed in part to the fact that the famine was much less severe in urban than in rural tracts, and consequently the high birth-rate which followed the famine was much more marked in the latter than in the former; and inasmuch as the low proportion of children under five in 1881 was due to the famine, this proportion would be lower in the country than in towns, with the result that the proportions of children

Ages of Urban and Rural population.

Age.	Males.		Females.	
	Urban.	Rural.	Urban.	Rural.
0 ...	303	331	308	340
1 ...	153	172	154	179
2 ...	283	318	287	330
3 ...	288	355	297	369
4 ...	250	317	251	319
Total 0—4	1,257	1,492	1,275	1,537
5—9 ...	1,226	1,400	1,190	1,355
10—14 ...	1,104	1,082	933	922
15—19 ...	916	824	917	776
20—24 ...	841	813	1,017	971
25—29 ...	860	819	882	864
30—34 ...	845	827	873	885
35—39 ...	604	591	504	505
40—44 ...	585	669	709	659
45—49 ...	360	366	322	304
50—54 ...	460	426	528	456
55—59 ...	173	177	132	157
60 & over ...	563	513	688	609
Total ...	10,000	10,000	10,000	10,000

between 10 and 14 in 1891 would show a similar relation. Another cause of the

lower proportion at the youthful ages among the urban population is the immigration into towns of adults seeking work. Of the urban male population 58.50 per cent. were between the ages of 15 and 59, while of the rural population the percentage at these ages was only 55.12.

157. No less than 412 persons returned their age as 100 and upwards. Of these 170 were males and 242 were females. Detailed

Centenarians.

inquiries were instituted with the result that the claims of many of these centenarians were found to be untenable, while in some cases the entry was simply a mistake on the part of the enumerator, who had written 105 for 15, 110 for 11, &c. In a few instances the centenarians were dead or could not be found at the time of the inquiry, but of the remainder local officers reported that 162 persons, viz., 83 men and 79 women, were 100 years old or more. The only evidence possible in these cases is the recollection by the alleged centenarian of his age at the time of some remote event, such as the siege of Seringapatam, the Rohilla raid, the famine of the year Nandana, the Coorg war, &c., and this evidence was forthcoming in abundance. In the majority of the cases it was not possible to disprove these statements, but in a fair proportion of the instances it could be shown that they were erroneous or at least highly improbable. For example, a woman who claimed to be 100 years old had a son living who was between 40 and 50 at the time of the census. His mother must, therefore, have been between 50 and 60 at the time of his birth, but it may safely be asserted that this is impossible. The best supported case was that of an inhabitant of the City of Madras. He returned his age as 108 and assured me that he was present at the siege of Seringapatam in 1799 as a Commissariat agent to the Nizam's army. It certainly seems improbable that a youth of 15 or 16 would be holding such a position, but his story has been believed in Madras for many years, and it did not seem to me likely that he was unconsciously deceiving himself. He added that he had afterwards served under the British and that he had received letters from the Duke of Wellington, General Harris and other officers of that period, but unfortunately these were accidentally destroyed some time ago. He has a certificate, dated 1877, from the late Muhammad Hussain, Native Aid-de-Camp to His Excellency the Commander-in-Chief, who stated that he had known him since the Kittoor war of 1824, when he was about 34 or 35 years of age. In this case the statement of the centenarian receives some confirmation, but the evidence does not amount to a satisfactory proof. The other claims rest solely upon the statements of the centenarians themselves. The only conclusion I can arrive at is that in no case is it satisfactorily established that any person has attained the age of 100 years; and in the absence of any record of births, I doubt if really satisfactory proof could be obtained.

158. The most noticeable feature in the age returns for the feudatories is that in all States, except Pudukota, the proportion under 5 is lower than in the adjoining British districts. In Travancore the proportion of males under 5 is lower than that between 5 and 9, but this anomaly is not found in the figures for females. The proportion of infants under one year is also unduly small, being less than the number at any of the next four years of life. This relation is found in the Cochin returns also, but the discrepancy is not so large. The Travancore age tables of 1881 show an even greater under-statement of the children under 5, and in that year the deficiency

Age.	TRAVANCORE.	
	Number in 10,000	
	Males.	Females.
0—4	1,180	1,332
5—9	1,231	1,246
10—14	1,162	1,088

was not confined to the male sex. On the whole, the age statistics of this State seem to be even less trustworthy than those for British territory. The Cochin figures are better, but the number of children under 5 is greatly under-stated.

Section II.—A life-table for the City of Madras.

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159. The life-tables with which this note concludes are based upon the following statistics relating to the City of Madras; the census of 17th February 1881, the census of 26th February 1891, and the deaths registered as having occurred in the four years from 1st January 1888 to 31st December 1891, inclusive.

160. The census returns give the ages of the population for each of the first five years of age; after that the ages are given in groups of five years each, up to age 60; above that age no further distinction is made. These populations are given in Table I.

TABLE I.

Population of Madras City according to the censuses of 1881 and 1891.

Age.	Males.		Females.	
	1891.	1881.	1891.	1881.
1	2	3	4	5
0	5,768	4,032	6,393	5,148
1	2,867	3,867	3,052	4,129
2	5,440	4,623	5,740	4,833
3	6,337	4,908	6,619	5,035
4	5,250	4,444	5,607	4,486
TOTAL 0-4	26,769	22,824	27,915	23,691
5-9	26,174	22,910	26,587	23,396
10-14	23,101	22,489	20,703	20,927
15-19	18,791	17,529	20,497	18,115
20-24	21,893	18,173	24,231	21,134
25-29	19,823	17,303	21,403	19,425
30-34	19,775	17,885	20,297	19,382
35-39	15,179	13,033	19,311	16,977
40-44	16,704	14,842	16,058	14,654
45-49	8,672	7,591	7,472	6,599
50-54	11,200	9,506	11,554	10,611
55-59	8,920	8,624	9,366	8,156
60 and over	13,740	12,408	14,508	13,910
Not stated	61	42	58	61
TOTAL	225,317	200,170	226,761	205,678

The registration of deaths in Madras may, I think, be considered as trustworthy, so far at least as regards the number of deaths. A few cases of deaths among the newly born may escape registration, but such cases cannot be very numerous. As a check on the registered deaths, returns are received from the various burial and burning grounds in the City: any discrepancy between these returns and the death-registers is investigated by the Registrar and corrected, so that there is practically a double system of registration. Registration, both of births and deaths, has been compulsory in Madras for many years: the people are accustomed to it, and there is no desire to conceal deaths. People may, in some cases, try to avoid the trouble of attending at the Registrar's office, but the check afforded by the returns from the burial and burning grounds enables such cases to be readily detected.

The period of four years, 1888-91, for which the deaths have been extracted from the registers, contained one year (1891) of exceptionally heavy mortality. There was an outbreak of cholera during the year, and the deaths from "fevers" were much more numerous than usual. The previous four years (1884-87) also

contained an exceptional year, viz., 1884, during which there was a serious epidemic of small-pox as well as a largely increased mortality from other causes. Before this, 1876 and still more 1878 were years of high mortality, while in 1877 the mortality was largely increased by the famine. It thus appears that unhealthy years are to be expected about once in every four or five years, and I have, therefore, given the year 1891 its full weight in estimating the death-rates for Madras.

TABLE II.

Deaths from 1st January 1888 to 31st December 1891 in Madras City.

Age.	Deaths.		Age.	Deaths.	
	Males.	Females.		Males.	Females.
1	2	3	1	2	3
0	11,146	9,405	50	1,229	1,252
1	2,736	2,773	51	38	23
2	1,286	1,494	52	103	58
3	1,023	1,164	53	72	26
4	719	774	54	50	21
5	650	676	55	506	394
6	339	369	56	95	61
7	290	347	57	61	32
8	253	302	58	72	39
9	146	127	59	36	9
10	317	425	60	1,619	1,720
11	161	165	61	38	13
12	285	275	62	88	44
13	119	138	63	56	52
14	111	153	64	66	33
15	153	232	65	433	397
16	183	273	66	44	25
17	78	154	67	51	25
18	231	429	68	53	45
19	120	161	69	19	10
20	534	916	70	1,069	1,391
21	109	112	71	8	15
22	318	406	72	53	24
23	185	144	73	33	11
24	146	184	74	26	25
25	716	1,194	75	390	433
26	137	175	76	32	25
27	120	110	77	15	7
28	177	214	78	21	32
29	53	55	79	6	13
30	980	1,312	80	979	1,436
31	50	47	81	13	5
32	156	137	82	26	37
33	68	62	83	28	12
34	57	53	84	21	16
35	776	737	85	234	276
36	119	98	86	22	15
37	68	53	87	24	8
38	99	81	88	17	17
39	54	26	89	7	5
40	1,135	1,235	90	329	636
41	51	17	91	5	4
42	121	75	92	11	16
43	67	36	93	9	9
44	64	48	94	7	5
45	609	521	95	97	167
46	85	48	96	11	10
47	51	30	97	12	12
48	106	82	98	7	20
49	52	20	99	7	11
100 and over				61	134
Not stated				1	6
TOTAL	36,013	37,236			

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161. The registered deaths are given in Table II, arranged according to age. It will be seen that this table presents in a very exaggerated form all the usual characteristics of such returns, viz., a great excess of deaths at those ages which are exact multiples of 10; and an excess not quite so great, at the odd multiples of 5. There appears also to be a tendency to prefer the even to the odd numbers: the same preference is shown in statements C and D of para. 134 of this chapter. For these reasons no use can be made of the figures as given for each year, and the best method of proceeding is to arrange them in groups as in Table IV. The populations of Table I are similarly arranged in Table III. The numbers whose age is not stated in the census returns are small and are omitted. In Table IV the numbers whose age is not stated have been included among those aged 95 and over.

TABLE III.
Population of Madras City.

Age.	Males.		Females.	
	1891.	1881.	1891.	1881.
0-4	26,738	22,824	27,915	23,631
5-9	26,174	22,910	26,437	23,896
10-14	23,101	22,389	20,703	20,927
15-24	40,654	35,708	44,728	39,249
25-34	39,614	35,193	41,700	38,507
35-44	31,533	27,875	28,267	25,631
45-54	19,872	17,097	19,098	17,210
55 and over	17,669	16,032	17,867	17,066
TOTAL	225,756	200,128	226,643	205,617

TABLE IV.

Registered Deaths in Madras City, 1st January 1888 to 31st December 1891.

Age.		Males.	Females.
0	...	11,146	9,402
1	...	2,736	2,773
2	...	1,286	1,494
3	...	1,023	1,164
4	...	729	774
TOTAL 0-4		16,910	15,607
5-9	...	1,678	1,891
10-14	...	933	1,161
15-24	...	2,057	3,011
25-34	...	2,514	3,359
35-44	...	2,564	2,406
45-54	...	2,446	2,061
55-64	...	2,637	2,327
65-74	...	1,832	1,978
75-84	...	1,531	2,016
85-94	...	665	921
95 and over	...	195	360
TOTAL		36,013	27,238

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162. To find the rates of mortality it is necessary to find the average population, or, what comes to the same thing, the number of years of life lived by the population of Madras for each group of ages during the four years 1888 to 1891. This has been done, for males, on the assumption that the population in each group has increased in geometrical progression between 1881 and 1891. That is, if P_0 is the population in any group at the census of 1881, and P_1 the population in the same group T years afterwards, it has been assumed that

$$P_1 = P_0 e^{\lambda T} \quad \dots \quad (1)$$

where λ is some constant depending on the rate of increase.

This being the case, if T be the interval between the census of 1881 and that of 1891, λ can be found from the equation

$$P_1 = P_0 e^{\lambda T} \quad \dots \quad (2)$$

P_0 and P_1 are given in the second and third columns of Table III, and $T = 10.026$, being the interval from 17th February 1881 to 26th February 1891.

If t_1 be the time from the census of 1881 to the beginning of 1888, and t_2 the time to the end of 1891, then

$$t_1 = 6.869$$

$$t_2 = 10.869$$

and the number of years of life lived by the population in each group during the four years 1888 to 1891 is given by

$$L = \int_{t_1}^{t_2} P_t dt = P_0 \int_{t_1}^{t_2} e^{\lambda t} dt = P_0 (e^{\lambda t_2} - e^{\lambda t_1}) / \lambda$$

$$= (P_{t_2} - P_{t_1}) / \lambda \quad \dots \quad (3)$$

From equation (2), taking logarithms,

$$\lambda T \log e = \log P_1 - \log P_0 = \delta, \text{ say; } \quad \dots \quad (4)$$

and

$$T \log e = 10.026 \times .4342945$$

therefore

$$\log (T \log e) = .6389120.$$

Take the logarithm of equation (4)

$$\log \lambda = \log \delta - .6389120 \quad \dots \quad (5)$$

The value of λ is, however, not needed. From $P_{t_1} = P_0 e^{\lambda t_1}$

we find $\log (P_{t_1} / P_0) = \lambda t_1 \log e$

and from (4)

$$\delta = \lambda T \log e$$

$$\therefore \log (P_{t_1} / P_0) = \delta t_1 / T$$

Similar

$$\log (P_{t_2} / P_0) = \delta t_2 / T \quad \dots \quad (6)$$

From (4) δ is found for each group: then from (6) P_{t_1} and P_{t_2} are found, and their difference $P_{t_2} - P_{t_1} = \Delta$, say: then from (3) and (5)

$$\log L = \log \Delta - \log \lambda$$

$$= \log \Delta - \log \delta + .6389120 \quad \dots \quad (7)$$

The resulting values of L , together with the deaths (D) and the average rate of mortality (m), for each age-group, are given in Table V.*

* The values of L for females have been found by the process described in para. 171.

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TABLE V.

Males.				Females.			
Age. (1)	L. (2)	D. (3)	$m = D/L$ (4)	Age. (1)	L. (2)	D. (3)	$m = D/L$ (4)
0-4	105,107	16,910	016088	0-4	109,308	15,607	014278
5-9	103,123	1,678	01627	5-9	104,978	1,891	01817
10-14	91,550	938	01016	10-14	82,935	1,161	01400
15-24	160,311	2,057	01283	15-24	175,964	3,011	01712
25-34	155,318	2,514	01608	25-34	155,047	3,359	02195
35-44	125,602	2,564	02041	35-44	111,621	2,406	02156
45-54	78,124	2,446	03131	45-54	75,107	2,061	02744
55 and over	69,870	6,911	09891	55 and over	71,028	7,742	10900
TOTAL	890,317	26,012	04045	TOTAL	895,028	37,238	04161

163. To find the death-rates for each year of age, it is necessary to distribute the figures in columns (2) and (3) of Table V so as to approximate to the years of life lived and the deaths at each year of age. The method of distribution that has been adopted is the graphical process used by Milne in constructing the Carlisle life table. A base line is taken on which lengths are marked, representing the age intervals in column (1) of Table V; see figure 1. On each of these lengths is erected a rectangle whose area is equal to the corresponding number L in Table V, column (2). Thus, for males, the height of the first rectangle is one-fifth of 105,107, i.e., 21,021; the height of the fourth rectangle is one-tenth of 160,311, i.e., 16,031. The upper limit of age has been taken, for the present, to be 100, so that the height of the last rectangle is $\frac{1}{5}$ th of 69,870, i.e., 13,974. Through the tops of these rectangles a curve is then drawn freely in such a way as to touch the base line at age 100, and so that the area of the portion of the curve standing on the base of any of the rectangles is equal, as nearly as may be, to the area of the corresponding rectangle. The number of years of life lived in each year of age is then obtained by measuring the area of the vertical strip standing on the line that represents that year, and terminated by the curve; or, what comes to the same thing, it is taken to be the height of the ordinate of the curve standing at the middle point of that year. The years of life lived by the population in each year of age, during the four years 1888-91, as found from the curve in figure 1, are given in Table VI, column (2).

It will be noticed that the curve in figure 1, Males, descends very steeply from about age 8 to age 12 and then ascends for a time; and there is a similar characteristic in the curve in figure 1, Females, between ages 10 and 17. Such a deficiency appears to be indicated by the shape of the rectangles in these figures, the rectangles being merely a diagrammatic representation of the numbers given in Table V. The top of the rectangle for ages 15-24 in figure 1, Males, is only slightly below that for ages 10-14, while in figure 1, Females, the rectangle for ages 15-24 is actually higher than that for ages 10-14.* Moreover there exists an *a priori* reason for supposing the numbers in the neighbourhood of ages 10-14 to be smaller than they would be in a normal population increasing uniformly; for it is well known that the famine of 1877 carried off large numbers of children at the early ages and also had the effect of greatly diminishing the birth-rate for a time.

Exactly the same process is gone through in order to distribute the deaths of Table V, column (3), except that larger groups have been taken in two cases, viz., 25 to 45 in the case of males, and 45 to 65 for both males and females; this has been done because there is evidently an excess in the returns at ages 30 and 60, and this excess requires a wider distribution than could be made if the ten year groups were used. These deaths are mapped out into rectangles in figure 2; a curve is drawn just as described for figure 1, and the distributed deaths, as read off from this curve, are given in Table VI, column (3).

* On this point see the *Journal of the Institute of Actuaries*, vol. xxiv, p. 202. On the method used by Milne in the construction of the Carlisle Table of Mortality, by G. King.

TABLE VI-M—MALES.

Age.	Years of life.	Deaths.	Average death-rate.	Corrected death-rate.	Probability of death.	Age.	Years of life.	Deaths.	Average death-rate.	Corrected death-rate.	Probability of death.
1	2	3	4	5	6	1	2	3	4	5	6
0	26,100	11,146	04271	...	03519	50	7,540	248	0329	...	0324
1	21,350	2,736	01282	...	0204	51	7,160	249	0348	...	0342
2	20,830	1,336	00641	...	00621	52	6,790	251	0370	...	0363
3	20,550	973	0473	...	0463	53	6,420	254	0396	...	0388
4	20,320	719	0354	...	0348	54	6,060	257	0424	...	0415
5	20,120	600	0249	...	0245	55	5,710	261	0457	...	0447
6	19,950	390	0195	...	0194	56	5,360	264	0493	...	0481
7	19,800	309	0156	0157	0155	57	5,010	265	0529	0527	0513
8	19,680	257	0131	...	0130	58	4,670	266	0570	0561	0546
9	19,530	222	0114	...	0113	59	4,330	265	0612	0600	0583
10	19,330	198	0102	0103	0102	60	4,000	263	0658	0640	0620
11	19,060	183	0098	...	0097	61	3,690	250	0702	0682	0660
12	18,580	182	0098	...	0097	62	3,410	254	0745	0724	0700
13	17,950	183	0102	...	0101	63	3,160	248	0785	0767	0739
14	17,000	184	0108	...	0108	64	2,940	242	0823	0813	0781
15	16,220	186	0115	0114	0113	65	2,720	236	0868	0860	0825
16	15,950	188	0118	...	0118	66	2,510	229	0912	...	0873
17	15,800	193	0122	...	0121	67	2,310	222	0961	...	0917
18	15,830	193	0125	...	0124	68	2,110	215	1019	1010	0961
19	15,870	203	0128	...	0127	69	1,910	208	1089	1060	1007
20	15,980	208	0130	...	0129	70	1,740	201	1155	1120	1061
21	16,100	213	0132	...	0131	71	1,500	195	1219	1190	1123
22	16,180	215	0135	...	0134	72	1,460	188	1288	1260	1185
23	16,200	223	0138	0137	0137	73	1,330	181	1361	1340	1256
24	16,180	227	0140	...	0139	74	1,210	174	1438	1420	1326
25	16,120	232	0144	...	0143	75	1,100	167	1518	1510	1404
26	16,060	237	0148	0147	0146	76	990	160	1616	1610	1490
27	15,980	241	0151	...	0150	77	890	153	1719	...	1588
28	15,860	245	0154	...	0153	78	790	147	1861	...	1702
29	15,740	249	0158	...	0157	79	700	140	2000	...	1818
30	15,610	253	0162	...	0161	80	620	134	2161	...	1951
31	15,480	256	0165	...	0164	81	540	128	2370	...	2119
32	15,330	258	0168	...	0167	82	470	121	2574	...	2281
33	15,170	260	0171	...	0170	83	410	115	2805	...	2400
34	14,970	262	0175	...	0173	84	350	108	3086	...	2673
35	14,710	263	0179	...	0177	85	300	102	3400	3370	2884
36	14,330	263	0184	...	0182	86	250	96	3840	3670	3101
37	13,930	263	0189	...	0187	87	220	89	4045	3980	3319
38	13,470	262	0195	...	0193	88	190	83	4310	4300	3530
39	12,920	261	0208	...	0200	89	170	77	4529	4620	3753
40	12,340	259	0210	...	0208	90	150	70	4637	5000	4000
41	11,740	257	0219	...	0216	91	130	63	4846	5450	4288
42	11,220	255	0227	...	0225	92	110	57	5132	5950	4586
43	10,720	252	0235	0236	0233	93	90	51	5667	6500	4906
44	10,220	250	0245	...	0242	94	70	45	6429	7050	5213
45	9,740	249	0256	...	0253	95	55	39	7091	7600	5507
46	9,270	248	0268	...	0264	96	40	32	8000	8300	5806
47	8,820	247	0280	...	0276	97	30	25	9333	9100	6264
48	8,370	246	0294	...	0290	98	20	16	8000	10100	6711
49	7,950	247	0311	...	0306	99	10	7	7000	...	...

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TABLE VI-F—FEMALES.

Age.	Years of life.	Deaths.	Average death-rate.	Corrected death-rate.	Probability of death.	Age.	Years of life.	Deaths.	Average death-rate.	Corrected death-rate.	Probability of death.
1	2	3	4	5	6	1	2	3	4	5	6
0	26,000	9,403	.3616	...	.3662	50	7,325	216	.0295	...	.0291
1	24,300	2,773	.1141	...	.1079	51	7,000	217	.0310	...	.0305
2	22,950	1,494	.0651	.0695	.0672	52	6,685	218	.0326	...	.0321
3	22,100	1,164	.0527	.0505	.0493	53	6,375	220	.0345	...	.0339
4	21,375	774	.0362	...	.0356	54	6,075	222	.0365	...	.0358
5	20,750	542	.0261	...	.0258	55	5,775	225	.0390	...	.0383
6	20,150	413	.0205	...	.0203	56	5,475	228	.0416	...	.0408
7	19,550	353	.0170	.0180	.0178	57	5,175	229	.0443	...	.0435
8	18,750	308	.0164	.0155	.0162	58	4,875	230	.0472	...	.0461
9	17,525	275	.0157	.0155	.0154	59	4,575	231	.0505	...	.0493
10	16,750	250	.0140	...	.0148	60	4,275	232	.0543	...	.0529
11	16,400	236	.0144	.0143	.0142	61	3,975	232	.0584	...	.0567
12	16,400	226	.0138	...	.0137	62	3,675	230	.0626	...	.0607
13	16,575	233	.0135	...	.0134	63	3,375	228	.0676	...	.0654
14	16,825	226	.0134	...	.0133	64	3,075	226	.0735	...	.0709
15	17,025	234	.0137	...	.0136	65	2,800	224	.0800	...	.0769
16	17,225	251	.0146	...	.0145	66	2,550	222	.0871	...	.0835
17	17,400	270	.0155	...	.0154	67	2,300	219	.0952	...	.0909
18	17,525	259	.0165	...	.0164	68	2,050	216	.1054	...	.1001
19	17,625	305	.0173	...	.0172	69	1,825	213	.1167	...	.1103
20	17,725	318	.0179	...	.0177	70	1,625	210	.1292	...	.1214
21	17,800	327	.0184	.0183	.0181	71	1,425	207	.1453	.1420	.1326
22	17,850	334	.0187	...	.0185	72	1,275	204	.1600	.1590	.1447
23	17,875	339	.0190	.0191	.0189	73	1,150	201	.1748	.1710	.1575
24	17,900	344	.0192	.0195	.0193	74	1,050	198	.1896	.1870	.1710
25	17,850	347	.0194	.0197	.0195	75	975	195	.2000	.2030	.1843
26	17,750	348	.0196	.0199	.0197	76	900	191	.2122	.2210	.1990
27	17,650	340	.0198	.0201	.0199	77	825	187	.2267	.2406	.2143
28	17,425	348	.0199	.0203	.0201	78	750	183	.2440	.2610	.2369
29	17,175	346	.0201	.0205	.0203	79	675	179	.2652	.2840	.2487
30	16,700	344	.0206	...	.0204	80	600	175	.2917	.3080	.2669
31	16,150	337	.0209	.0207	.0205	81	525	170	.3258	.3330	.2855
32	15,475	323	.0211	.0208	.0206	82	450	165	.3687	.3590	.3044
33	14,800	314	.0212	.0209	.0207	83	400	160	.4000	.3870	.3243
34	14,100	300	.0213	.0210	.0208	84	350	155	.4429	.4150	.3437
35	13,400	285	.0213	.0211	.0209	85	325	149	.4885	.4430	.3627
36	12,750	272	.0213	.0212	.0210	86	300	143	.5467	.4720	.3819
37	12,175	259	.0213	.0213	.0211	87	275	137	.6082	.5010	.4006
38	11,650	247	.0212	.0213	.0211	88	250	131	.6840	.5310	.4196
39	11,225	237	.0211	.0214	.0212	89	225	125	.7656	.5620	.4387
40	10,825	229	.0212	.0215	.0213	90	200	118	.8600	.5950	.4586
41	10,450	223	.0213	.0217	.0215	91	175	111	.9642	...	.4816
42	10,075	219	.0217	.0220	.0216	92	150	104	...	...	.5148
43	9,725	218	.0224	...	.0221	93	125	96	.7680	...	.5549
44	9,375	217	.0231	...	.0228	94	100	88	.8800	...	.6111
45	9,025	216	.0239	...	.0236	95	75	79	1.0533	...	.6899
46	8,675	215	.0248	...	.0245	96	50	69	1.3800	...	.8166
47	8,325	214	.0257	...	.0254	97	30	58	1.9333	...	.9831
48	7,975	214	.0268	...	.0264	98	15	43	2.8667	...	...
49	7,555	215	.0281	...	.0277	99	5	20	4.0000	...	...

The average death-rates for each year are then found by dividing the figures in column (3) by those in column (2), and are given in column (4) of the same table. Chap. IV. para. 166.

164. Upon mapping these death-rates in a diagram (figure 3), it is seen that they run fairly regularly, and that but slight adjustment is required in order to make them progress with the uniformity that such rates are found in other cases to possess. But the death-rate in the first year is improbably great: this feature will be considered later.

The small adjustment required has been made graphically by drawing a curve as shown in figure 3, so as to remove the irregularities, and at the same time to give as nearly as possible the same total number of deaths as that given in Table II.

It is to be noticed that the vertical scale in the second part of figure 3 is one-tenth the scale of the first part.

The death-rate at each age is now taken to be the ordinate of the adjusted curve at that age, and these death-rates are given in Table VI, column (5).

165. The probability p_x that a person alive at age x will live to the age $x+1$ has been calculated [from the equation $p_x = \frac{2-m_x}{2+m_x}$ where m_x is the death-rate for the year x to $x+1$]. This is not quite correct, as it assumes that the deaths in any year are equally distributed throughout the year, and it becomes more incorrect the larger m_x is, i.e., as the end of the life is approached. In view of the uncertainty of all the statistics on which the table is based, the result thus obtained is, however, quite near enough. The probability of death, $q_x = 1-p_x$, thus obtained, is shown in Table VI, column (6). There is reason to believe that the value of q_x here given is too high, and in fact, for the earlier ages, the "years of life" curve in figure 1, is too doubtful for much dependence to be placed upon it, and better results will probably be obtained from the birth registers.

166. The registered births of males in Madras from the middle of the year 1887 to the middle of 1891 were 34,445.* If the deaths under one year of age, 11,146 in the years 1888-91 inclusive, be regarded as taking place out of these births, we get a probability of death for the first year of $11,146 \div 34,445$ or .3236. This is improbably high, and as a matter of fact the registered deaths do not correspond to the registered births. Many women ordinarily resident in Madras go away to the mofussil in order that their first and second confinements may take place in the houses of their parents.† There is a similar movement in the other direction from the country to Madras, but not on so large a scale. Consequently there is a large number of children born in the mofussil brought back to Madras a month or two after birth. The deaths out of these children help to swell the death registers, while their births do not appear in the birth registers, so that there is apparently an excessive death-rate.

An approximation to the addition that ought to be made to the registered births may be obtained from the statistics of vaccination, which is compulsory in Madras. Since 1885 a record has been kept of the birth-places of infants vaccinated in Madras. Out of 105,658 infants vaccinated, 80,960 were born in Madras, and 24,698 born elsewhere; * i.e., for every 100 born in Madras 30.5 were born elsewhere. On the other hand some infants born in Madras are taken away before the age of compulsory vaccination (six months). It may be assumed, with some probability, that the number of infants born of Madras parents outside Madras is 25 per cent. of the number of births registered in Madras, and we shall assume that these infants return to the town at the average age of one month. [If they returned at once, before any of them died, then the proper probability of death for age 0 would be $\frac{1}{4} \times 3236 = .2589$.]

* These figures are taken from the Municipal Reports.
† See the Administration Report of the Madras Municipality for 1884-85, p. 145.

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167. According to the death registers, of the 11,146 deaths of males under age 1 in the four years 1888-91, 6,237 are recorded as having occurred in the first month, leaving 4,909 for the remainder of the year. But these 4,909 deaths, on our supposition, belong to an infant population 25 per cent. greater than that to which the 6,237 deaths in the first month relate. Reducing them to the same population we have $\frac{4}{5}$ of 4,909, or 3,927 as the number of deaths occurring in the last 11 months of the first year of age, making, with the 6,237 deaths in the first month, a total of 10,164 deaths in the first year out of 34,445 births. This gives a probability of death during the first year, of .295079; and this has accordingly been assumed to be the correct probability.

168. The addition of 25 per cent. here made to the birth-rate of Madras is confirmed by a comparison of the populations recorded in the two censuses of 1881 and 1891. These give for the population of Madras, in 1881, 405,848; in 1891, 452,518, showing an increase of 46,670. The births registered in the period between the two censuses are 161,841, and the deaths 158,474 showing an increase of 3,370 only. Twenty-five per cent. of the registered births is 40,460, and deducting 18 per cent. for deaths in the first month we have 33,178 as the number of infant immigrants into Madras, making a total increase of 36,548, leaving only 10,122 to be accounted for by adult immigration. This agrees with what is otherwise known about the adult immigration into Madras.

169. The only other statistics bearing on the infant death-rate in Madras that I am aware of, consist of a record kept, unfortunately for only one complete year, of the vaccinations and deaths out of a given number of children born. The vaccinators are supplied with lists of births registered, and record in these lists the vaccinations performed by them. If a child whose birth is registered is not brought to be vaccinated within six months after its birth, the vaccinators proceed to inquire the reason, and on the result of these inquiries enter in their list that the child is dead, or removed, or cannot be found, or is unprotected, &c. During the calendar year 1884 the vaccinators appear to have had 13,787 registered entries of births to examine. Of these they appear to have investigated 13,662 with the following result:—

Vaccinated	...	...	...	...	...	4,605
Died	...	...	...	...	...	3,848
Removed	...	...	...	...	...	685
Not found	...	...	...	...	...	2,488
Unprotected	...	...	...	...	...	1,943
Had small-pox	...	...	...	...	...	93
Total	...	...	...	...	...	13,662

Assuming that the 685 "removed" are known to be alive at the time of the inquiry, we have, after deducting the "not found" from the total, 3,848 deaths out of 11,174 born, giving a probability of death of .3444. The vaccinators begin their investigations as soon as the legal term of six months after birth has elapsed, so that, even allowing three months on the average for the inquiry, this number would represent the probability of death in the first nine months after birth. These statistics are not worth very much, but, taken in conjunction with the others, they seem to show that our assumed death-probability of .295 is at all events not too high.

170. Starting now with a death-probability of .295079 at age 0, giving $p_0 = .704921$ and adopting for the other ages the values of q_x given in Table VI, the life-table is calculated from a radix $l_0 = 1,000,000$ and the result given in Table VII.

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171. The female life-table was formed in precisely the same way as the table for males, except that, in view of the subsequent adjustment, it has been considered enough to suppose that the population has increased in arithmetical progression, so that the L of Table V for females is given by

$$L = 4 \frac{\frac{1}{2}(t_1 + t_2) P_T + \{T - \frac{1}{2}(t_1 + t_2)\} P_0}{T}$$

where t_1 , t_2 , T , have the same values as before; so that

$$L = 3.451 P_T + .509 P_0 \\ = 4 P_T - .509 (P_T - P_0).$$

Column (5) of Table VII, giving the average numbers living during each year, has been calculated in the usual way from the central difference equation

$P_x = \frac{1}{2}(l_{x+1} + l_x) - \frac{1}{24}(\Delta^2 l_x + \Delta^2 l_{x-1}) + \frac{11}{1440}(\Delta^4 l_{x-1} + \Delta^4 l_{x-2}) - \dots$ except for age 0, where P_0 has been formed as in Farr's English Table No. 3; i.e., a subsidiary monthly life-table has been constructed from the death registers for the first year, and then P_0 has been taken to be

$$= \frac{1}{12}(l_0 + l_{\frac{1}{12}} + l_{\frac{2}{12}} + \dots + l_{\frac{11}{12}} + l_1).*$$

* The deaths under one year of age in the four years 1888-91 are given, with the age at death in months, in column (2) of the following table:—

Registered deaths in the first year of age during the years 1888-91.

MALES.					
Age in months.	Registered deaths.	Registered deaths corrected by deducting $\frac{1}{12}$ after 1st month.	Graduated deaths.	Born and surviving each month.	Surviving each month out of 1,000,000 births.
1	2	3	4	5	6
0 ...	6,237	6,237	6,237	34,445	1,000,000
1 ...	540	432	502	28,208	813,920
2 ...	330	264	420	27,706	804,855
3 ...	642	514	390	27,263	792,161
4 ...	307	325	370	26,806	780,839
5 ...	388	310	355	26,526	770,007
6 ...	536	429	340	26,171	759,791
7 ...	393	314	330	25,831	749,920
8 ...	480	394	320	25,501	740,340
9 ...	371	297	310	25,181	731,050
10 ...	561	442	306	24,871	722,060
11 ...	261	209	290	24,571	713,340
.....	.....	.....	.....	24,281	704,921
.....	11,146	10,164	10,164	.....	13)10,087,793
.....	.....	.....	.....	.....	775,984
FEMALES.					
Age in months.	Registered deaths.	Registered deaths corrected by deducting $\frac{1}{12}$ after 1st month.	Graduated deaths.	Born and surviving each month.	Surviving each month out of 1,000,000 births.
1	2	3	4	5	6
0 ...	4,828	4,828	4,828	32,473	1,000,000
1 ...	450	360	459	27,645	851,323
2 ...	324	259	400	27,186	837,188
3 ...	578	463	360	26,786	824,870
4 ...	354	283	340	26,426	813,734
5 ...	388	310	330	26,096	803,314
6 ...	536	429	320	25,756	793,151
7 ...	393	271	310	25,436	783,297
8 ...	448	359	300	25,126	773,751
9 ...	378	302	290	24,826	764,512
10 ...	514	411	280	24,536	755,582
11 ...	265	212	270	24,256	746,959
.....	.....	.....	.....	23,986	738,644
.....	9,402	8,487	8,487	.....	13)10,486,375
.....	.....	.....	.....	.....	806,644

These registered deaths are corrected by the process described in para. 167 and the results given in column (3). These numbers are graduated graphically as in column (4). The deaths, thus graduated, are assumed to be the deaths out of a number of births equal to the number of births between the middle of 1887 and the middle of 1891, viz., 34,445 for males and 32,473 for females: the numbers surviving each month are given in column (5). The numbers surviving each month out of 1,000,000 births are proportional to these, and are given in column (6). The arithmetical mean of the first 13 of these is taken to be P_0 .

Chap. IV. Also, as the central difference equation cannot be applied to the earlier ages, P_1 and P_2 have been calculated from

$$P_x = \frac{1}{2} (l_x + l_{x+1}) - \frac{1}{12} \Delta^2 l_x + \frac{1}{24} \Delta^3 l_x - \frac{19}{720} \Delta^4 l_x + \dots$$

The mean after life-time, or expectation of life, has been calculated from $e_x = (\Sigma P_x)/l_x$ and tabulated in column (8) of Table VII; and is compared, by means of a diagram (figure 4), with the same function as given in Hardy's Madras Five-Districts table, 1881,† and the English Table No. 3.‡

It is right to add that the values of l_x in the life-tables have received a slight arbitrary adjustment so as to make their second differences run smoothly, and that the values of q_x and m_x have been re-calculated, except for the last few ages, from $q_x = d_x/l_x$ and $m_x = d_x/P_x$; but the values so calculated do not, to the number of decimal places here retained, differ to any important extent from those first obtained. The final values of the mean annual death-rate m_x are compared with those of the English Table No. 3, and with the corresponding rates as calculated from Hardy's *Five-Districts* Table, by means of a diagram (figure 5).

172. The resulting life-tables should represent very fairly the mortality for the Presidency of Madras, as the conditions of life in the City do not differ very materially from those in the country districts.

One very noticeable peculiarity is the large excess of female over male mortality between the ages 7 and 15, amounting at age 11 to 45 per cent. This peculiarity appears in the undistributed Table V as well as in the final table, and there seems no reason to doubt its real existence. The same thing is shown in Hardy's *Five-Districts* Table, but not till age 10, and to a much smaller extent. It cannot be altogether accounted for by early marriages, for, even in India, girls do not usually bear children until after the age of 12. It would seem rather to indicate the lower value attached to female life and an indifference to providing girls with healthy surroundings and occupation.

* e_x is here the complete expectation of life, the function usually denoted by e_x .

† See the *Report of the Census of British India, taken on the 17th February 1881*, vol. 1, pp. 180, 181. I have used this table for purposes of comparison, because I think it represents the average mortality of Madras better than the *Madras Presidency* table on pp. 178, 179 of the same report.

‡ I had no opportunity of examining Dr. Ogle's English Table No. 4, which may be regarded as the latest exposition of English mortality, until too late to make use of it in this connexion.

TABLE VII-M—MALES.

1	2	3	4	5	6	7	8	9
Age.	Living at age x .	Dying between ages x and $x+1$.	Probability at age x of dying before age $x+1$.	Average number living between age x and $x+1$.	Average death-rate between ages x and $x+1$.	Average number living at age x and upwards.	Mean after life-time at age x .	Age.
x	l_x	d_x	$q_x = \frac{d_x}{l_x}$	$P_x = \int_x^{x+1} l_t dt$	$m_x = \frac{d_x}{P_x}$	$Q_x = \Sigma P_x$	$e_x = \frac{Q_x}{l_x}$	x
0	1,000,000	295,079	.2951	775,984	.3803	24,397,839	24.40	0
1	704,921	84,196	.1194	555,140	.1285	23,621,355	33.51	1
2	620,725	39,231	.0632	590,910	.0654	22,966,215	37.00	2
3	581,494	27,081	.0466	567,116	.0478	22,868,305	38.46	3
4	554,413	18,798	.0339	544,400	.0345	21,799,189	39.32	4
5	535,615	13,440	.0251	528,545	.0254	21,254,720	39.68	5
6	522,175	10,109	.0194	516,902	.0196	20,726,184	39.69	6
7	512,066	7,954	.0155	507,945	.0157	20,209,282	39.47	7
8	504,112	6,540	.0130	500,748	.0131	19,701,337	39.08	8
9	497,572	5,624	.0113	494,699	.0114	19,200,589	38.59	9
10	491,948	5,038	.0102	488,393	.0103	18,705,890	38.02	10
11	486,910	4,743	.0097	484,526	.0098	18,217,497	37.41	11
12	482,167	4,700	.0097	479,823	.0098	17,732,971	36.78	12
13	477,467	4,843	.0101	475,059	.0102	17,253,148	36.13	13
14	472,624	5,088	.0108	470,095	.0108	16,778,080	35.50	14
15	467,536	5,286	.0113	464,908	.0114	16,307,394	34.88	15
16	462,250	5,434	.0118	459,543	.0118	15,843,086	34.27	16
17	456,816	5,532	.0121	454,057	.0122	15,383,543	33.68	17
18	451,284	5,607	.0124	448,486	.0125	14,929,486	33.08	18
19	445,677	5,659	.0127	442,852	.0128	14,481,000	32.49	19
20	440,013	5,692	.0129	437,174	.0130	14,038,148	31.90	20
21	434,326	5,717	.0132	431,470	.0133	13,600,974	31.32	21
22	428,609	5,739	.0134	425,743	.0135	13,169,504	30.73	22
23	422,870	5,769	.0136	419,989	.0137	12,743,762	30.14	23
24	417,101	5,811	.0139	414,200	.0140	12,323,773	29.55	24
25	411,290	5,836	.0143	408,362	.0144	11,909,579	28.96	25
26	405,424	5,925	.0146	402,467	.0147	11,501,211	28.37	26
27	399,469	5,983	.0150	396,513	.0151	11,098,744	27.78	27
28	393,516	6,038	.0153	390,501	.0155	10,702,231	27.20	28
29	387,478	6,087	.0157	384,439	.0158	10,311,730	26.61	29
30	381,391	6,125	.0161	378,332	.0162	9,927,291	26.03	30
31	375,266	6,148	.0164	372,194	.0165	9,548,959	25.45	31
32	369,118	6,164	.0167	366,037	.0168	9,176,765	24.86	32
33	362,954	6,178	.0170	359,866	.0172	8,810,728	24.28	33
34	356,776	6,193	.0174	353,682	.0175	8,450,862	23.69	34
35	350,583	6,220	.0177	347,474	.0179	8,097,180	23.10	35
36	344,363	6,230	.0182	341,237	.0183	7,749,706	22.50	36
37	338,103	6,316	.0187	334,950	.0189	7,408,469	21.91	37
38	331,787	6,390	.0193	328,599	.0194	7,073,519	21.32	38
39	325,397	6,485	.0199	322,163	.0201	6,744,920	20.73	39
40	318,912	6,590	.0207	315,626	.0209	6,422,757	20.14	40
41	312,322	6,704	.0215	308,980	.0217	6,107,131	19.55	41
42	305,618	6,824	.0223	302,216	.0226	5,798,151	18.97	42
43	298,794	6,948	.0233	295,330	.0235	5,495,935	18.39	43
44	291,846	7,075	.0242	288,320	.0245	5,200,905	17.82	44
45	284,771	7,207	.0253	281,179	.0256	4,912,285	17.25	45
46	277,564	7,346	.0265	273,903	.0268	4,631,106	16.68	46
47	270,218	7,493	.0277	266,485	.0281	4,357,203	16.12	47
48	262,725	7,649	.0291	258,914	.0294	4,090,718	15.57	48
49	255,076	7,816	.0306	251,153	.0311	3,831,804	15.02	49

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TABLE VII-M—MALES—continued.

1	2	3	4	5	6	7	8	9
Age.	Living at age x .	Dying between ages x and $x+1$.	Probability at age x of dying before age $x+1$.	Average number living between ages x and $x+1$.	Average death-rate between ages x and $x+1$.	Average number living at age x and upwards.	Mean after life-time at age x .	Age.
x	l_x	d_x	$q_x = \frac{d_x}{l_x}$	$P_x = \int_x^{x+1} l_t dt$	$m_x = \frac{d_x}{P_x}$	$Q_x = \sum P_x$	$e_x = \frac{Q_x}{l_x}$	x
50	247,260	7,998	.0323	243,277	.0329	3,580,621	14.48	50
51	239,262	8,195	.0343	235,182	.0348	3,337,344	13.95	51
52	231,067	8,408	.0364	226,882	.0371	3,102,162	13.43	52
53	222,659	8,640	.0388	218,359	.0396	2,875,280	12.91	53
54	214,019	8,893	.0416	209,594	.0424	2,656,921	12.41	54
55	205,126	9,150	.0446	200,572	.0456	2,447,327	11.93	55
56	195,976	9,393	.0479	191,298	.0491	2,246,755	11.46	56
57	186,583	9,575	.0513	181,808	.0527	2,055,457	11.02	57
58	177,008	9,885	.0547	172,173	.0563	1,873,649	10.59	58
59	167,323	9,735	.0582	162,458	.0599	1,701,476	10.17	59
60	157,588	9,737	.0618	152,618	.0638	1,539,018	9.77	60
61	147,851	9,697	.0656	142,998	.0678	1,386,400	9.38	61
62	138,154	9,621	.0696	133,335	.0722	1,243,402	9.00	62
63	128,533	9,490	.0738	123,775	.0767	1,110,067	8.64	63
64	119,043	9,304	.0782	114,378	.0813	986,292	8.28	64
65	109,789	9,061	.0826	105,186	.0861	871,919	7.95	65
66	100,678	8,761	.0870	96,271	.0910	766,733	7.62	66
67	91,917	8,419	.0916	87,678	.0960	670,462	7.29	67
68	83,498	8,044	.0963	79,444	.1013	582,784	6.98	68
69	75,454	7,645	.1013	71,598	.1068	503,340	6.67	69
70	67,809	7,232	.1067	64,158	.1127	431,742	6.37	70
71	60,577	6,809	.1124	57,137	.1192	367,584	6.07	71
72	53,708	6,378	.1186	50,543	.1262	310,447	5.77	72
73	47,390	5,942	.1254	44,383	.1339	259,904	5.48	73
74	41,448	5,504	.1328	38,659	.1424	215,521	5.20	74
75	35,944	5,061	.1409	33,375	.1517	176,862	4.92	75
76	30,880	4,625	.1498	28,532	.1621	143,487	4.65	76
77	26,255	4,189	.1597	24,125	.1736	114,955	4.38	77
78	22,066	3,758	.1703	20,151	.1865	90,830	4.12	78
79	18,308	3,337	.1823	16,605	.2010	70,679	3.86	79
80	14,971	2,928	.1956	13,474	.2173	54,074	3.61	80
81	12,043	2,534	.2104	10,744	.2359	40,600	3.37	81
82	9,500	2,159	.2270	8,400	.2570	29,856	3.14	82
83	7,350	1,804	.2454	6,420	.2810	21,456	2.92	83
84	5,546	1,477	.2663	4,782	.3089	15,036	2.71	84
85	4,039	1,173	.2883	3,459	.3391	10,254	2.52	85
86	2,896	890	.3104	2,426	.3706	6,795	2.35	86
87	1,997	603	.3320	1,648	.4023	4,369	2.19	87
88	1,334	472	.3539	1,084	.4354	2,721	2.04	88
89	862	324	.3759	689	.4702	1,637	1.90	89
90	538	215	.4000	423	.5090	948	1.76	90
91	323	138	.4283	240	.5559	525	1.63	91
92	185	85	.4595	139	.6089	276	1.49	92
93	100	49	.4936	74	.6680	137	1.37	93
94	51	27	.5324	37	.7430	63	1.24	94
95	24	14	.5773	16	.8440	26	1.08	95
96	10	6	.6330	7	.9280	10	1.00	96
97	4	3	.7683	2.5	1.2000	3	.75	97
98	1	1	1.0000	0.5	2.0000	0.5	50	98
99	0	...	...	...	...	...	...	99

* From age 88 onwards q_x is not quite equal to the d_x divided by the l_x of the table, as fractions are omitted in both d_x and l_x ; but $d_x = q_x l_x$ to the nearest integer. The same remark applies to the values of m_x in col. 6.

TABLE VII-F—FEMALES.

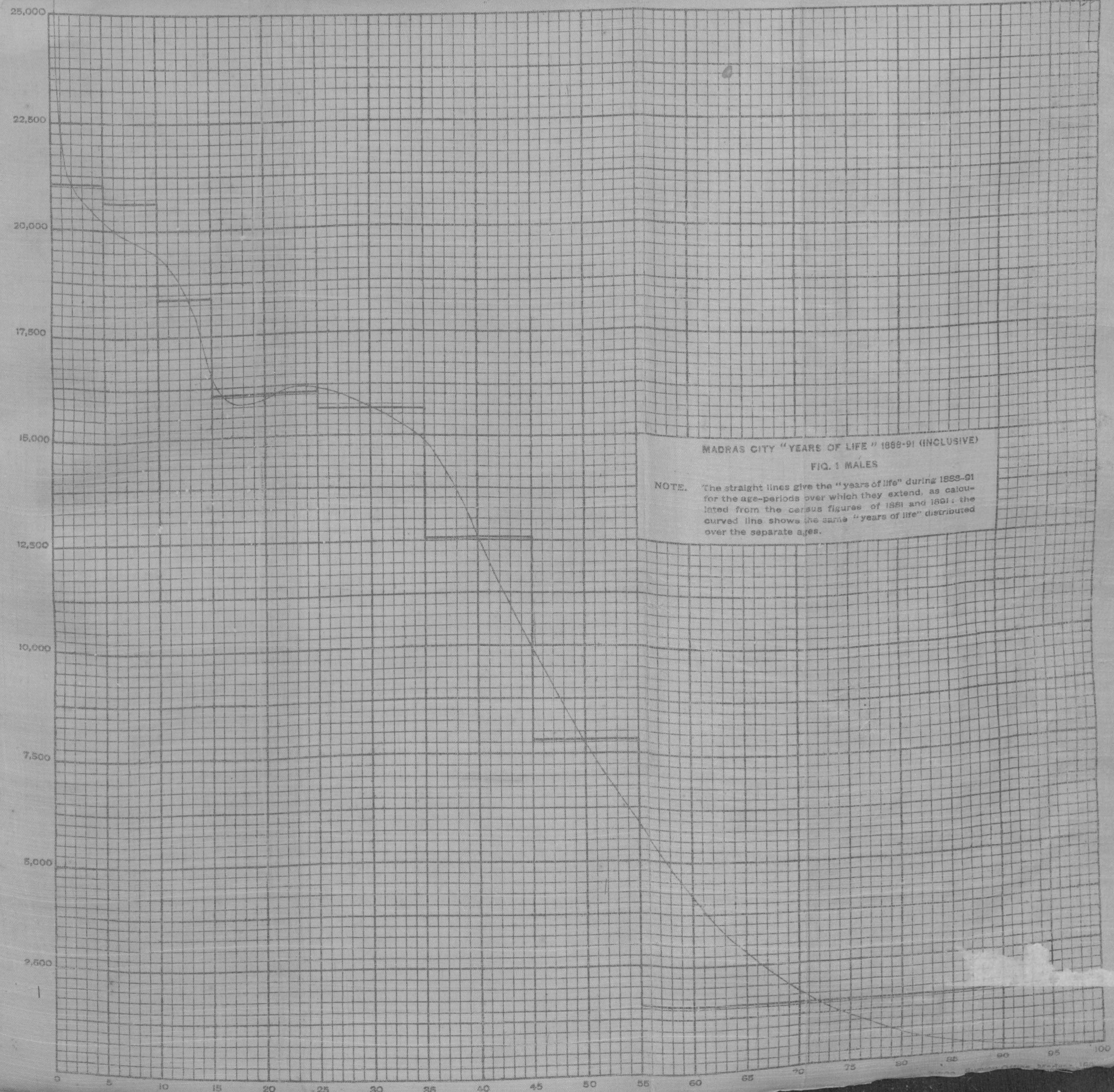
1	2	3	4	5	6	7	8	9
Age.	Living at age x .	Dying between ages x and $x+1$.	Probability at age x of dying before age $x+1$.	Average number living between ages x and $x+1$.	Average death-rate between ages x and $x+1$.	Average number living at age x and upwards.	Mean after life-time at age x .	Age.
x	l_x	d_x	$q_x = \frac{d_x}{l_x}$	$P_x = \int_x^{x+1} l_t dt$	$m_x = \frac{d_x}{P_x}$	$Q_x = \sum P_x$	$e_x = \frac{Q_x}{l_x}$	x
0	1,000,000	261,400	.2614	806,644	.3241	24,664,315	24.66	0
1	738,300	77,479	.1049	694,440	.1116	23,557,671	32.30	1
2	661,121	40,262	.0609	639,419	.0630	23,163,231	35.04	2
3	620,859	26,449	.0426	606,818	.0436	22,523,812	36.28	3
4	594,410	18,783	.0316	584,532	.0321	21,916,994	36.87	4
5	575,627	14,192	.0247	568,237	.0250	21,332,462	37.06	5
6	561,435	11,408	.0203	555,553	.0205	20,764,225	36.98	6
7	550,027	9,745	.0177	545,052	.0179	20,208,672	36.74	7
8	540,282	8,795	.0163	535,826	.0164	19,663,620	36.40	8
9	531,487	8,225	.0155	527,334	.0156	19,127,794	35.99	9
10	523,262	7,744	.0148	519,332	.0149	18,600,400	35.55	10
11	515,518	7,316	.0142	511,828	.0143	18,081,108	35.07	11
12	508,202	6,968	.0137	504,693	.0138	17,569,280	34.57	12
13	501,234	6,717	.0134	497,858	.0135	17,064,587	34.05	13
14	494,517	6,577	.0133	491,223	.0134	16,566,729	33.50	14
15	487,940	6,332	.0136	484,341	.0137	16,075,506	32.95	15
16	481,308	6,961	.0145	477,858	.0147	15,590,865	32.39	16
17	474,347	7,305	.0154	470,724	.0155	15,113,007	31.86	17
18	467,942	7,649	.0164	463,243	.0165	14,642,283	31.35	18
19	459,393	7,894	.0172	455,458	.0173	14,179,040	30.86	19
20	451,490	8,007	.0177	447,501	.0179	13,723,582	30.40	20
21	443,492	8,050	.0182	439,470	.0183	13,276,081	29.94	21
22	435,442	8,070	.0185	431,408	.0187	12,836,611	29.48	22
23	427,372	8,068	.0189	423,337	.0191	12,405,203	29.03	23
24	419,304	8,048	.0192	415,278	.0194	11,981,866	28.58	24
25	411,256	8,010	.0195	407,247	.0197	11,566,588	28.13	25
26	403,246	7,956	.0197	399,263	.0199	11,159,341	27.67	26
27	395,290	7,885	.0199	391,341	.0201	10,760,078	27.22	27
28	387,405	7,802	.0201	383,487	.0203	10,368,737	26.76	28
29	379,603	7,709	.0203	375,740	.0205	9,985,250	26.30	29
30	371,894	7,606	.0205	368,082	.0207	9,609,510	25.84	30
31	364,298	7,496	.0206	360,531	.0208	9,241,428	25.37	31
32	356,792	7,379	.0207	353,093	.0209	8,880,897	24.89	32
33	349,413	7,257	.0208	345,774	.0210	8,527,804	24.41	33
34	342,156	7,131	.0208	338,580	.0211	8,182,030	23.91	34
35	335,025	7,003	.0209	331,513	.0211	7,843,450	23.41	35
36	328,022	6,872	.0209	324,575	.0212	7,511,937	22.90	36
37	321,150	6,742	.0210	317,768	.0212	7,187,362	22.38	37
38	314,408	6,615	.0210	311,090	.0213	6,869,594	21.85	38
39	307,793	6,496	.0211	304,535	.0213	6,558,504	21.31	39
40	301,297	6,386	.0212	298,096	.0214	6,253,969	20.76	40
41	294,911	6,304	.0214	291,754	.0216	5,955,873	20.20	41
42	288,607	6,259	.0217	285,475	.0219	5,664,119	19.63	42
43	282,348	6,255	.0222	279,222	.0224	5,378,644	19.05	43
44	276,093	6,288	.0228	272,953	.0230	5,099,422	18.47	44
45	269,805	6,351	.0235	266,636	.0238	4,826,469	17.89	45
46	263,454	6,439	.0244	260,243	.0247	4,559,833	17.31	46
47	257,015	6,545	.0255	253,752	.0258	4,299,590	16.73	47
48	250,470	6,663	.0266	247,149	.0270	4,045,838	16.15	48
49	243,807	6,791	.0279	240,423	.0282	3,798,689	15.58	49

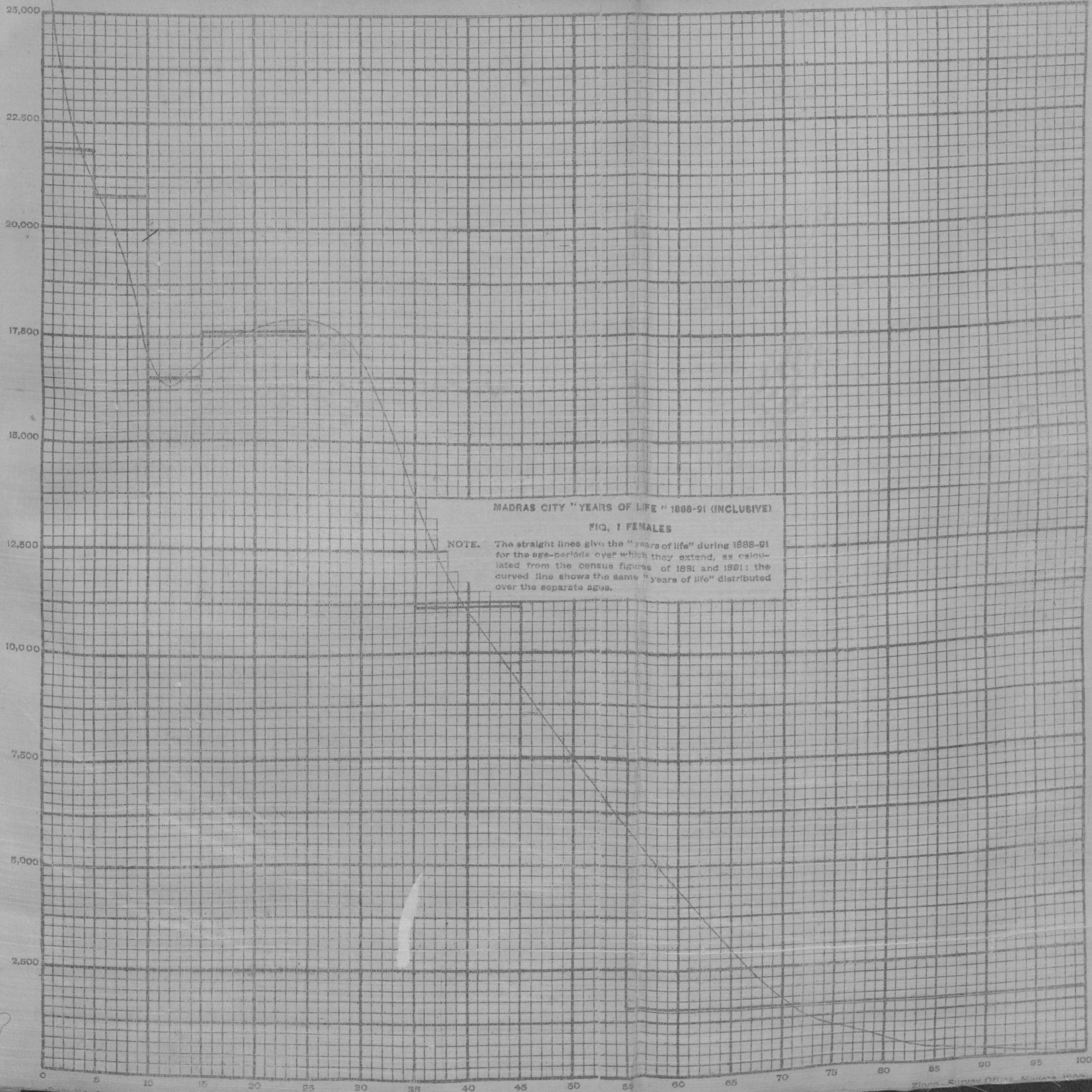
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TABLE VII-F—FEMALES—continued.

1	2	3	4	5	6	7	8	9
Age.	Living at age x .	Dying between ages x and $x+1$.	Probability at age x of dying before age $x+1$.	Average number living between ages x and $x+1$.	Average death-rate between ages x and $x+1$.	Average number living at age x and upwards.	Mean after life-time at age x .	Age.
x	l_x	d_x	$q_x = \frac{d_x}{l_x}$	$P_x = \int_x^{x+1} l_t dt$	$m_x = \frac{d_x}{P_x}$	$Q_x = \sum P_x$	$e_x = \frac{Q_x}{l_x}$	x
50	237,016	6,229	0.0262	233,563	0.0267	3,558,260	15.01	50
51	230,087	7,073	0.0307	226,563	0.0312	3,324,703	14.45	51
52	223,014	7,221	0.0324	219,416	0.0329	3,098,140	13.89	52
53	215,793	7,372	0.0342	212,120	0.0348	2,878,724	13.34	53
54	208,421	7,524	0.0361	204,672	0.0368	2,660,094	12.79	54
55	200,897	7,678	0.0382	197,071	0.0390	2,461,932	12.25	55
56	193,219	7,832	0.0405	189,316	0.0414	2,264,861	11.72	56
57	185,387	7,984	0.0431	181,408	0.0440	2,075,545	11.20	57
58	177,403	8,135	0.0459	173,348	0.0469	1,894,137	10.68	58
59	169,268	8,281	0.0489	165,140	0.0501	1,720,789	10.17	59
60	160,987	8,423	0.0523	156,787	0.0537	1,555,649	9.66	60
61	152,564	8,560	0.0561	148,295	0.0577	1,398,862	9.17	61
62	144,004	8,690	0.0603	139,689	0.0622	1,250,567	8.68	62
63	135,314	8,811	0.0651	130,918	0.0673	1,110,898	8.21	63
64	126,503	8,919	0.0705	122,052	0.0731	979,980	7.75	64
65	117,584	9,011	0.0766	113,086	0.0797	857,928	7.30	65
66	108,573	9,079	0.0830	104,038	0.0873	744,842	6.86	66
67	99,494	9,115	0.0916	94,938	0.0960	640,804	6.44	67
68	90,379	9,109	0.1008	85,822	0.1061	545,856	6.04	68
69	81,270	9,081	0.1111	76,744	0.1177	460,044	5.66	69
70	72,239	8,831	0.1222	67,800	0.1303	383,300	5.31	70
71	63,408	8,478	0.1337	59,135	0.1433	315,500	4.98	71
72	54,932	7,979	0.1453	50,898	0.1608	256,365	4.67	72
73	46,958	7,384	0.1573	43,200	0.1769	205,469	4.38	73
74	39,569	6,721	0.1698	36,152	0.1859	162,260	4.10	74
75	32,848	6,025	0.1831	29,777	0.2028	126,108	3.84	75
76	26,823	5,316	0.1982	24,106	0.2205	93,231	3.59	76
77	21,507	4,610	0.2143	19,113	0.2408	72,225	3.36	77
78	16,897	3,912	0.2315	14,983	0.2629	53,082	3.14	78
79	12,985	3,229	0.2487	11,318	0.2853	38,199	2.94	79
80	9,756	2,604	0.2669	8,405	0.3098	26,883	2.76	80
81	7,152	2,043	0.2857	6,087	0.3356	18,478	2.58	81
82	5,109	1,558	0.3049	4,203	0.3629	12,301	2.43	82
83	3,551	1,122	0.3241	2,944	0.3919	8,008	2.28	83
84	2,390	824	0.3436	1,933	0.4198	5,164	2.15	84
85	1,575	571	0.3627	1,271	0.4490	3,191	2.03	85
86	1,004	383	0.3817	799	0.4793	1,920	1.91	86
87	621	249	0.4006	487	0.5112	1,121	1.81	87
88	372	156	0.4196	288	0.5434	634	1.70	88
89	216	95	0.4387	164	0.5762	346	1.60	89
90	121	55	0.4580	91	0.6099	182	1.50	90
91	66	32	0.4836	48	0.6563	91	1.38	91
92	34	18	0.5148	24	0.7208	43	1.26	92
93	16	9	0.5549	11.5	0.8100	19	1.19	93
94	7	4	0.6111	5	0.9000	7.5	1.07	94
95	3	2	0.7199	2	1.2000	2.5	0.87	95
96	1	1	1.0000	0.5	2.0000	0.5	0.50	96
97	0	...	...	...	...	...	...	97

* See Note on p. 116.

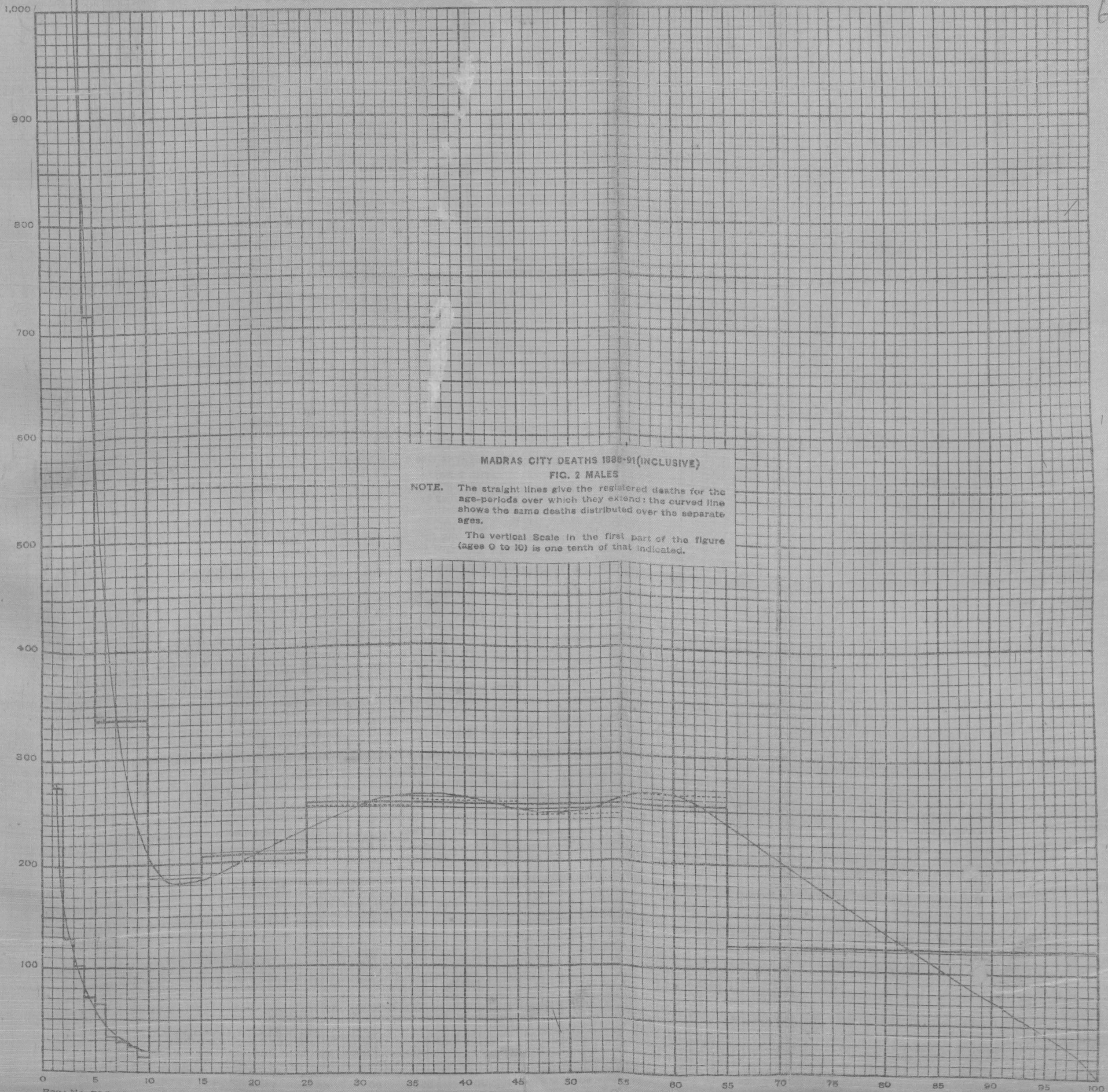


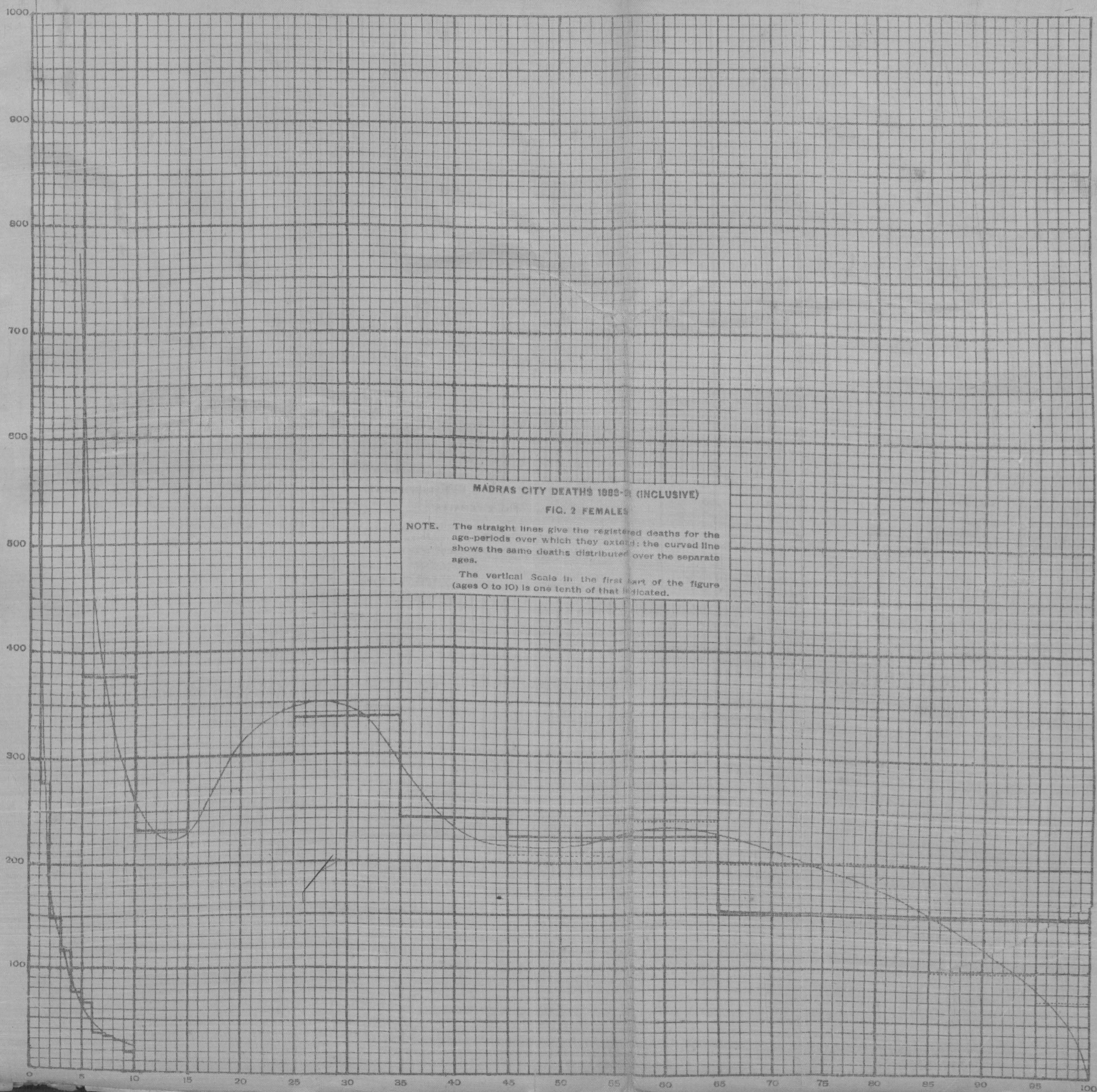


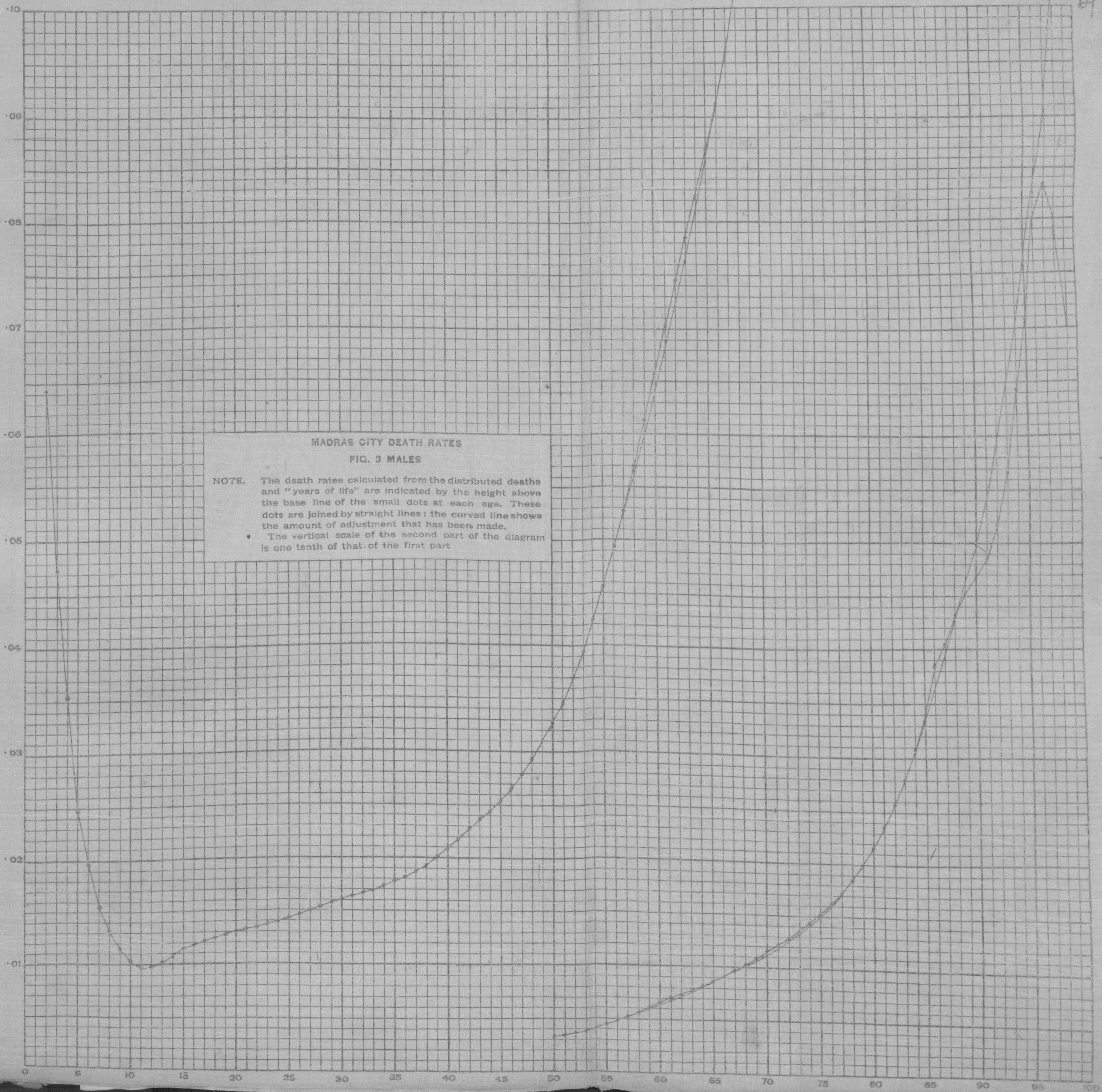
MADRAS CITY "YEARS OF LIFE" 1888-91 (INCLUSIVE)

FIG. 1 FEMALES

NOTE. The straight lines give the "years of life" during 1888-91 for the age-periods over which they extend, as calculated from the census figures of 1881 and 1891: the curved line shows the same "years of life" distributed over the separate ages.





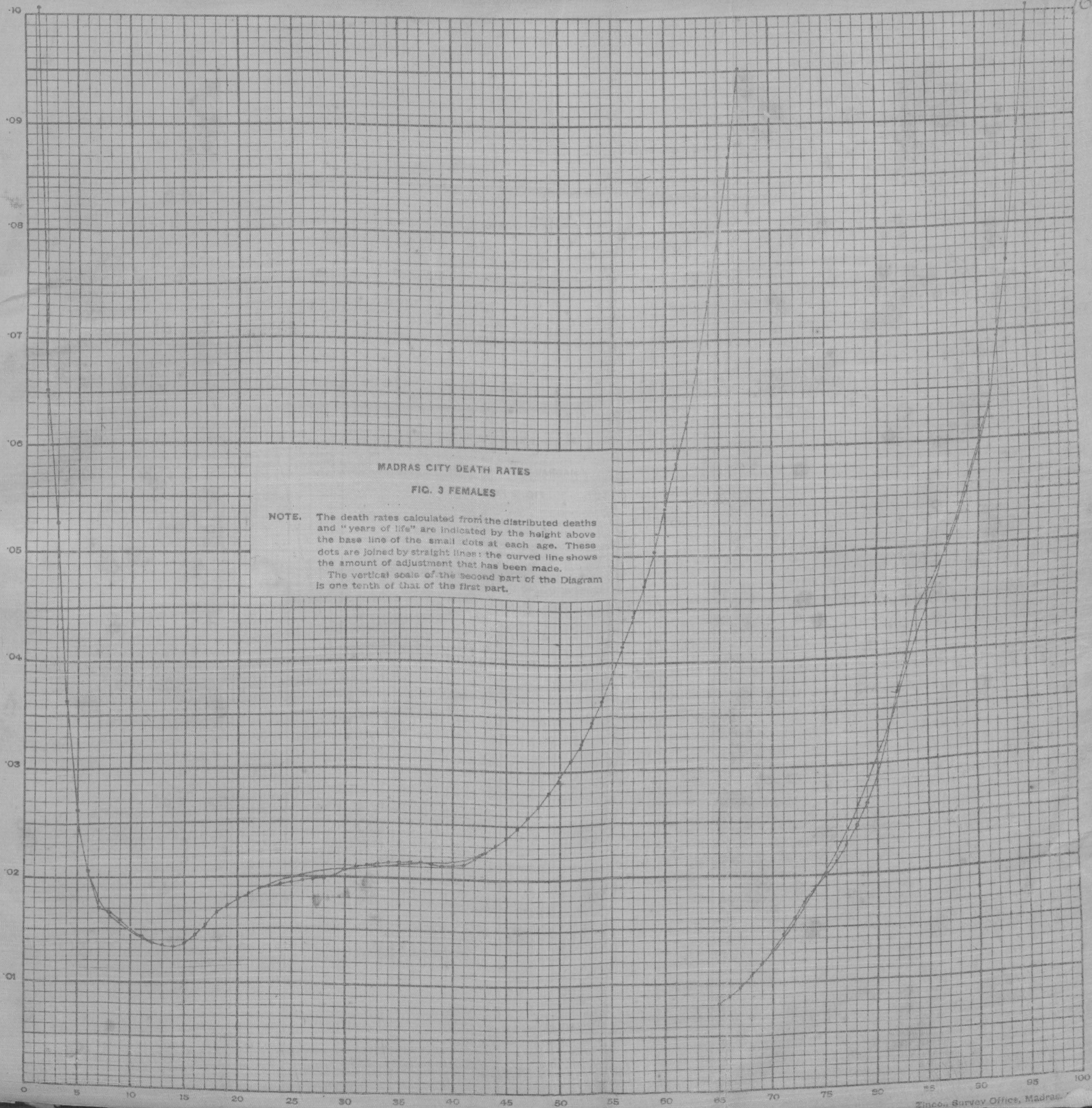


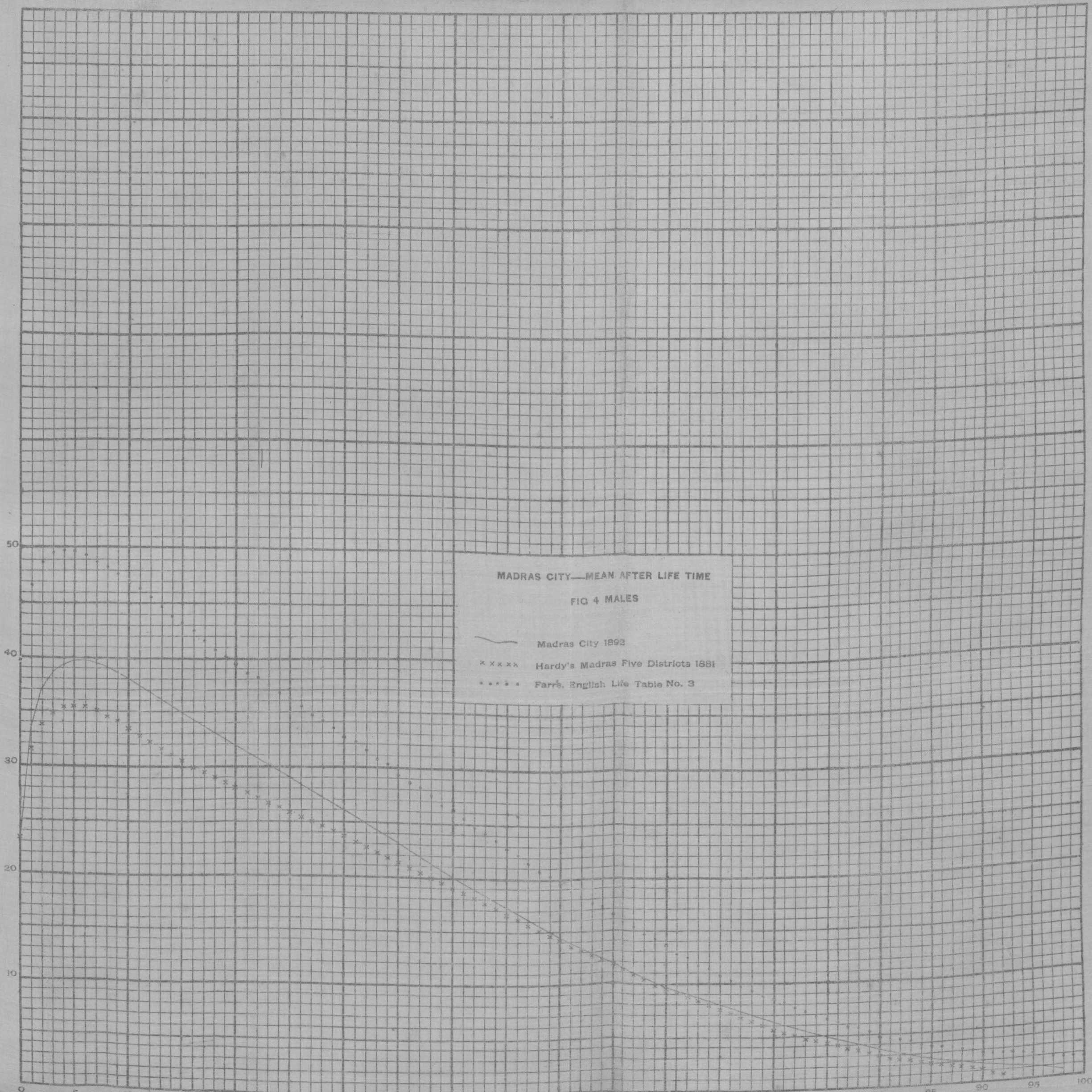
MADRAS CITY DEATH RATES

FIG. 3 MALES

NOTE. The death rates calculated from the distributed deaths and "years of life" are indicated by the height above the base line of the small dots at each age. These dots are joined by straight lines: the curved line shows the amount of adjustment that has been made.

The vertical scale of the second part of the diagram is one tenth of that of the first part





MADRAS CITY—MEAN AFTER LIFE TIME

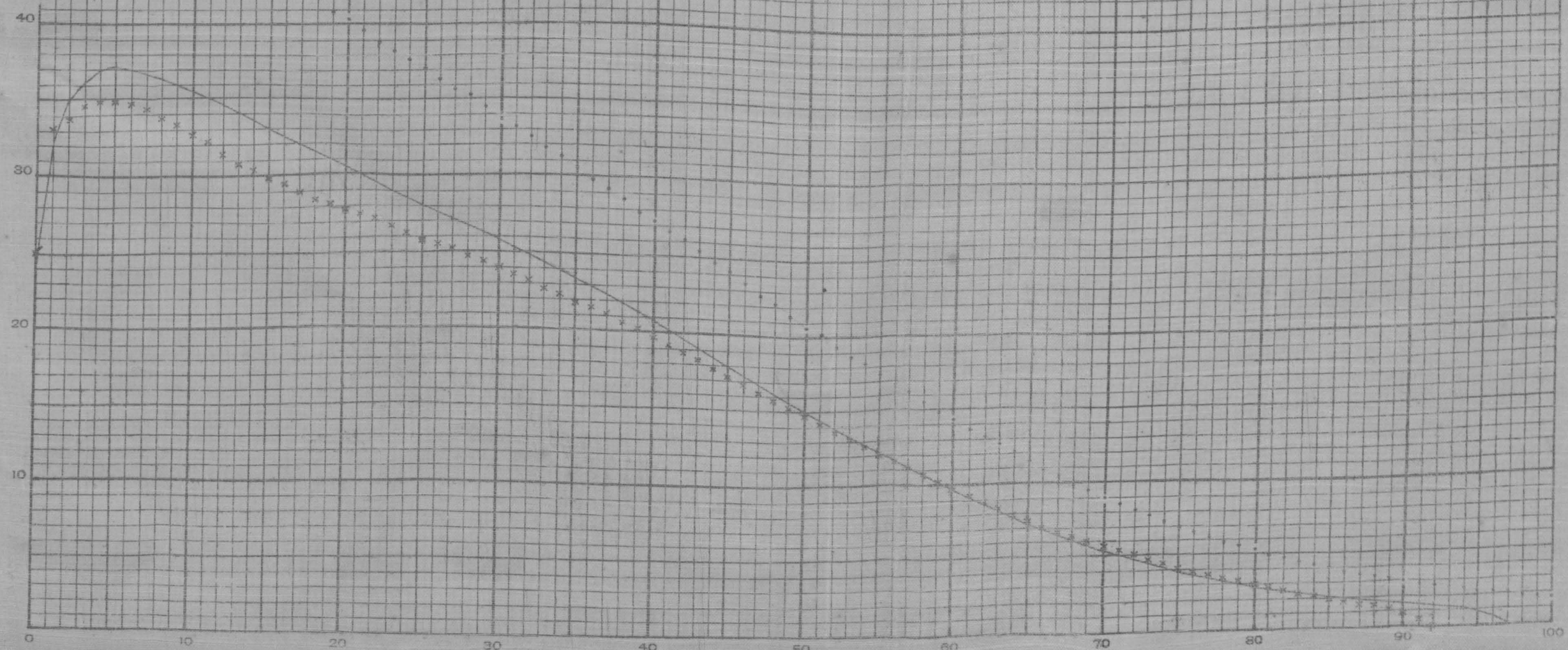
FIG 4 MALES

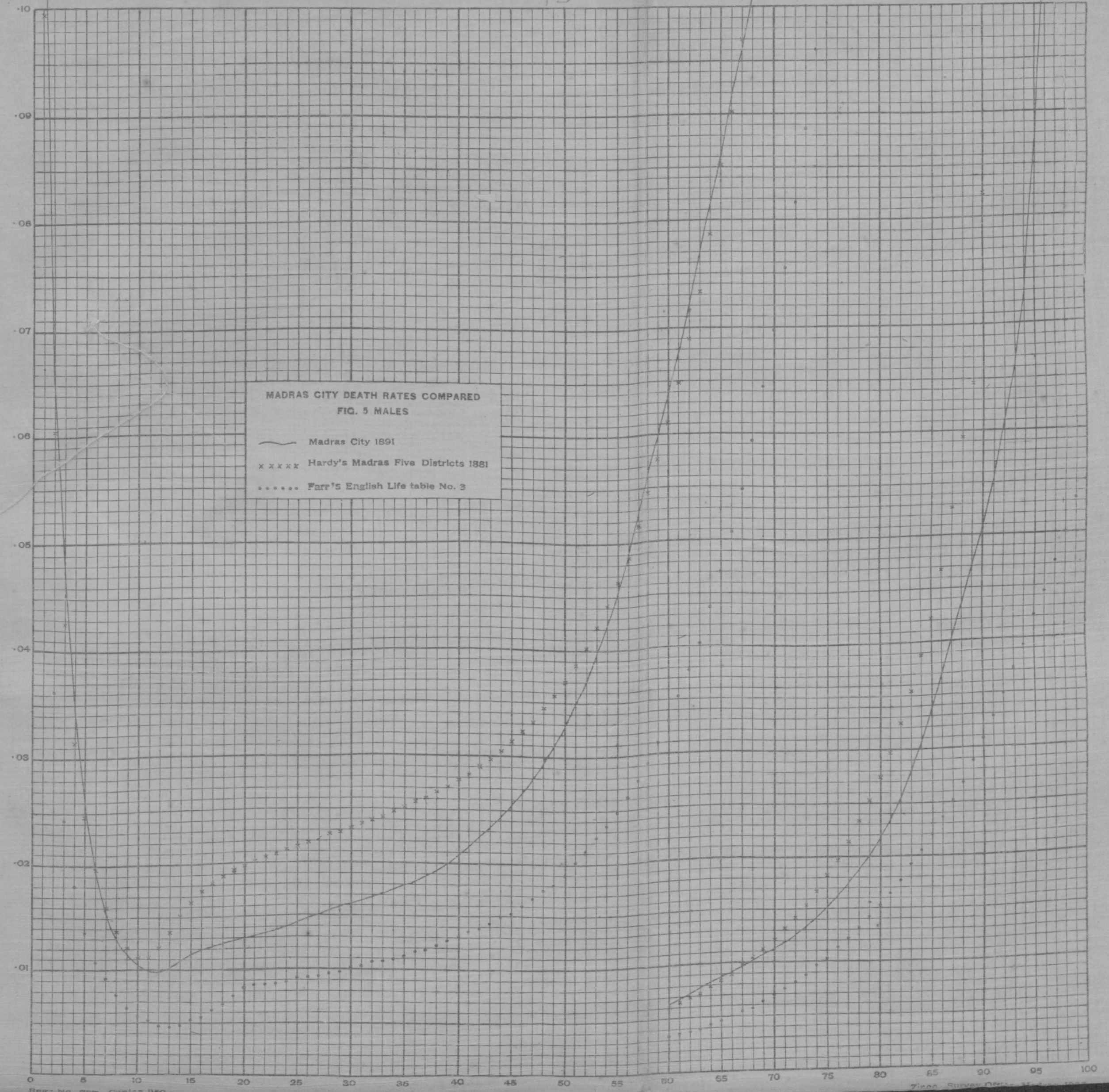
- Madras City 1893
- x x x x Hardy's Madras Five Districts 1881
- Farr's English Life Table No. 3

MADRAS CITY—MEAN AFTER-LIFE TIME

FIG. 4 FEMALES

— Madras City 1892
xxxxx Hardy's Madras Five Districts 1881
..... Farr's English Life Table No. 3





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Proportion of the sexes in 1891

Importance of the subject.

Dr. Cornish's views.

Statistics of 1881

Comparison of statistics for 1891
and 1881.

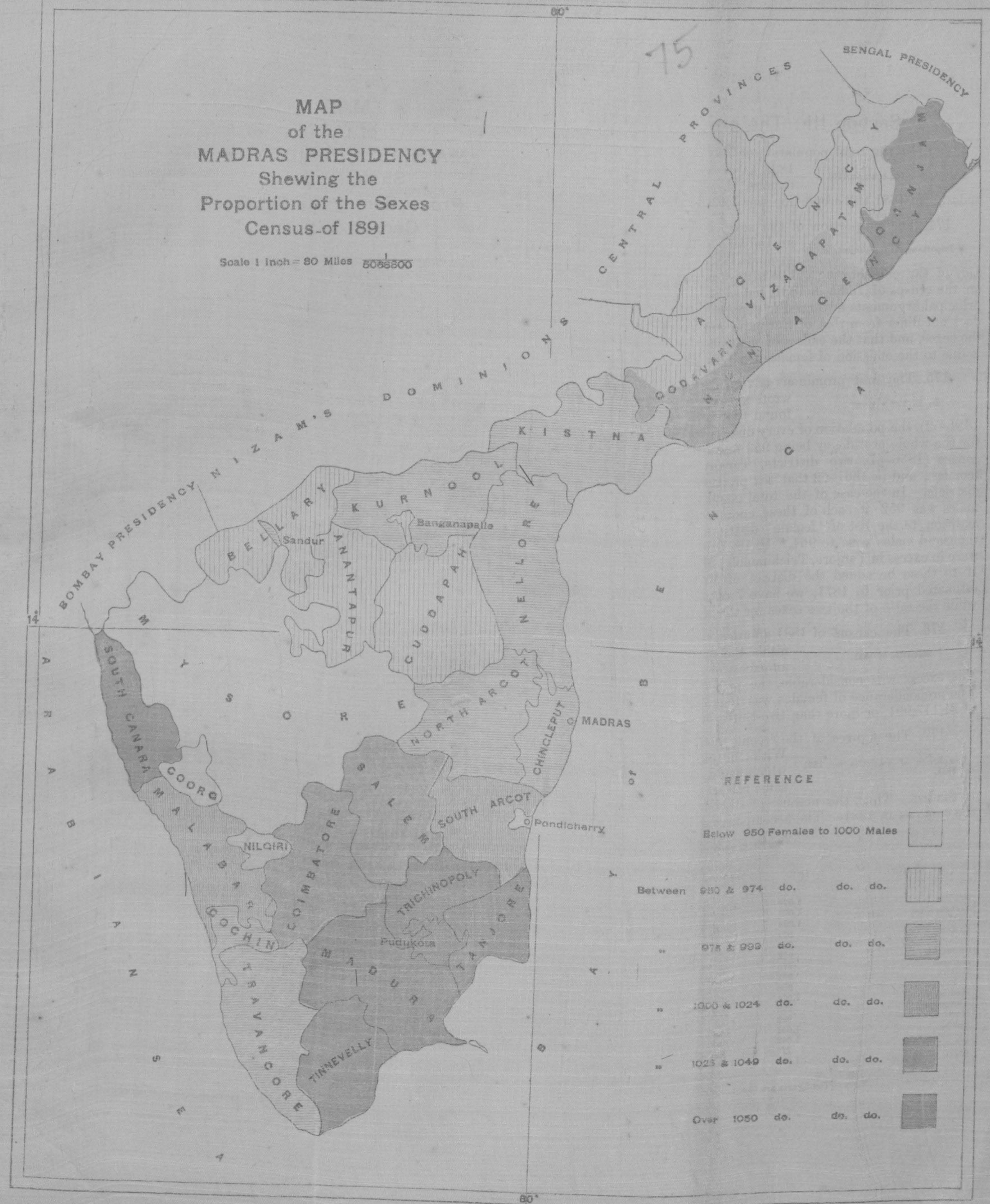
District.	1891.	1881.
Ganjam	1,079	1,083
Vizagapatam	1,033	996
Godavari	1,028	1,018
Kistna	977	934
Nellore	987	983
Cuddapah	953	967
Kurnool	875	973
Bellary	961	970
Anantapur	956	964
Madras	1,004	1,028
Chingleput	985	992
North Arcot	992	1,003
Salem	1,041	1,055
Coimbatore	1,042	1,054
Ndgiris	777	786
South Arcot	1,004	1,004
Tanjore	1,090	1,075
Trichinopoly	1,069	1,072
Madura	1,084	1,100
Tinnevely	1,053	1,058
Malabar	1,018	1,014
South Canara	1,067	1,032
TOTAL	1,025	1,024
Agency { Ganjam	935	891
{ Vizagapatam	953	941
Tracts. { Godavari	963	962
TOTAL AGENCY TRACTS	950	933
Total British Territory	1,022	1,020

NOTE.—The figures are based on the 1881 population given in Table II.

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Statement showing the number of females per 1,000 males at each age.

District or State.	All ages.	Under 1 year.	1 year.	2 years.	3 years.	4 years.	Total 0-4.	5-9.	10-14.	15-19.	20-24.	25-29.	30-34.	35-39.	40-44.	45-49.	50-54.	55-59.	60 and over.
1																			
Ganjam	1,079	1,047	1,069	1,081	1,100	1,084	1,067	1,000	985	1,001	1,285	1,145	1,244	947	1,102	840	1,219	860	1,403
Vizagapatnam	1,028	1,035	1,061	1,100	1,094	1,081	1,077	965	801	924	1,275	1,089	1,163	872	1,010	813	1,142	916	1,304
Godavari	977	1,047	1,061	1,089	1,088	1,086	1,087	963	828	1,034	1,238	1,048	1,109	827	1,019	758	1,108	815	1,368
Krishna	987	1,044	1,066	1,082	1,084	1,083	1,083	982	876	949	1,148	1,144	1,101	777	952	656	982	746	1,141
Nellore	983	1,039	1,063	1,088	1,084	1,084	1,084	973	881	883	1,154	1,011	1,119	788	988	688	960	754	1,149
Cuddapah	975	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Kurnool	961	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Bellary	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Anantapur	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Madras	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Chingleput	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
North Arcot	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Salem	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Coimbatore	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Nilgiri	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
South Arcot	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Tanjore	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Trichinopoly	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Madurai	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Tinnevely	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Malabar	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
South Canara	956	1,037	1,065	1,078	1,088	1,081	1,085	987	846	859	1,136	1,042	1,006	719	921	709	950	799	1,229
Total	1,025	1,048	1,065	1,083	1,089	1,087	1,086	991	873	965	1,213	1,062	1,098	876	1,019	858	1,107	907	1,220
Agency (Ganjam)	935	1,080	1,054	1,047	1,076	1,059	1,051	940	842	983	1,186	982	1,028	799	809	683	703	811	918
Agency (Vizagapatnam)	933	1,007	1,056	1,108	1,134	1,087	1,079	943	823	1,006	1,250	969	941	867	726	759	853	963	1,094
Agency (Godavari)	933	1,067	1,112	1,064	1,097	1,071	1,079	946	853	1,060	1,276	962	897	985	787	701	826	854	1,152
TOTAL, AGENT TRACTS	930	1,031	1,059	1,084	1,112	1,076	1,075	943	832	1,025	1,238	957	956	828	755	729	841	902	1,055
Total, British Territory	1,032	1,048	1,065	1,083	1,089	1,087	1,086	990	871	967	1,214	1,077	1,093	874	1,010	853	1,100	907	1,217
Feudatories (Travancore)	982	1,201	1,136	1,088	1,078	1,046	1,101	894	420	1,060	1,098	1,085	960	818	891	813	928	918	1,057
Feudatories (Cochin)	988	1,129	1,052	1,066	1,065	1,058	1,070	987	593	1,300	1,135	1,076	990	842	921	864	1,041	963	1,202
Feudatories (Pudukotta)	1,007	1,043	1,044	1,001	1,052	1,048	1,056	1,032	982	968	1,302	1,282	1,252	1,015	1,131	987	1,275	1,012	1,283
Feudatories (Bangalore)	999	1,010	1,072	987	995	1,015	1,038	973	905	851	1,078	958	930	757	805	708	1,113	879	1,204
Feudatories (Sandur)	991	904	879	1,135	1,056	1,168	1,047	951	875	796	1,175	1,060	982	823	923	913	1,083	1,165	1,527
Total, Feudatories	986	1,151	1,111	1,080	1,071	1,049	1,086	992	913	1,033	1,192	1,061	994	839	900	839	987	930	1,112



It will be seen that the proportion of females has risen in 9 and fallen in 12 districts, while in one (South Arcot) it is the same as in 1881. The proportion has also risen in the three Agencies. Chap. IV. para. 180.

178. It is important to notice that, excluding the Nilgiris, the circumstances of which are special, and the Agency Tracts, the districts in which the male sex preponderates form a solid connected block of country, more or less in the centre of the presidency (see map). In this central area the females are to the males as 978 to 1,000. In 1881 the proportion was higher, viz., 983 to 1,000, for the females have increased by only 18.53 per cent., while the male increase is 19.10 per cent. It is extremely difficult to determine how far this deficiency in the females is real and how far it is merely due to inaccurate enumeration. When I first examined the figures, I was much struck by the fact that the districts in which the male sex preponderated formed a connected block and it occurred to me that there might be something in the circumstances of the population of that area which caused a higher proportion of male births than elsewhere, more especially as it is in this part of the presidency that the conditions of life are hardest, and, therefore, according to the latest theory on sex, the least favourable to the production of females. The birth statistics, however, lend no support to this line of explanation.

The birth returns are far from accurate, but it is very improbable that female births are recorded more correctly or completely than those of the other sex; indeed, it may be confidently assumed that the reverse is the case and the true ratio of female to male births is probably higher than that given by the registers.

179. The following table shows the average number of male to every 1,000 female births in each district of the presidency for the period 1882-89:—

Number of male births to a thousand female births.

District.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	Mean.
Ganjam	1,085	1,097	1,090	1,104	1,090	1,095	1,102	1,079	1,093
Vizagapatam	1,076	1,030	1,050	1,050	1,043	1,037	1,033	1,059	1,048
Godavari	1,040	1,033	1,045	1,033	1,037	1,023	1,031	1,033	1,041
Kistna	1,041	1,038	1,022	1,024	1,024	1,042	1,051	1,040	1,036
Nellore	1,022	1,035	1,054	1,023	1,057	1,033	1,059	1,026	1,039
Cuddapah	1,066	1,026	1,025	991	1,034	1,030	1,036	1,007	1,020
Kurnool	1,029	1,038	1,058	1,021	1,015	1,035	1,052	1,050	1,041
Bellary	1,036	1,047	1,040	1,012	1,040	1,023	1,040	1,009	1,027
Anantapur	1,002	1,042	1,040	1,021	1,072	1,051	1,081	1,058	1,061
Madras	1,032	1,051	1,058	1,053	1,052	1,054	1,043	1,030	1,049
Chingleput	1,050	1,047	1,053	1,050	1,052	1,053	1,038	1,029	1,043
North Arcot	1,044	1,037	1,029	1,047	1,037	1,043	1,034	1,032	1,040
Salem	1,045	1,051	1,038	1,039	1,039	1,039	1,070	1,042	1,049
Coimbatore	1,041	1,047	1,047	1,060	1,042	1,039	1,064	1,126	1,080
Nilgiris	1,094	1,193	1,123	1,072	1,136	1,064	1,126	1,080	1,109
South Arcot	1,068	1,043	1,018	1,069	1,049	1,069	1,034	1,036	1,048
Tanjore	1,048	1,059	1,054	1,048	1,053	1,074	1,058	1,070	1,059
Trichinopoly	1,049	1,020	1,035	1,049	1,031	1,037	1,041	1,052	1,041
Madura	1,090	1,063	1,072	1,057	1,056	1,021	1,034	1,035	1,053
Tinnevely	1,070	1,069	1,058	1,061	1,070	1,070	1,053	1,071	1,067
Malabar	1,072	1,040	1,066	1,076	1,056	1,046	1,054	1,039	1,057
South Canara	1,045	1,041	1,032	1,032	1,055	1,052	1,062	1,027	1,046
PRESIDENCY TOTAL ...	1,051	1,046	1,046	1,046	1,048	1,047	1,049	1,042	1,047

The five districts in which the excess of male over female births was least are all in the area for which the census gives an excess of males over females. The other three districts in that area are Bellary, North Arcot and Chingleput. In the first the number of boys born to every 1,000 girls is only 1,041, while in the second it is 1,043, and in the third 1,049. For this central tract, taken as a whole, the proportion is 1,037 male births to each thousand of the opposite sex, while for the districts which contain more females than males the ratio is 1,053 male births to 1,000 females. It is, I think, abundantly clear from this that the deficiency of females is not due to an exceptional deficiency of female births.

180. The statement on the opposite page shows the proportion of the sexes at each age-period in each district and state of the presidency. It will be observed that the proportion of females always rises at the age-period containing

Chap. IV. para. 181. the multiple of ten, owing no doubt to the ages of females being returned as multiples of ten more commonly than those of males. In order to minimize the error due to this cause I have worked out the proportions for decennial periods, commencing with each odd multiple of five and I give the results in the following table:—

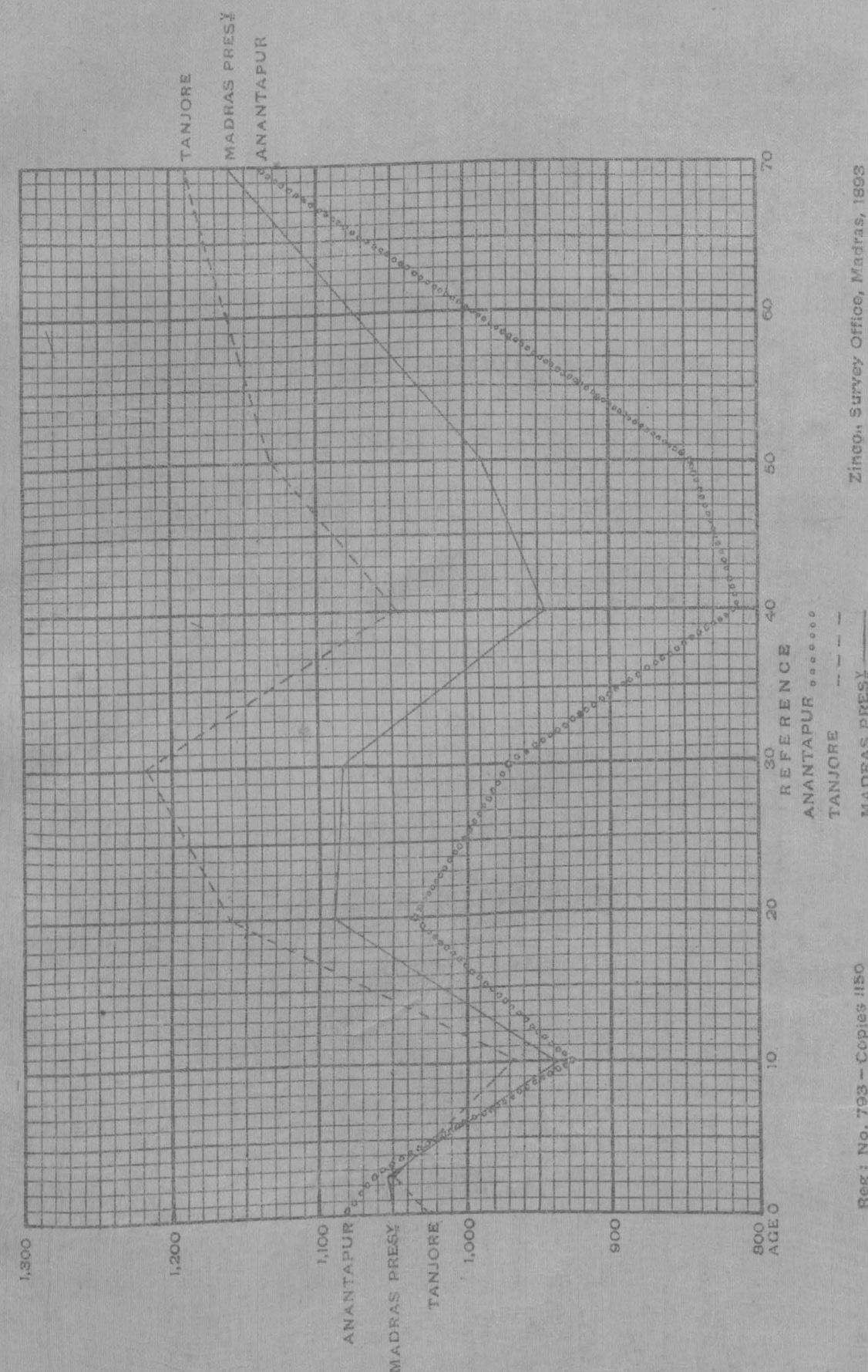
Number of females per 1,000 males at each age-period.

DISTRICT.	Age-period.							All ages.
	0-4.	5-14.	15-24.	25-34.	35-44.	45-54.	55 & over.	
Ganjam ...	1,087	952	1,133	1,197	1,072	1,071	1,298	1,079
Vizagapatam ...	1,077	890	1,092	1,119	956	1,018	1,230	1,023
Godavari ...	1,057	894	1,163	1,080	955	1,002	1,242	1,028
Kistna ...	1,050	932	1,047	976	888	864	1,086	977
Nellore ...	1,065	921	1,023	1,073	885	864	1,089	987
Cuddapah ...	1,055	942	1,025	979	840	866	1,133	968
Kurnool ...	1,044	921	1,059	986	846	870	1,157	975
Bellary ...	1,046	927	1,043	946	845	893	1,024	961
Anantapur ...	1,063	929	1,036	971	812	845	1,003	956
Madras ...	1,043	957	1,099	1,053	897	957	1,012	1,004
Chingleput ...	1,074	948	1,054	1,074	873	861	924	985
North Arcot ...	1,071	932	1,064	1,056	855	886	1,024	992
Salem ...	1,056	930	1,114	1,099	907	1,015	1,150	1,041
Coimbatore ...	1,037	965	1,079	1,115	981	1,064	1,161	1,042
Nilgiris ...	1,020	899	736	647	608	748	989	777
South Arcot ...	1,063	950	1,088	1,095	904	916	989	1,004
Tanjore ...	1,050	938	1,131	1,319	1,055	1,130	1,171	1,090
Trichinopoly ...	1,043	976	1,102	1,184	1,047	1,090	1,114	1,069
Madura ...	1,043	953	1,118	1,194	1,067	1,140	1,230	1,084
Tinnevely ...	1,027	965	1,055	1,115	1,038	1,078	1,246	1,053
Malabar ...	1,020	916	1,109	1,053	943	1,024	1,244	1,018
South Canara ...	1,026	969	1,175	1,173	997	1,036	1,208	1,067
Agency { Ganjam ...	1,065	899	1,077	982	804	730	804	935
Agency { Vizagapatam ...	1,079	888	1,136	954	781	815	1,069	953
Agency { Godavari ...	1,079	904	1,174	922	758	858	1,111	963
TOTAL, BRITISH TERRITORY.	1,052	938	1,080	1,065	946	966	1,138	1,022

Notwithstanding the predominance of the male sex at birth, we find that among children under five, the girls outnumber the boys in every district, the number of females to 1,000 males varying from 1,087 in Ganjam to 1,020 in Malabar and the Nilgiris, the mean ratio for the presidency being 1,052 to 1,000. This bar and the Nilgiris, the mean ratio for the presidency being 1,052 to 1,000. This preponderance of female children is found in most Indian Provinces, both those which show a general excess of females and those in which the relation is reversed. It is also found in England and Wales, but in the majority of European countries there are more boys than girls under five years of age. At the 5-14 period males preponderate in every district, and with a few exceptions the excess is most marked in those districts in which the males are in excess for the total population. The life-table shows a very much greater death-rate among females than among males from 6 to 14 and this accounts in part though not entirely for the deficiency of females at this period. At the next period (15-24) the females again preponderate in all districts. Going to the next age-period we find a decrease in the relative number of females in most of the 'male' districts, and an increase in the majority of the 'female' districts. The figures for the succeeding period (35-44) show a decline in every case, and in the 'male' districts the proportion of females reaches its lowest point either at this or the next period. In the female districts, on the other hand, with the exception of South Arcot, the proportion is lowest at 5-14. Except in Chingleput, Nilgiris, South Arcot, and the Ganjam Agency, the population aged 55 and over contains an excess of females.

181. Excluding the Nilgiris and the Agency Tracts the district with the highest proportion of females is Tanjore, while Anantapur is that in which the proportion is lowest. The annexed diagram shows the proportion at each age-period in these two districts and in the presidency as a whole. The diagram is imperfect as the curve is merely a line joining the average points for each decennium, but it is useful for purposes of comparison, and it brings out very clearly the general similarity of the direction of the ratio.

NUMBER OF FEMALES PER 1,000 MALES AT EACH AGE-PERIOD



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Proportion in the different religions.
Number of females per 1,000 males.

Age-period.	Hindus.	Musal- mans.	Chris- tians.	Jains.	Animists.
0	1,049	1,036	1,038	947	1,059
1	1,069	1,030	1,050	1,096	988
2	1,068	1,012	1,039	965	1,060
3	1,064	1,011	1,034	1,148	1,121
4	1,032	995	1,009	1,014	1,042
TOTAL 0-4	1,055	1,016	1,033	1,021	1,062
5-14 ...	938	928	966	946	895
15-24 ...	1,087	1,125	1,114	908	1,065
25-34 ...	1,086	1,103	1,095	903	954
35-44 ...	946	967	951	871	801
45-54 ...	988	1,003	960	897	722
55 and over.	1,142	1,121	1,074	1,115	886
TOTAL ...	1,024	1,025	1,026	941	932

182. The marginal statement shows the proportions at each age-period among the followers of each main religion. There is a fair degree of uniformity in the figures for Hindus, Musalmans and Christians, but those for Animistic and Jains show a marked excess of males. It is important to note that the proportion of females is slightly higher among Musalmans than among Hindus, and all three religions show a preponderance of females. Among the Animistic the males are largely in excess, and an excess nearly as great is found among the Jains.

183. The proportion of the sexes among the urban population was noticed in paragraph 57, but I may here repeat that of the nine districts which show a total excess of males, in only three—Bellary, Anantapur and Nilgiris—do we find this excess among the urban population. On the other hand, in the urban population of Malabar and Canara, the males are in excess though in the total population the females predominate. In the urban population of the whole presidency there are 1,047 females to 1,000 males, while in the rural population the ratio is 1,020 to 1,000.

184. The following statement shows the proportion of the sexes in each caste numbering not less than 20,000 members. The statement also gives the number of wives to 1,000 husbands :—

Statement showing the proportion of sexes in the principal castes.

Traditional occupation.	Caste.	Number of females to 1,000 males.	Number of wives to 1,000 husbands.
Agriculturists, formerly Military and dominant.	Agamudaiyan ... Tamil ...	1,071	1,068
	Ambalakaran ... Do. ...	1,094	1,078
	Kallan ... Do. ...	1,071	1,068
	Kabdariya ... Foreign ...	976	976
	Marathi ... Do. ...	1,013	1,020
	Maravan ... Tamil ...	1,036	1,077
	Nayar ... Malayalam ...	1,074	1,111
	Razu ... Telugu ...	941	933
	Velama ... Do. ...	1,005	974
Cultivators ...	Badaga ... Canarese ...	959	1,037
	Banta ... Do. ...	1,034	1,132
	Gauda ... Do. ...	992	1,038
	Gavara ... Uriya ...	994	1,037
	Jain ... Canarese ...	956	982
	Kalingi ... Uriya ...	1,040	1,032
	Kamma ... Telugu ...	990	996
	Kappiliyan ... Canarese ...	1,037	1,122
	Kapu or Reddi ... Telugu ...	1,005	1,019
	Mahaiman ... Tamil ...	1,129	1,038
	Nadava ... Canarese ...	1,106	1,218
	Nagavasa ... Uriya ...	1,050	1,054
	Nattaman ... Tamil ...	1,085	1,032
	Odia ... Uriya ...	1,036	1,076
	Telaga ... Telugu ...	1,024	999
	Tottian or Kambalattan. ... Tamil ...	1,034	1,135
	Udaiyan ... Do. ...	1,057	1,022
	Vakkaliga ... Canarese ...	990	947
	Vellala ... Tamil ...	1,048	1,031

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Statement showing the proportion of sexes in the principal castes—continued.

Traditional occupation.	Caste.	Number of females to 1,000 males.	Number of wives to 1,000 husbands.
Field labourers	Cheruman ... Malayalam ...	1,064	1,033
	Holeya ... Canarese ...	1,131	1,136
	Mála ... Telugu ...	999	1,073
	Máppan ... Tamil ...	1,043	1,021
	Paidi ... Uriya ...	998	1,033
	Pailan ... Tamil ...	1,090	1,089
	Palli ... Do. ...	1,018	1,060
	Paniyan ... Malayalam ...	914	982
	Paraiyan ... Tamil ...	1,039	1,077
	Uráli ... Do. ...	1,072	1,131
	Vettuvan ... Do. ...	1,044	1,054
Forest and Hill Tribes.	Bakta ... Uriya ...	985	1,056
	Botra ... Do. ...	950	967
	Gadaba ... Hill and Forest Tribe. ...	999	952
	Irula ... Tamil ...	975	1,052
	Játapu ... Hill and Forest Tribe. ...	965	985
	Khond ... Do. ...	914	982
	Kondadora ... Telugu ...	979	1,030
	Kóya ... Do. ...	945	1,016
	Malayálan ... Hill and Forest Tribe. ...	979	1,106
	Porejá ... Do. ...	961	972
	Savara ... Do. ...	963	972
	Yárádi ... Telugu ...	979	1,056
Priests	Bráhmans—		
	Áruvólu ... Telugu ...	1,012	1,005
	Brahacharanam ... Tamil ...	1,053	1,047
	Dánua ... Uriya ...	1,058	1,019
	Dásasta ... Foreign ...	1,075	995
	Holua ... Uriya ...	1,026	1,019
	Murkináda ... Telugu ...	1,034	1,014
	Niyógi ... Do. ...	1,044	1,000
	Sarasvata ... Canarese ...	949	1,022
	Sivalli ... Do. ...	1,065	1,107
	Tengalai ... Tamil and Telugu ...	1,039	1,006
	Vadugalai ... Tamil ...	1,037	1,015
Temple servants	Vadama ... Do. ...	1,039	1,015
	Vaidiki ... Telugu ...	1,046	996
	Válanádu ... Do. ...	1,044	986
	All Bráhmans	1,031	1,003
	Jangam ... Canarese ...	1,029	1,048
	Pandáram ... Tamil ...	1,010	1,060
	Valluva ... Do. ...	1,020	1,086
	Sátáni ... Telugu ...	1,033	1,036
	Kanakkam ... Tamil ...	1,019	1,017
	Karnam ... Telugu ...	1,021	1,006
	Baliya ... Telugu ...	1,017	1,044
	Chetti ... Tamil, Telugu and Canarese. ...	1,040	1,039
Traders	Kavarai ... Telugu ...	1,059	1,053
	Kómati ... Do. ...	995	993
	Labbai ... Tamil ...	1,233	1,297
	Máppilla ... Malayalam ...	992	1,064
Carriers	Vadugan ... Telugu ...	1,068	1,056
	Lambédi ... Foreign ...	871	991
Goldsmiths	Tattán ... Tamil ...	1,019	1,003
	Kammálan ... Tamil ...	1,022	1,044
Artisans	Kamaala ... Telugu ...	1,004	1,004
	Ambattan ... Tamil ...	1,025	1,053
Barbers	Mangala ... Telugu ...	987	1,019
	Kollan ... Tamil ...	987	961
Blacksmiths	Ásári ... Tamil and Malayalam. ...	1,073	974
	Dévanga ... Telugu and Canarese. ...	1,006	1,081
Weavers	Dombo ... Uriya ...	974	1,017
	Kalkólan ... Tamil ...	1,032	1,073
	Néso ... Do. ...	947	962
	Páno ... Uriya ...	989	1,003
	Patnól ... Foreign ...	1,000	993
	Sálo ... Telugu ...	991	1,026
	Sáliyan ... Tamil ...	1,000	1,017
	Sédan ... Canarese ...	1,052	1,077
	Togata ... Do. ...	960	1,016

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Statement showing the proportion of sexes in the principal castes—continued.

Traditional occupation.	Caste.	Number of females to 1,000 males.	Number of wives to 1,000 husbands.
Washermen	Dhóbi ... Canarese ...	1,056	1,093
	Táukala ... Telugu ...	997	1,038
	Vannán ... Tamil ...	1,035	1,045
Cotton-cleaners	Dádékula or Pinjári ... Muhammadan ...	970	1,045
Shepherds	Golla ... Telugu ...	996	1,016
	Idaiyan ... Tamil ...	1,034	1,042
	Kurumban ... Canarese ...	996	1,020
Oil-pressers	Gánda ... Telugu ...	986	976
	Téli ... Telugu and Uriya. ...	1,039	1,053
	Vániyan ... Tamil ...	1,028	1,020
Potters	Kummara or Kumbára. ... Telugu and Canarese. ...	992	1,040
	Kusavan ... Tamil ...	1,003	1,040
Earth-workers, formerly salt-workers.	Uppara ... Telugu and Canarese. ...	971	1,020
	Uppiliyan ... Tamil ...	1,043	1,058
Fishermen, boatmen, &c.	Banri ... Uriya ...	1,098	1,099
	Besta ... Canarese ...	992	1,025
	Bóya ... Telugu ...	980	1,075
	Kevuto ... Uriya ...	1,068	1,108
	Mogér ... Canarese ...	1,230	1,381
	Palle ... Telugu ...	1,115	1,140
	Pattanavan ... Tamil ...	1,024	1,033
	Sembadavan ... Do. ...	1,031	1,041
	Váda ... Telugu ...	1,256	1,404
	Billava ... Canarese ...	1,055	1,147
	Gamalla ... Telugu ...	994	1,013
	Halepaik ... Canarese ...	1,267	1,550
Distillers and toddy-drawers.	Idiga ... Telugu ...	1,067	1,131
	Índra ... Do. ...	1,037	1,119
	Izhuvan ... Tamil ...	1,057	1,021
	Segidi ... Telugu ...	1,123	1,154
	Shánán ... Tamil ...	1,025	1,092
	Shánán ... Tamil ...	1,000	1,052
	Sondi ... Uriya ...	976	976
	Tiyyan ... Malayálam ...	1,010	1,010
	Yáta ... Telugu ...	1,102	1,207
Leather-workers	Chakkiliyan ... Tamil and Telugu. ...	1,021	1,073
	Mádiga ... Telugu and Canarese. ...	983	1,036
Village watchmen	Dandási ... Uriya ...	1,073	1,095
	Ekari ... Telugu ...	946	1,008
	Mutrácha ... Do. ...	980	1,057
	Muttiriyan ... Tamil ...	988	1,067
Earth-workers	Odde ... Telugu and Uriya ...	987	1,027
	Korava or Yerukala ... Tamil ...	988	1,064
Mat-makers, &c.	Bédar or Védan ... Tamil and Canarese. ...	1,011	1,039
	Kárálan ... Tamil ...	965	1,048
Hunters	Valaiyan ... Do. ...	1,057	1,076
Beggars, &c.	Ándi ... Tamil ...	1,079	1,106
	Dásari ... Telugu ...	1,067	1,123
Non-Indian Asiatic Races.	Moghal ... Muhammadan Tribe. ...	984	1,018
	Pathan ... Do. ...	953	988
	Saiyad ... Do. ...	975	1,027
	Sheik ... Do. ...	1,002	1,050
Christian Converts	Native Christian ...	1,032	1,083
	Lingáyat ...	963	966
Territorial, Linguistic and Sectarian names.			

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In nearly every Tamil, Malayalam and Uriya caste (except hill people) the females are more numerous than the males. Among the Telugu people, on the other hand, we find an excess of males in a large number of castes, both high and low. This deficiency of females is still more prevalent among the hill and forest tribes and it also exists in a marked degree among the Canarese castes. Of Bráhmans, the Sáravats alone of the larger sub-divisions have an excess of males. The local nature of the divergence in the proportion of the sexes is further brought out by a comparison of the ratios in the same group of castes. Thus among the Tamil Chettis, there are 1,040 females to 1,000 males, while among the Telugu Kómatis the ratio is 995 to 1,000. Tamil barbers show a considerable excess of females, Telugu barbers a considerable deficiency. It is the same with the weavers, the washermen, the potters, the leather-workers, &c., and though there are some exceptions, yet speaking generally Telugu and Canarese castes contain a lower proportion of females than the similar castes of the Tamil and Malayalam country.

185. Now the omission to return the female members of a family might arise from the female sex being regarded as unimportant or from that desire to maintain the privacy and seclusion

Evidence of omission of females.

of women which is so common throughout the east. The female sex is undoubtedly treated as of less importance than the male, but I know of no grounds for the belief that this feeling is more common in the Telugu than in the Tamil country; indeed, the higher proportion of females in the birth statistics and at the earlier ages in the census returns indicates rather that the disregard of females is less prevalent in the north than the south. If then, there is any concealment of females, it must be ascribed to the second cause, and the fact that the divergence between the proportions in the two parts of the country is greatest at the adult ages lends support to this theory. On the other hand, we find the excess of males is common to all classes of the people—to the despised Mála and Mádiya as well as to the high caste Rázu, to the barber (Mangala) as well as to the wealthy Kómati merchant, while among the highest caste of all, the Bráhmans, the females preponderate. But this jealous respect for the privacy of their women would be felt most strongly by the upper classes, and we should not expect to find it at all among the lower classes, or at any rate only in a very minor degree, due to imitation of their superiors. The Pariah woman leads fully as free a life and contributes as much to the family income among the Telugu as among the Tamil people, and it would not be easy to conceal her existence even if there were a desire to do so. But, while the returns tend to show that among many castes the preponderance of males is due to natural causes and not to any failure to return women at the census, there can be little doubt that there has been some omission of married women. For there is no other satisfactory explanation of the excess of

Castes in which husbands outnumber wives.

Kahatriya.	Bráhma	Désasta.
Rázu.		Vaidiki.
Velama.		Vélanádu.
Jain.	Kómati.	
Kamma.	Lambádi.	
Telaga.	Kollan.	
Vakkaliga.	Ásári.	
Paniyan.	Nése.	
Botra.	Patául.	
Gadaba.	Gándle.	
Játapa.	Tiyyan.	
Khoul.	Pathán.	
Porajá.	Lingayat.	
Savara.		

husbands, which we find among some two dozen castes. These castes, with the possible exception of the Kollan, Ásári and Tiyyan castes of Malabar, do not practise or permit polyandry, and it seems to me very improbable that unmarried men would be returned as married to any great extent, though it is likely that widowers may have been so described. As a set off to this, however, we have the certainty that a number of unmarried women and widows living in concubinage would return themselves as married, and I cannot but think that this excess of husbands is due to the omission of wives from the returns. But where the wives exceed the husbands in number I should hesitate to assert that there has been a deliberate omission of females on any large scale. The conclusion in fact at which I arrive is that there has been a great omission of females among the hill tribes of the Agency tracts and some omission in the central Telugu tracts (including the Canarese portion of Bellary and Anantapur); but it seems to me highly probable that in this part of the country there is naturally an excess of males.

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186. Such an excess of the male sex was noticed in the early years of the century by so competent an observer as Sir Thomas Munro. Writing of the census of the Ceded districts, of which he was at that time Collector, he says:—

Sir Thomas Munro on the excess of males.

“It is a general opinion among the inhabitants that the number of males is ‘actually one-tenth greater than that of females. I was at first inclined to believe that the difference might have risen from the seclusion of females, but it is not particularly great among those castes who follow this practice but extends to every caste and every district. I examined the details of several villages in different parts of the country and though in one village the females were more numerous than the males and in a few others equal in number to them, yet the average result was the same as in whole districts. The coincidence of so many unconnected accounts is certainly a strong argument in favour of the popular notion of the ‘males being one-tenth more numerous than females.’”

I learn too, that it is the general belief among the inhabitants of the southern districts, that 50 or 60 years ago the proportion of females was much smaller than it is now, and in support of the statement stress is laid upon the fact that it was then difficult to obtain wives, while now the converse is the case and a considerable dowry has to be given with a girl in order to obtain a suitable husband for her. This idea is probably in great part an outcome of that fondness for ‘the good old times’ which is a universal weakness of the human mind, but I do, as a fact, find that the proportion of unmarried among females of 15 years of age and upwards is higher in the southern than in the northern districts, and this is possibly due to a greater proportion of females in the former than in the latter.

187. In the Nilgiri district there are only 777 females to every 1,000 males, and 764 wives to 1,000 husbands. This anomalous

Nilgiri district.

proportion of the sexes is chiefly due to the fact that the population largely consists of immigrant males who do not bring their wives and families with them. Among people born in the district the ratio of females to males is 965 to 1,000 and in the principal indigenous caste—the Badagas—we find that the wives exceed the husbands. It is true that the Tódas practise polyandry, but this caste numbers only 739 all told, so that its customs have practically no effect on the statistics for the whole population. I do not think there has been any great omission of females in this district.

188. As stated above, there has undoubtedly been a large omission of females among the hill tribes of the Agency tracts, for we

The Agency Tracts.

have there a great deficiency of wives. There are only 979 married women to 1,000 married men, and as polyandry does not prevail and

Number of wives to 1,000 husbands.

Agency Tracts.	Number.
Agency. { Ganjam	972
{ Vizagapatnam	981
{ Godavari	981
TOTAL	979

there is no appreciable immigrant population, a considerable number of wives must have been omitted from the census schedules. On the assumption that there are in reality at least 1,020 wives to 1,000 husbands, the number of wives whom the enumerator failed to include in his returns is about 12,500, and if these omitted wives be added to the female population, the number of females to a thousand males becomes 969 instead of 950. The proportion of wives to husbands is, however, probably higher than 1,020 per mille and if wives have been so largely omitted from the returns, it is likely that there has been an omission of other females as well, especially widows.

Comparison with other provinces and countries.

189. The following statement gives the proportion of the sexes in the other provinces of India and in some of the countries of Europe:—

* Selections from the Records of the Bellary District.

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para. 191.

Number of females per 1,000 males.

Madras	1,022	England and Wales	1,055
Bombay	931	France	1,005
Bengal	1,003	Belgium	1,001
North-West Provinces and Oudh	930	Germany	1,043
Punjab	854	Sweden	1,061
Central Provinces	998	Austria	1,047
Assam	968	Hungary	1,030
Burma	962	Italy	995
Mysore	991	Spain	1,045
		Portugal	1,091

In Madras and Bengal alone of the Indian provinces do the females exceed the males, while in every European country except Italy for which I have been able to obtain statistics the females preponderate. It does not lie within the scope of a report on the Madras Census to examine the figures for the other provinces, but it may be stated that the general excess of males in 1881 was ascribed by the Census Commissioner to the omission of females from the returns. If that view is correct it implies that the enumeration of the people was more complete in Madras than elsewhere.

190. In only one of the Feudatory States—Pudukóta—do the females exceed the males in number. Banganapalle and Sandúr lie in the 'male' area of the presidency, and it was therefore to be expected that the males would exceed the females. It is, however, surprising to find a preponderance of males in Travancore and Cochin—more especially in the former, where previous enumerations have shown an excess of females. I have already referred to this matter in Chapter II and I stated that the great change in the proportion since 1881 pointed to the omission of females at the recent census. Among children under four there are as many as 1,101 girls to 1,000 boys, a proportion which is considerably higher than that found in any British district or in any of the other Feudatory States, and we should, therefore, expect a higher rather than a lower proportion of females at the other ages. But the strongest evidence in support of the conclusion that there has been a great omission of females is furnished by the statistics of civil condition which show only 974 wives to 1,000 husbands. Now polyandry does not prevail to any great extent in Travancore and there is no extensive immigration of adult males, so that this excess of husbands can only be due to the omission of wives. In the neighbouring state of Cochin there are 1,044 wives to 1,000 husbands, while in the district of Malabar the ratio is 1,060 to 1,000.

Travancore.
Number of females to 1,000 males.

Year of Census.	Number.
1871	1,010
1881	1,006
1891	982

any British district or in any of the other Feudatory States, and we should, therefore, expect a higher rather than a lower proportion of females at the other ages. But the strongest evidence in support of the conclusion that there has been a great omission of females is furnished by the statistics of civil condition which show only 974 wives to 1,000 husbands. Now polyandry does not prevail to any great extent in Travancore and there is no extensive immigration of adult males, so that this excess of husbands can only be due to the omission of wives. In the neighbouring state of Cochin there are 1,044 wives to 1,000 husbands, while in the district of Malabar the ratio is 1,060 to 1,000.

191. In Cochin there are 996 females to every 1,000 males, the ratio at the previous census being 989 to 1,000, and in 1875 it was 988. The returns of the latest census show therefore a greater relative increase for females than for the other sex, and this may with confidence be largely ascribed to more complete enumeration. Probably the number of females is still under-stated somewhat, but it has already been pointed out that the wives in this state exceed the husbands by nearly $4\frac{1}{2}$ per cent., so it is not likely that the omission of females is great.

CHAPTER V.

CIVIL CONDITION.

Chap. V.

Statement showing the distribution by Civil

District or State.	Sex.	All Ages.			0-14.		
		Un-married.	Married.	Widowed.	Un-married.	Married.	Widowed.
		3	4	5	6	7	8
Ganjam	Males	4,976	4,698	326	9,410	569	21
	Females	3,315	4,755	1,930	7,750	2,145	105
Vizagapatam	Males	4,602	5,016	292	9,910	728	21
	Females	2,926	5,041	2,083	7,195	2,707	98
Godavari	Males	5,335	4,367	298	9,819	1,77	4
	Females	3,337	4,359	2,304	8,223	1,702	75
Kistna	Males	5,169	4,534	297	9,864	132	4
	Females	3,340	4,549	2,011	8,223	1,724	53
Nellore	Males	5,461	4,210	329	9,933	65	2
	Females	3,297	4,144	2,259	8,700	1,252	39
Cuddapah	Males	5,586	3,873	541	9,949	49	2
	Females	3,230	4,064	2,706	8,915	1,046	39
Kurnool	Males	5,192	4,257	551	9,861	135	4
	Females	3,167	4,381	2,452	8,551	1,406	48
Bellary	Males	5,169	4,308	523	9,760	230	10
	Females	3,556	4,486	1,958	8,500	1,461	39
Anantapur	Males	5,469	3,989	592	9,912	85	3
	Females	3,425	4,205	2,370	8,806	1,161	33
Madras	Males	5,085	4,545	370	9,914	81	5
	Females	3,573	4,489	1,938	9,350	631	19
Chingleput	Males	5,586	4,120	294	9,937	62	1
	Females	3,386	4,379	1,614	9,297	690	13
North Arcot	Males	5,535	4,119	346	9,943	55	9
	Females	3,675	4,318	2,007	9,146	835	19
Salem	Males	5,452	4,214	334	9,926	73	1
	Females	3,903	4,240	1,857	9,481	507	12
Coimbatore	Males	5,481	4,189	330	9,919	80	1
	Females	4,039	4,199	1,762	9,570	421	9
Nilgiris	Males	5,218	4,547	235	9,915	85	7
	Females	4,211	4,472	1,317	9,641	362	1
South Arcot	Males	5,471	4,234	295	9,924	75	1
	Females	3,872	4,414	1,714	9,294	691	16
Tanjore	Males	5,377	4,216	407	9,989	60	1
	Females	3,670	4,231	2,099	9,407	680	13
Trichinopoly	Males	5,424	4,257	319	9,931	68	1
	Females	3,779	4,228	1,993	9,505	484	11
Madura	Males	5,403	4,253	344	9,912	86	2
	Females	3,903	4,278	1,819	9,633	357	10
Tinnevely	Males	5,470	4,145	385	9,930	69	1
	Females	3,914	4,214	1,872	9,633	358	9
Malabar	Males	5,902	3,906	192	9,971	29	6
	Females	4,716	3,934	1,350	9,609	385	2
South Canara	Males	5,744	3,964	292	9,918	80	2
	Females	3,879	4,276	1,845	8,958	1,011	31
TOTAL	Males	5,299	4,258	343	9,849	147	4
	Females	3,706	4,348	1,946	8,984	934	32
Agency	Males	5,264	4,323	413	9,724	270	6
	Females	4,542	4,493	965	9,324	654	22
	Males	4,964	4,697	339	9,726	266	8
	Females	4,124	4,835	1,041	9,375	597	28
	Males	5,378	4,266	356	9,850	146	4
	Females	4,008	4,349	1,643	8,937	1,023	40
TOTAL, AGENCY TRACTS	Males	5,076	4,566	358	9,740	253	7
	Females	4,211	4,707	1,082	9,305	667	28
Total, British Territory	Males	5,387	4,269	344	9,346	150	4
	Females	3,723	4,361	1,916	8,994	974	32
Feudatories	Males	5,251	4,395	354	9,933	63	4
	Females	4,525	4,360	1,115	9,676	317	7
	Males	5,347	4,396	257	9,946	53	1
	Females	4,247	4,601	1,152	8,500	497	3
	Males	5,488	4,181	331	9,937	63	10
	Females	3,919	4,107	1,914	9,633	357	2
	Males	5,211	4,117	672	9,927	71	2
	Females	2,969	4,190	2,341	8,796	1,104	40
	Males	5,475	3,831	694	9,816	179	5
	Females	3,570	3,999	2,431	8,838	1,047	65
Total, Feudatories	Males	5,293	4,370	337	9,936	61	3
	Females	4,389	4,334	1,227	8,626	367	7

Chap. V.

Condition of 10,000 persons of each sex at each age-period.

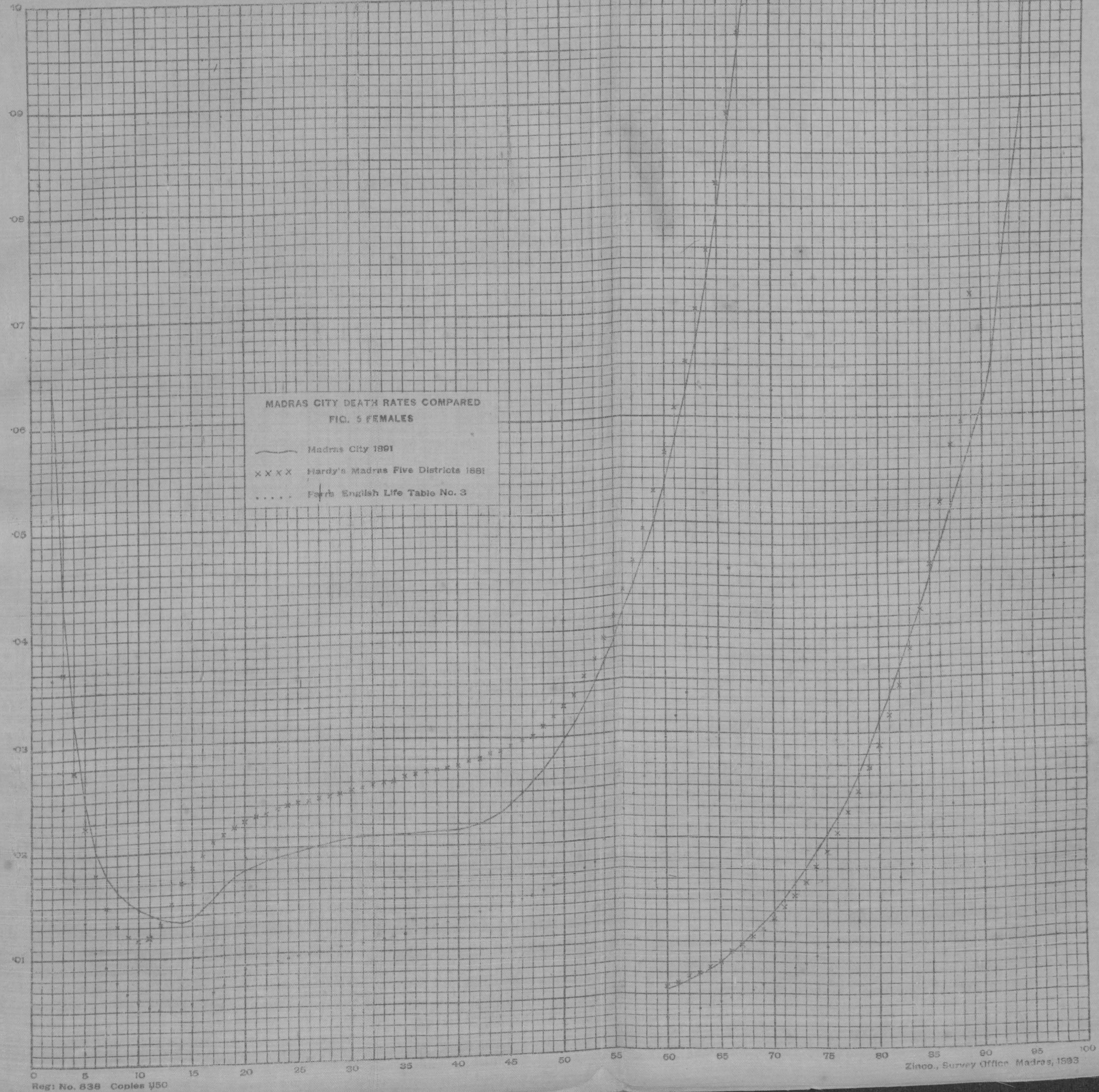
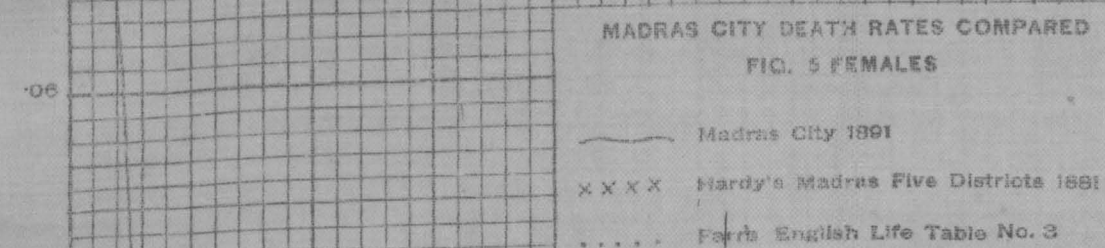
15-24.			25-39.			40-49.			50 and over.		
Un-married.	Married.	Wid-owed.	Un-married.	Married.	Wid-owed.	Un-married.	Married.	Wid-owed.	Un-married.	Married.	Widowed.
9	10	11	12	13	14	15	16	17	18	19	20
4,392	5,472	186	525	9,150	325	129	9,247	624	85	8,238	1,677
766	8,565	669	153	7,915	1,932	97	5,213	4,690	64	2,125	7,811
4,350	5,554	96	590	9,182	228	136	9,357	507	81	8,366	1,553
549	8,735	716	134	7,885	1,981	77	5,212	4,711	50	2,103	7,847
5,818	4,114	68	927	8,840	233	222	9,255	523	132	8,103	1,675
360	8,672	968	113	7,266	2,621	74	4,530	5,396	48	1,541	8,311
6,196	3,753	51	940	8,861	199	187	9,370	443	124	8,291	1,585
362	8,915	723	104	7,887	2,009	86	5,434	4,480	71	2,155	7,774
7,746	2,221	33	2,159	7,659	182	380	9,176	444	188	8,167	1,645
637	8,669	694	101	7,817	2,082	75	5,238	4,687	53	1,919	8,028
7,940	2,003	57	2,483	7,115	402	741	8,192	1,067	422	7,034	2,544
526	8,506	968	135	6,691	3,174	98	3,773	6,123	60	1,207	8,733
6,805	3,107	88	1,761	7,803	436	506	8,386	1,108	279	7,068	2,653
491	8,675	834	176	7,125	2,699	130	4,072	5,798	87	1,432	8,481
6,150	3,748	102	1,541	8,023	436	467	8,414	1,119	280	7,014	2,706
793	8,706	501	470	7,402	2,128	391	4,301	5,218	283	1,692	8,025
7,344	2,588	68	2,173	7,373	454	752	8,052	1,196	465	6,730	2,796
571	8,686	793	261	6,965	2,774	206	4,169	5,625	142	1,472	8,366
7,293	2,662	45	1,470	8,315	285	359	8,995	646	264	8,031	1,705
1,665	7,969	366	413	8,010	1,577	242	5,204	4,554	200	2,017	7,783
7,877	2,003	30	1,514	8,283	203	245	9,283	472	149	8,264	1,587
1,005	8,634	361	177	8,378	1,445	105	5,821	4,074	62	2,344	7,594
7,730	2,234	36	1,688	8,047	265	341	8,996	663	176	8,004	1,820
723	8,749	528	156	7,782	2,062	101	4,832	5,067	62	1,808	8,130
7,222	2,721	57	1,400	8,327	273	282	9,030	688	150	8,013	1,837
1,915	8,326	359	153	8,083	1,764	76	5,055	4,809	50	2,045	7,905
6,045	3,005	50	1,300	8,449	251	269	9,058	679	151	7,933	1,916
1,764	7,884	332	97	8,194	1,709	56	5,355	4,589	41	2,464	7,465
7,071	2,881	48	1,643	8,082	275	323	9,116	591	136	8,543	1,321
1,717	7,959	324	372	8,129	1,499	185	5,574	4,241	148	2,672	7,180
7,540	2,423	37	1,429	8,351	220	262	9,221	517	142	8,275	1,583
1,285	8,373	342	188	8,365	1,507	102	5,620	4,278	54	2,232	7,714
7,268	2,683	44	1,192	8,496	312	251	9,022	727	168	7,869	2,029
1,890	8,180	421	135	8,023	1,839	87	5,197	4,716	48	1,938	8,024
7,657	2,306	37	1,470	8,303	227	251	9,204	545	131	8,250	1,669
1,676	7,960	364	151	8,144	1,705	96	5,301	4,543	56	2,232	7,712
7,157	2,778	65	1,280	8,439	281	234	9,115	651	136	8,035	1,829
2,115	7,604	232	163	8,593	1,441	96	5,673	4,331	62	2,334	7,604
7,483	2,459	55	1,296	8,404	300	243	9,051	703	134	7,863	2,003
1,966	7,765	329	106	8,351	1,541	67	5,784	4,143	46	2,442	7,512
7,490	2,482	29	1,409	8,420	171	438	8,749	413	462	8,290	1,258
2,580	7,214	206	1,132	7,743	1,125	1,172	5,143	3,685	1,043	1,889	7,068
7,491	2,470	39	1,444	8,320	296	391	8,998	611	314	8,058	1,628
1,412	8,138	450	431	7,827	1,742	406	5,047	4,547	267	1,763	7,950
6,943	3,001	58	1,374	8,358	268	312	9,043	645	193	7,989	1,818
1,235	8,269	506	240	7,965	1,855	182	5,145	4,673	136	2,021	7,843
5,407	4,245	258	1,087	8,406	507	249	8,770	981	129	7,831	2,040
2,400	7,322	276	236	8,882	882	116	6,542	3,342	126	8,674	6,200
5,053	4,778	169	856	8,779	365	245	9,091	664	172	8,151	1,377
1,829	7,837	334	237	8,861	869	153	6,022	2,925	141	3,615	6,244
6,077	3,814	79	1,130	8,492	378	353	8,869	778	205	7,954	1,841
992	8,478	580	204	8,005	1,731	148	5,232	4,820	93	2,160	7,747
5,277	4,542	181	952	8,642	406	258	8,978	764	165	8,035	1,869
1,867	7,790	343	258	8,776	966	142	6,018	3,240	130	3,410	6,460
6,891	3,049	60	1,360	8,368	272	310	9,041	649	192	7,991	1,817
1,355	8,244	501	241	7,931	1,828	181	5,161	4,638	136	2,047	7,817
6,817	3,153	30	1,510	8,324	166	575	8,782	643	537	7,334	2,129
8,112	6,781	107	930	8,379	691	805	6,457	2,738	743	3,188	6,069
6,395	3,553	22	805	9,000	195	275	9,215	510	259	8,037	1,704
1,978	7,880	142	299	8,820	881	312	6,575	3,113	377	3,165	6,458
7,822	2,148	30	1,768	7,993	239	245	9,196	559	144	8,187	1,669
2,689	7,049	292	1,768	8,406	1,356	144	5,456	4,200	70	2,225	7,705
7,267	2,699	94	2,217	7,260	523	661	7,980	1,359	347	6,693	2,960
620	8,446	934	169	6,627	3,204	144	3,844	6,012	108	1,225	8,667
7,253	2,653	94	1,860	7,488	652	616	7,693	1,781	385	6,184	3,431
1,057	8,124	819	566	6,911	2,523	559	3,296	6,145	330	1,000	8,010
6,823	3,143	29	1,408	8,409	183	490	8,867	623	445	7,535	2,020
2,822	7,041	197	727	8,445	828	626	6,341	3,033	581	3,025	6,394

CIVIL CONDITION.

Statement showing the distribution, by age, of 10,000 persons of each sex in each Civil Condition.

District or State.	Sex.	All civil conditions*										Unmarried.					Married.					Widowed.				
		0-14	15-24	25-39	40-49	50 and over.	0-14	15-24	25-39	40-49	50 and over.	0-14	15-24	25-39	40-49	50 and over.	0-14	15-24	25-39	40-49	50 and over.	0-14	15-24	25-39	40-49	50 and over.
Ganjam ...	Males	4,405	1,693	2,157	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Vizagapatam	Males	4,172	1,670	2,140	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Godavari	Males	3,877	1,677	2,226	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Kistna	Males	3,904	1,691	2,094	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Nellore	Males	3,949	1,679	2,110	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Cuddapah	Males	3,669	1,692	2,059	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Kurnoor	Males	3,417	1,643	2,033	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Bellary	Males	3,358	1,737	2,445	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Anantapur	Males	3,319	1,888	2,350	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Madras	Males	3,492	1,768	2,455	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Chingleput	Males	3,662	1,753	2,340	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
North Arcot	Males	3,557	1,903	2,487	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Salem	Males	3,311	1,973	2,370	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Coimbatore	Males	3,997	1,652	2,140	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Nilgris	Males	4,014	1,653	2,170	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
South Arcot	Males	3,893	1,646	2,093	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Tanjore	Males	3,893	1,646	2,093	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Tribenopoly	Males	3,893	1,646	2,093	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Madura	Males	3,893	1,646	2,093	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204
Thiruvelli	Males	3,893	1,646	2,093	2,048	1,610	8,292	1,421	216	24	17	583	1,875	3,934	1,937	1,771	390	673	2,044	1,769	5,204	219	218	2,044	1,769	5,204

* Includes only those persons who have returned their civil condition.



Statement showing the distribution, by age, of 10,000 persons of each sex in each Civil Condition—continued.

District or State.	Sex.	All civil conditions.										Unmarried.					Married.					Widowed.				
		0-14					15-24					25-34					35-44					45-54				
		0-14	15-24	25-34	35-44	45-54	0-14	15-24	25-34	35-44	45-54	0-14	15-24	25-34	35-44	45-54	0-14	15-24	25-34	35-44	45-54	0-14	15-24	25-34	35-44	45-54
I	Males.	4,142	1,809	2,350	915	884	7,033	2,304	3,899	66	68	31	1,184	4,869	2,063	1,683	10	262	2,014	1,895	5,819	18	302	1,853	2,310	5,508
	Females.	3,897	1,977	2,924	850	1,052	7,941	1,081	3,944	211	235	381	3,026	4,377	1,111	505	18	302	1,853	2,310	5,508	18	302	1,853	2,310	5,508
Malabar	Males.	4,169	1,863	2,411	978	1,069	7,131	2,186	3,988	67	68	84	1,080	4,433	2,290	2,173	24	224	1,733	2,048	5,971	24	224	1,733	2,048	5,971
	Females.	3,837	1,820	2,203	932	1,185	8,907	683	245	97	89	912	3,463	4,086	1,100	483	65	444	2,083	2,233	5,110	65	444	2,083	2,233	5,110
South Canara	Males.	3,553	1,649	2,236	1,034	1,129	7,211	2,120	509	60	40	136	1,162	4,334	2,197	2,113	49	263	1,746	1,948	5,989	49	263	1,746	1,948	5,989
	Females.	3,755	1,751	2,252	970	1,242	9,178	593	140	48	45	856	3,325	4,084	1,148	577	52	456	2,146	2,320	5,907	52	456	2,146	2,320	5,907
Total	Males.	4,312	1,445	2,354	1,040	890	7,936	1,503	492	49	20	272	1,436	4,931	2,129	1,477	57	872	2,335	2,384	5,852	57	872	2,335	2,384	5,852
	Females.	4,338	1,666	2,333	859	724	8,955	879	124	22	20	219	2,741	4,736	1,264	566	86	462	2,098	2,855	4,479	86	462	2,098	2,855	4,479
Agency.	Males.	3,692	1,766	2,450	1,084	808	7,032	1,810	426	54	28	219	1,779	4,335	2,077	1,380	35	907	2,710	2,179	4,109	35	907	2,710	2,179	4,109
	Females.	3,533	2,007	2,305	830	819	8,846	938	157	31	23	273	3,375	4,362	1,181	608	102	671	1,988	2,320	4,902	102	671	1,988	2,320	4,902
Godavari	Males.	4,190	1,535	2,319	893	963	7,675	1,735	483	65	37	143	1,363	4,616	2,863	1,793	53	339	2,461	2,170	4,376	53	339	2,461	2,170	4,376
	Females.	4,190	1,872	2,117	890	1,021	9,342	464	140	30	23	255	3,640	5,390	963	507	103	604	2,329	2,231	4,513	103	604	2,329	2,231	4,513
Total, Agency Tracts.	Males.	4,046	1,643	2,418	1,061	897	7,766	1,711	453	54	27	224	1,642	4,865	2,090	1,456	77	828	2,723	2,247	4,125	77	828	2,723	2,247	4,125
	Females.	4,040	1,860	2,368	835	817	8,935	836	145	25	25	254	3,240	4,418	1,178	594	100	607	2,064	2,450	4,779	100	607	2,064	2,450	4,779
Total British Territory	Males.	2,855	1,043	2,240	1,035	1,120	7,227	2,108	565	80	40	159	1,176	4,333	2,193	2,027	59	297	1,778	1,957	5,323	59	297	1,778	1,957	5,323
	Females.	3,793	1,756	2,255	906	1,280	9,170	592	146	47	45	848	3,322	4,104	1,148	578	63	458	2,145	2,331	5,003	63	458	2,145	2,331	5,003
Travancore.	Males.	3,652	1,753	2,458	1,076	1,116	6,776	2,383	709	113	114	51	1,262	4,674	2,151	1,862	36	147	1,156	1,955	5,706	36	147	1,156	1,955	5,706
	Females.	3,697	1,930	2,369	921	1,115	7,839	1,327	487	164	183	266	3,092	4,554	1,354	814	24	185	1,408	2,363	5,000	24	185	1,408	2,363	5,000
Cochin	Males.	3,698	1,769	2,344	964	926	7,437	2,115	353	50	45	249	1,441	4,739	2,021	1,690	10	135	1,764	1,914	4,140	10	135	1,764	1,914	4,140
	Females.	3,653	1,885	2,300	871	1,008	8,806	878	162	61	90	425	3,228	4,410	1,244	663	10	231	1,759	2,352	5,048	10	231	1,759	2,352	5,048
Puduchota	Males.	3,692	1,568	2,239	1,096	1,265	7,947	2,150	721	49	33	69	775	4,390	2,409	2,477	7	138	1,619	1,861	5,385	7	138	1,619	1,861	5,385
	Females.	3,551	1,542	2,418	1,071	1,418	8,751	1,058	147	39	25	304	2,609	4,877	1,453	757	18	211	1,713	2,349	5,709	18	211	1,713	2,349	5,709
Bangalore	Males.	3,141	1,361	2,443	1,071	1,200	8,942	421	131	159	80	54	1,257	4,317	2,432	1,960	44	272	1,908	2,697	5,285	44	272	1,908	2,697	5,285
	Females.	3,153	2,012	2,298	1,111	1,426	9,942	421	131	159	80	54	1,257	4,317	2,432	1,960	44	272	1,908	2,697	5,285	44	272	1,908	2,697	5,285
Sandor	Males.	3,619	1,359	2,543	1,031	1,231	8,804	2,432	866	115	114	169	1,287	4,879	2,027	1,838	25	232	2,393	2,320	4,710	25	232	2,393	2,320	4,710
	Females.	3,587	1,852	2,403	947	1,231	8,804	540	385	148	114	169	1,287	4,879	2,027	1,838	25	232	2,393	2,320	4,710	25	232	2,393	2,320	4,710
Total, Feudatories	Males.	3,652	1,736	2,422	1,038	1,093	6,955	2,241	644	98	92	52	1,262	4,660	2,151	1,885	28	150	1,916	1,955	5,651	28	150	1,916	1,955	5,651
	Females.	3,702	1,880	2,351	932	1,126	8,115	1,209	391	133	149	310	3,029	4,547	1,344	779	21	211	1,593	2,295	5,879	21	211	1,593	2,295	5,879

CHAPTER V.

CIVIL OR CONJUGAL CONDITION.

(TABLE VIII.)

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192. In dealing with the statistics relating to civil condition, it is necessary to remember that marriage in India does not connote conjugal life, for it frequently takes place before the bride has attained the age of puberty, and it is only when she reaches that age that real married life commences. Among Bráhmans and some of the higher castes a girl must be married before puberty, but among the majority of the population there is no such rule, though even among pariahs there is one sub-division which follows the Brahmanical custom. Again, it is part of the Brahmanical doctrine that a man must have a son to save him from hell, but this belief obtains little currency among the generality of the people, and the strong tendency to marriage has little, if any, connection with religious sentiments. This is a fact which it is well to remember, for some voluntary restriction on the present custom of almost universal marriage is becoming one of the great needs of the country. Nor is the remarriage of widows forbidden by either religion or caste custom to the majority of the population. The prohibition exists among the Bráhmans and among castes desirous of attaining a high relative position by close observance of Brahmanical customs, but the restriction is entirely foreign to Dravidian ideas. It is true that remarriage is less frequent than in western countries, but this is due quite as much to the reluctance of men to marry widows as to any law or rule enforcing perpetual widowhood.

193. Table VIII contains statistics of the civil or conjugal condition of the people at each of the age-periods given in Table VII, and the statements prefixed to this chapter furnish information for every district and feudatory state, as to the numbers of unmarried, married and widowed out of 10,000 at each age, and of the numbers at each age out of 10,000 in each civil condition.

194. For convenience of reference, I give here the total numbers of unmarried, married and widowed, and the percentage on the total population, omitting those who have made no return of their conjugal state. These amount to only 14,757, which is a vast improvement on 1881, when there were 948,999 persons under the head of 'Not stated.'

Civil condition.	Total numbers.		Number in 10,000.			
	Males.	Females.	1891.		1881.	
			Males.	Females.	Males.	Females.
Unmarried	8,488,413	6,703,462	5,357	3,723	5,469	3,342
Married	7,610,174	7,550,992	4,269	4,361	4,147	4,233
Widowed	604,791	3,448,551	344	1,916	344	2,115
TOTAL	17,612,378	18,003,305	10,000	10,000	10,000	10,000

The unmarried males exceed the unmarried females by nearly three millions, but the widowers fall short of the widows by about the same number. There are about 320,000 more wives than husbands, owing partly to the absence of husbands, partly to the practice of polygamy. The relatively low proportion of unmarried females and the high proportion of widows is the result of the custom which enforces the early marriage of girls and discourages the remarriage of widows. This feature will be discussed in greater detail below.

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195. Compared with 1881, the returns show a slight decrease in the proportion of unmarried males, which corresponds with the change in the proportion of males below twenty. The proportion of unmarried females, on the other hand, has increased. The proportion of married of both sexes is higher than in 1881, and the proportion of widowed is lower. The differences are not great, but so far as they go they are satisfactory as affording evidence of the prosperity of the decennium. More males are married because seasons have been favourable. There are fewer widowed because the public health has been better.

Comparison with other provinces
and countries.

196. The following statement shows the proportions in each civil condition in other provinces of India and in some of the countries of Europe:—

Statement showing the Civil Condition in other Provinces and Countries.

Province or Country.	Number in a total of 10,000 of each sex.					
	Unmarried.		Married.		Widowed.	
	Males.	Females.	Males.	Females.	Males.	Females.
Madras	5,387	3,723	4,269	4,361	344	1,916
Bombay	4,727	3,193	4,891	5,151	472	1,656
Bengal (1881)	4,651	2,937	4,946	4,913	403	2,150
North-Western Provinces and Oudh	4,503	3,070	4,864	5,254	633	1,676
Punjab	5,264	3,750	4,107	4,877	629	1,373
Central Provinces	4,068	3,560	4,890	4,960	442	1,480
Burma	5,673	5,059	3,945	3,782	477	1,159
Assam	5,622	4,138	3,968	4,162	410	1,700
Mysore	5,390	3,636	4,187	4,249	473	2,115
England and Wales	6,193	5,928	3,463	3,314	344	758
German Empire	6,213	5,809	3,449	3,321	338	870
France	5,513	5,041	3,954	3,984	523	1,025
Italy	5,989	5,397	3,610	3,672	461	901

Excluding Burma, where the religion and customs of the people differ from those found in India proper, the proportion of unmarried males in Madras is higher than in any Indian province except Assam, and it is slightly lower than that found in the Native State of Mysore. The proportion of unmarried females is exceeded only in the Punjab and Assam. The ratio of married among both the males and females is comparatively low. The proportion of widowers is the lowest of all Indian provinces, but the relative number of widows is exceeded only in Bengal and Mysore. Comparing the Madras figures with those for England and Wales in 1881, we see that in that country there is a higher proportion of unmarried, a lower proportion of married, and a much lower relative number of widowed. The differences are greatest in the case of females. In England 59 per cent. of the females are unmarried; in Madras only 37 per cent., notwithstanding the relatively greater numbers at the young ages in this country. Again, in England, the married women constitute only 34.63 per cent. of the sex; in Madras the percentage is 43.61. Lastly, there are in England only 758 widows in 10,000 females; in Madras there are 1,916. In this presidency, out of 5 females of all ages, 1 is a widow; in England there is 1 widow in 13 females. In the case of males the unmarried are 8 per cent. higher in England than in Madras, while

Chap. V. para. 197. the married are 8 per cent. lower. The widowers constitute the same proportion (3.44 per cent.) in both countries.

Civil condition in different districts.

197. The following statement gives the proportions in each civil condition in the different districts:—

Distribution by Civil Condition of 10,000 persons of each sex in each district.

District	Males.			Females.		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
Ganjam	4,976	4,698	326	3,315	4,755	1,930
Vizagapatam	4,692	5,016	292	2,928	5,041	2,083
Godavari	4,367	4,367	298	3,387	4,359	2,304
Kistna	5,335	4,634	297	3,340	4,649	2,011
Nellore	5,169	4,634	297	3,297	4,444	2,259
Cuddapah	5,461	4,210	329	3,230	4,064	2,706
Kurnool	5,586	3,873	541	3,230	4,381	2,452
Bellary	5,192	4,257	551	3,167	4,381	1,958
Anantapur	5,169	4,308	523	3,556	4,486	1,958
Madras	5,469	3,939	592	3,425	4,205	2,370
Chingleput	5,085	4,545	370	3,573	4,489	1,938
North Arcot	5,586	4,120	294	3,986	4,370	1,644
Salem	5,535	4,119	346	3,675	4,318	2,007
Coimbatore	5,452	4,214	334	3,903	4,240	1,857
Nilgiris	5,481	4,189	330	4,039	4,199	1,762
South Arcot	5,218	4,547	235	4,211	4,472	1,317
Tanjore	5,471	4,234	295	3,872	4,414	1,714
Trichinopoly	5,377	4,216	407	3,670	4,231	2,099
Madura	5,424	4,257	319	3,779	4,228	1,893
Tinnevely	5,403	4,253	344	3,903	4,278	1,819
Malabar	5,470	4,145	385	3,914	4,214	1,872
South Canara	5,502	3,906	192	4,716	3,934	1,350
	5,744	3,964	292	3,879	4,276	1,845
TOTAL	5,399	4,258	343	3,706	4,348	1,946
Agency { Ganjam	5,264	4,323	413	4,542	4,493	965
{ Vizagapatam	4,964	4,607	389	4,124	4,835	1,041
{ Godavari	5,378	4,266	356	4,008	4,349	1,643
TOTAL AGENCY TRACTS	5,076	4,596	358	4,211	4,707	1,082
Total, British Territory	5,397	4,269	344	3,723	4,361	1,916

The proportion of unmarried males varies from 59.02 per cent. in Malabar to 46.92 per cent. in Vizagapatam, and the maximum and minimum ratios of unmarried females are found in the same districts. The proportion of married males is highest in Vizagapatam (50.16 per cent.) and lowest in Cuddapah (38.73 per cent.); in Malabar it is 39.06 per cent. Among females the highest proportion of wives is found in Vizagapatam and the lowest in Malabar. Of widowers, the lowest proportion is 192 in 10,000 males, which is the ratio in Malabar. The highest proportion is 592 in 10,000, in Anantapur. The relative number of widows is highest in Cuddapah (27.06 per cent.) and lowest in the Ganjam Agency (9.65 per cent.). In Malabar it is 13½ per cent. and in the Nilgiris 13.17 per cent.

The locality of the extremes is practically the same as in 1831. The high proportion of married in Vizagapatam and Ganjam was then ascribed to the prosperity of the people of those districts, and to the greater prevalence there of the Bengal customs of early marriage. I think the latter is certainly much the more potent factor as there are several other districts in which the population lives under more favourable conditions.

In Malabar and in parts of South Canara the marriage relation differs from that found elsewhere, in that it can be dissolved with greater freedom, and in these districts we find that marriages take place later in life, and that the proportion of widowed is considerably below the average for the presidency.

If the same marriage customs prevailed throughout, the proportion of unmarried ought to be highest in those districts in which the proportion at the youthful ages is highest, and the fact that this is not the case shows very clearly the great divergence as regards the age at which marriage takes place.

Number under ten in a Total 10,000 of each Sex.

District.	Males.	Females.
Ganjam	2,987	2,874
Vizagapatam	2,888	2,873
Godavari	2,920	2,850
Kistna	2,756	2,865
Nellore	2,689	2,779
Cuddapah	2,585	2,726
Kurnool	2,753	2,841
Bellary	2,910	3,069
Anantapur	2,712	2,818
Madras	2,345	2,397
Chingleput	2,887	3,075
North Arcot	2,881	3,006
Salem	3,106	3,074
Coimbatore	3,051	2,985
Nilgiris	2,274	2,915
South Arcot	2,559	2,972
Tanjore	2,774	2,656
Trichinopoly	2,834	2,752
Madura	3,021	2,870
Tinnevely	2,903	2,791
Malabar	2,918	2,803
South Canara	2,923	2,757
Agency Tracts { Ganjam	3,015	3,198
{ Vizagapatam	2,670	2,807
{ Godavari	2,927	3,070
TOTAL, BRITISH TERRITORY	2,873	2,870

The proportion of girls under ten is highest in Chingleput and Salem, but there are several districts with a higher proportion of unmarried females. Excluding Madras, the district with the lowest proportion of girls under ten is Tanjore, but the proportion of the unmarried in that district is considerably above that of the whole Telugu country. Compare, for instance, Tanjore with Vizagapatam. In the former district the proportion of girls under ten is 26.56 per cent.; and the proportion of unmarried females is 36.70 per cent., while in the latter, though the first proportion is 28.73 per cent., the proportion of unmarried girls is only 29.26 per cent.

Civil condition at different ages.

198. The following statement gives the civil condition of 10,000 persons at each age-period:—

Age-period.	Males.				Females.			
	Un-married.	Married.	Widowed.	Total.	Un-married.	Married.	Widowed.	Total.
0—4	9,932	37	1	10,000	9,903	93	4	10,000
5—9	9,910	87	3	10,000	9,871	611	18	10,000
10—14	9,604	386	10	10,000	6,945	2,958	97	10,000
15—19	8,411	1,559	30	10,000	2,231	7,467	302	10,000
20—24	5,356	4,554	90	10,000	469	8,870	661	10,000
25—29	2,372	7,446	182	10,000	273	8,656	1,071	10,000
30—34	969	8,746	291	10,000	223	7,733	2,044	10,000
35—39	504	9,124	372	10,000	217	7,639	2,744	10,000
40—44	345	9,064	591	10,000	180	5,420	4,400	10,000
45—49	246	8,998	756	10,000	183	4,665	5,152	10,000
50—54	219	8,596	1,185	10,000	146	3,147	6,707	10,000
55—59	183	8,373	1,439	10,000	153	2,047	7,200	10,000
60 and over	171	7,358	2,471	10,000	124	1,070	8,506	10,000
TOTAL	5,387	4,269	344	10,000	3,723	4,361	1,916	10,000

It must be borne in mind that the ages are given here as entered in the schedules, and as has been shown in the previous chapter, these are far from accurate. Out of 10,000 males below five years of age, 37 are married and 1 is widowed. Out of the same number of females under five, 93 are married and 4 widowed. In the next age-period, 5—9, there are 87 males and 611 females among the married, while 3 males and 18 females are widowed. In the 10—14 period the proportion of married males and 18 females are widowed. In the 15—19 we find a further rise in the proportion of married, the number of males in that conjugal condition being 1,559 in 10,000, while among females it is 7,467. Of women between 20—24 only 469 in 10,000 are single, and there are 661 widows and 8,870 wives. Of men at this age, 5,356, or rather more than half, are still unmarried, 4,554 are married and 90 are widowers. Even at the next age-period (25—29) there are 2,372 single men out of 10,000, but in the succeeding quinquennium the proportion of unmarried falls to 969, and of men between 35 and 39 only 504 in 10,000 are single, while the number of husbands is 9,124, which is the maximum rate for all age-periods. The proportion of married remains high among males throughout the remaining ages, and there are 7,358 husbands even among men who are sixty years of age and upwards. But among females it falls much more rapidly: at age 35—39 there are 7,039 married women,

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at 40—44 there are only 5,420, and the proportion of widows is as high as 4,400. These proportions continue, the one to fall and the other to rise, until we find that of 10,000 women who are sixty and over only 1,070 are wives, while as many as 8,806 are widows. The widowers at this age amount to only 2,471, and these figures bring out very clearly the sharp distinction between the sexes in respect of remarriage.

199. The relation between age and civil condition can be further elucidated by an examination of the relative ages of the people in each conjugal state, and the following statement shows the distribution by age of 10,000 in each civil condition:—

Statement showing the number of persons at each age out of 10,000 of each sex and Civil Condition.

	Males.			Females.		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
0—4	2,737	13	5	4,055	33	3
5—9	2,559	28	14	3,392	189	13
10—14	1,931	98	31	1,723	626	46
15—19	1,293	302	72	470	1,342	123
20—24	815	875	215	123	1,980	335
25—29	361	1,433	435	63	1,718	482
30—34	149	1,696	703	53	1,570	941
35—39	55	1,265	640	30	816	722
40—44	43	1,423	1,152	32	322	1,514
45—49	17	770	805	15	226	818
50—54	17	861	1,476	18	332	1,604
55—59	6	347	742	6	95	588
60 and over	17	889	3,710	20	151	2,811
TOTAL	10,000	10,000	10,000	10,000	10,000	10,000

Out of 10,000 unmarried males, 7,227 are below fifteen years of age, 8,520 are under twenty, 9,335 are under twenty-five and 9,696 are under thirty. Of the unmarried females, 9,170 are under 15 and 9,640 are under 20. In other words, the average age of unmarried females is considerably lower than that of unmarried males. It will also be seen that the mean age of husbands and widowers is higher than that of wives and widows. Two-thirds of the widowers and three-fifths of the widows are over forty-five years of age. The proportion of widows under twenty is only 1.85 per cent., but as many as 10 per cent. are under thirty years of age, and nearly 20 per cent. are under thirty-five. The mean age* of the unmarried is 11.30 years for males and 7.74 years for females; that of the married is 39.06 years for husbands and 28.97 years for wives; the mean age of widowers is 52.32 years, while that of widows is 49.22 years. The difference between the ages of the husband and wife is thus about 10 years. In England and Wales it was 2.4 years in 1881 according to the census returns, but the real difference was probably somewhat less.

200. In the annexed statement the civil condition of the Madras population at each of the age-periods adopted by the Census Commissioner is compared with that of the population of other provinces of India and certain countries of Europe.

Comparison of age statistics with those for other provinces.

* In calculating the mean age the arithmetical mean of each age-period was taken as the mean age of all persons included in the period. This, of course, is not correct, but where the returned ages are so inaccurate any more elaborate method would have been out of place and the results of doubtful value.

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Distribution by Civil Condition of 10,000 persons of each sex at each age-period.

Province.	Sex.	All ages.			0—14.			15—24.			25—39.			40—49.			50 and over.		
		Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
Madras	Males	5,337	4,239	344	8,845	150	4	3,049	60	272	310	9,041	649	192	7,991	1,817	1,140	7,069	1,791
Bengal (1881)	Females	2,723	4,361	1,916	9,994	974	22	8,244	501	1,628	181	5,181	4,638	136	2,047	7,617	1,961	4,282	3,757
Bombay	Males	4,551	4,946	403	9,135	810	25	5,437	186	424	233	8,979	788	159	8,074	1,757	1,388	6,848	1,764
Punjab	Females	4,727	4,901	472	7,454	2,438	108	8,872	838	2,245	39	4,976	4,985	30	2,212	7,758	1,514	4,408	4,078
North-West Provinces.	Males	3,193	4,107	629	9,401	579	20	5,349	155	432	404	8,611	985	305	7,410	2,284	1,094	7,020	1,880
Assam	Females	3,750	4,577	1,373	7,898	2,057	45	9,074	378	1,419	115	5,813	4,066	88	2,449	7,463	1,275	5,345	3,880
Mysore	Males	3,070	4,894	613	9,070	907	23	5,951	240	650	638	7,721	1,558	636	6,345	3,020	765	7,400	1,835
England and Wales (1881).	Females	3,640	4,140	470	8,227	1,147	16	9,277	363	1,200	51	5,750	4,193	54	6,345	3,020	1,092	4,896	4,012
Scotland (1881)	Males	5,193	3,453	344	9,928	344	729	9,277	363	1,200	64	6,304	3,632	55	2,847	7,068	1,134	4,896	4,012
Ireland (1861)	Females	6,625	3,044	328	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556
France (1881)	Males	6,871	2,750	379	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556
Germany (1881)	Females	6,344	2,698	938	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556
Austria (1881)	Males	5,313	3,954	534	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556
Italy (1881)	Females	5,041	3,324	1,025	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556
Sweden (1881)	Males	6,213	3,449	388	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556
	Females	5,899	3,321	870	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556
	Males	6,151	3,554	295	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556
	Females	5,771	3,416	818	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556
	Males	5,989	3,610	401	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556
	Females	5,307	3,672	931	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556
	Males	6,238	3,411	355	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556
	Females	5,995	3,233	809	10,000	10,000	10,000	9,277	363	1,200	102	7,888	951	225	7,959	1,816	711	7,155	1,556

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The proportion of the single among the population under 15 is higher in Madras than in any of the Indian provinces except Assam.

Under 15.

At the next age-period (15—24), Madras occupies the same position with respect to other provinces. At this age there are fewer widowers in Madras than elsewhere, but the proportion of widows is exceeded only in Bengal and Assam.

15—24.

Of males between 25 and 39 the relative number of unmarried is higher in Madras than in Bengal, Bombay or the North-West Provinces, but lower than the proportion in the Punjab and Assam. Of females between these ages the ratio of unmarried is higher than in any of the other provinces. The relative number of husbands is higher than in the Punjab, North-West Provinces or Assam, and lower than in Bengal or Bombay. The wives, on the other hand, are relatively more numerous than in Bengal or Assam only. Every province has a larger proportion of widowers, but in Bengal and Assam alone is there a higher ratio of widows.

25—39.

Of males between 40 and 49 there are 310 in 10,000 still unmarried in Madras, and the only province which has a proportion lower than this is Bengal. The proportion of unmarried females at this age on the other hand is higher in Madras than elsewhere. There are also relatively more husbands in Madras than in the other provinces, and the proportion of widowers is lower. The number of wives among 10,000 women between 40 and 49 is 5,181 in Madras—a number which is exceeded in all provinces, except Bengal and Assam, and it is only in these two provinces that the proportion of widows exceeds the figure for Madras.

40—49.

Of males who are not less than 50 years of age the proportion of unmarried is higher in Madras than in Bengal, but lower than in Assam, and much lower than in Bombay, the Punjab or the North-West Provinces. The proportion of unmarried females is higher in this than in any other province. Bengal alone has relatively more husbands, and only Bengal and Assam have fewer widowers than Madras among males of 50 years and upwards. Among females the proportion of wives is lower, and that of widows higher in Madras than in any of the other provinces.

50 and over.

The foregoing statistics show that both sexes marry later in Madras than elsewhere, except Assam; that up to 50 years of age widowers remarry to a somewhat greater extent than in other provinces; that the remarriage of widows below 50 is less common than in other provinces, with the exception of Bengal and Assam; and less frequent than in any other part of India in the case of women over 50; and that the relative number of females who remain unmarried throughout life is highest in Madras.

201. A comparison of the Madras statistics with those for European countries brings out three chief points of difference; first, the much later age at which marriage takes place in Europe; second, the smaller proportion of widows at all ages; third, the much larger proportion of the population who go through life unmarried. In Madras out of 10,000 of each sex below 15 years of age, 154 males and 1,006 females are either married or widowed; in Great Britain, Germany and France all the youth and maidens below fifteen are unmarried, and in Italy only one girl in 10,000 at this age is married. Of 10,000 young men and women between 15 and 24 years of age, 3,199 of the former and 8,745 of the latter have entered the state of matrimony, but in the European countries the proportion of husbands and widowers varies from a minimum of 340 in Ireland to a maximum of 725 in Scotland, while the proportion of wives ranges from 893 in Ireland to 2,344 in France. The proportion of widows in no case exceeds 79, but in Madras it is nearly seven times as great. Of men between 25 and 40 rather over one-third are unmarried in Europe; in this presidency the proportion is only 13.60 per cent. For females the proportion is in European countries much the same as that for males; in Madras

Comparison with European countries.

less than 2½ per cent. of the women between 25 and 40 are still single. On the other hand, the proportion of women of these ages who are widows is over 18 per cent. in Madras and only about 4 per cent. in Europe. At the next age-period (40—49) we find the same differences, but more accentuated. The proportion of widows at these ages is 46.38 per cent. in Madras as compared with about 13 per cent. in the European countries. And this discrepancy is still greater in the case of women of 50 years of age and upwards, for we have for this period about 38 per cent. of widows in Europe, and no less than 78 per cent. in Madras. One cause of the greater extent of widowhood in Madras is that a higher proportion of the women are married, but if we eliminate the single altogether the difference is still considerable. Thus in England and Wales out of every 100 women who have been married 19 are widows, while the corresponding number for Madras is 31. The excess may be ascribed partly to the greater difference between the ages of husband and wife in Madras and partly to the restrictions on the marriage of widows.

The annexed diagram exhibits in a graphic manner the difference in the civil condition of Madras and Scotland. That country has been taken in preference to England and Wales as the age-periods given in the tables for the latter are not suitable.

202. In the subjoined statements the statistics of age and civil condition are compared with those of the census of 1881. These figures show that child-marriages were relatively less numerous in the period preceding 1891 than in that before 1881; that the married were relatively more numerous at all ages except the period under 15; that the widowed were less numerous at all ages; and that the average age of widowers and widows was appreciably higher at the last enumeration:—

Statement showing distribution by Civil Condition of 10,000 persons of each sex at each age-period in 1891 and 1881.

Age.	Civil condition.	1891.		1881.	
		Males.	Females.	Males.	Females.
0—14	Single	9,846	8,904	9,820	8,801
	Married	150	974	174	1,144
	Widowed	4	32	6	55
15—24	Single	6,891	1,255	7,112	1,876
	Married	3,049	8,244	2,810	7,885
	Widowed	60	501	78	739
25—39	Single	1,360	241	1,512	234
	Married	6,368	7,931	8,103	7,481
	Widowed	272	1,828	386	2,285
40—49	Single	310	181	392	169
	Married	9,041	5,181	8,910	4,783
	Widowed	649	4,638	798	5,048
50 and over.	Single	192	136	192	125
	Married	7,991	2,047	7,941	1,910
	Widowed	1,817	7,817	1,867	7,965

Statement showing the age distribution of 10,000 persons of each sex and Civil Condition in 1881 and 1891.

Civil condition.	Year.	0—14.		15—24.		25—39.		40—49.		50 and over.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Unmarried	1891	7,227	9,170	2,108	592	565	148	60	47	40	45
	1881	7,066	9,096	2,205	671	639	147	52	44	38	42
Married	1891	139	848	1,178	3,322	4,393	4,104	2,193	1,148	2,097	579
	1881	163	1,017	1,150	3,308	4,520	4,050	2,107	1,076	2,057	550
Widowed	1891	60	63	387	458	1,778	2,145	1,957	2,331	5,928	5,003
	1881	58	98	344	617	2,323	2,461	2,042	2,259	5,233	4,566

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Statistics for the chief religions.

203. In the next statement statistics of civil condition at each age-period are given separately for the four principal religions:—

Distribution by Civil Condition of 10,000 persons of each sex at each age-period.

Religions.	Sex.	All ages.			0-14.			15-24.		
		Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
1	2	3	4	5	6	7	8	9	10	11
All Religions ...	Males ...	5,337	4,269	344	9,346	150	4	6,891	3,049	60
	Females ...	3,723	4,361	1,916	8,994	974	32	1,255	8,244	501
Hindus ...	Males ...	5,353	4,296	351	9,338	160	4	6,833	3,107	60
	Females ...	3,667	4,379	1,954	8,936	1,030	34	1,206	8,275	519
Musalman ...	Males ...	5,319	3,944	237	9,349	49	2	7,662	2,296	39
	Females ...	4,123	4,166	1,711	8,462	524	14	1,385	8,239	376
Christians ...	Males ...	5,654	4,062	284	9,442	50	8	7,367	2,536	47
	Females ...	4,303	4,078	1,519	8,629	357	14	2,230	7,516	260
Animistic ...	Males ...	5,235	4,362	400	9,763	331	6	5,644	4,108	251
	Females ...	4,507	4,567	926	9,466	517	17	2,583	7,143	274

Religions.	Sex.	25-39.			40-49.			50 and over.		
		Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
		12	13	14	15	16	17	18	19	20
All Religions ...	Males ...	1,360	8,366	272	310	9,041	649	192	7,991	1,817
	Females ...	241	7,931	1,828	181	5,181	4,637	136	2,047	7,817
Hindus ...	Males ...	1,365	8,360	275	314	9,024	652	192	7,959	1,849
	Females ...	230	7,905	1,771	171	5,151	4,678	126	2,034	7,840
Musalman ...	Males ...	1,405	8,387	208	237	9,271	442	204	8,429	1,367
	Females ...	366	8,037	1,597	335	5,194	4,471	287	1,967	7,746
Christians ...	Males ...	1,075	8,692	233	237	9,240	523	156	8,198	1,648
	Females ...	319	8,302	1,379	184	5,784	4,032	139	2,469	7,392
Animistic ...	Males ...	1,208	8,305	487	250	8,786	964	133	7,744	2,118
	Females ...	277	8,035	788	128	6,934	2,938	135	3,831	6,034

The chief differences are found in the age at which marriage takes place and the extent to which the widowhood of women prevails. Early marriage is, of course, most common among the Hindus; but even among Musalmans, Christians and the Animistic, it is far from being exceptional.

Percentage of unmarried among persons of 15 years of age and upwards.

Religion.	Males.	Females.
Hindus ...	24.50	4.74
Musalman ...	23.29	6.58
Christians ...	25.56	8.41
Animistic ...	20.73	9.58

In the case of males the Animistic marry on the whole at an earlier age even than the Hindus. Among persons of a marriageable age, i.e., 15 and upwards, the tendency to matrimony is, for males, strongest among the Animistic; but for females the Hindus stand at the head of the list. The proportion of females who remain single throughout life is small in all cases. The smallest proportion of widowers is found amongst Musalmans, the Christians coming next, then the Hindus, while the proportion is highest among the Animistic. But as regards widows we find a wide divergence, the Animistic having only 926 widows in 10,000 females of all ages, while the Hindus have 1,954, the Musalmans 1,711 and the Christians 1,519.

Prevalence of widowhood.

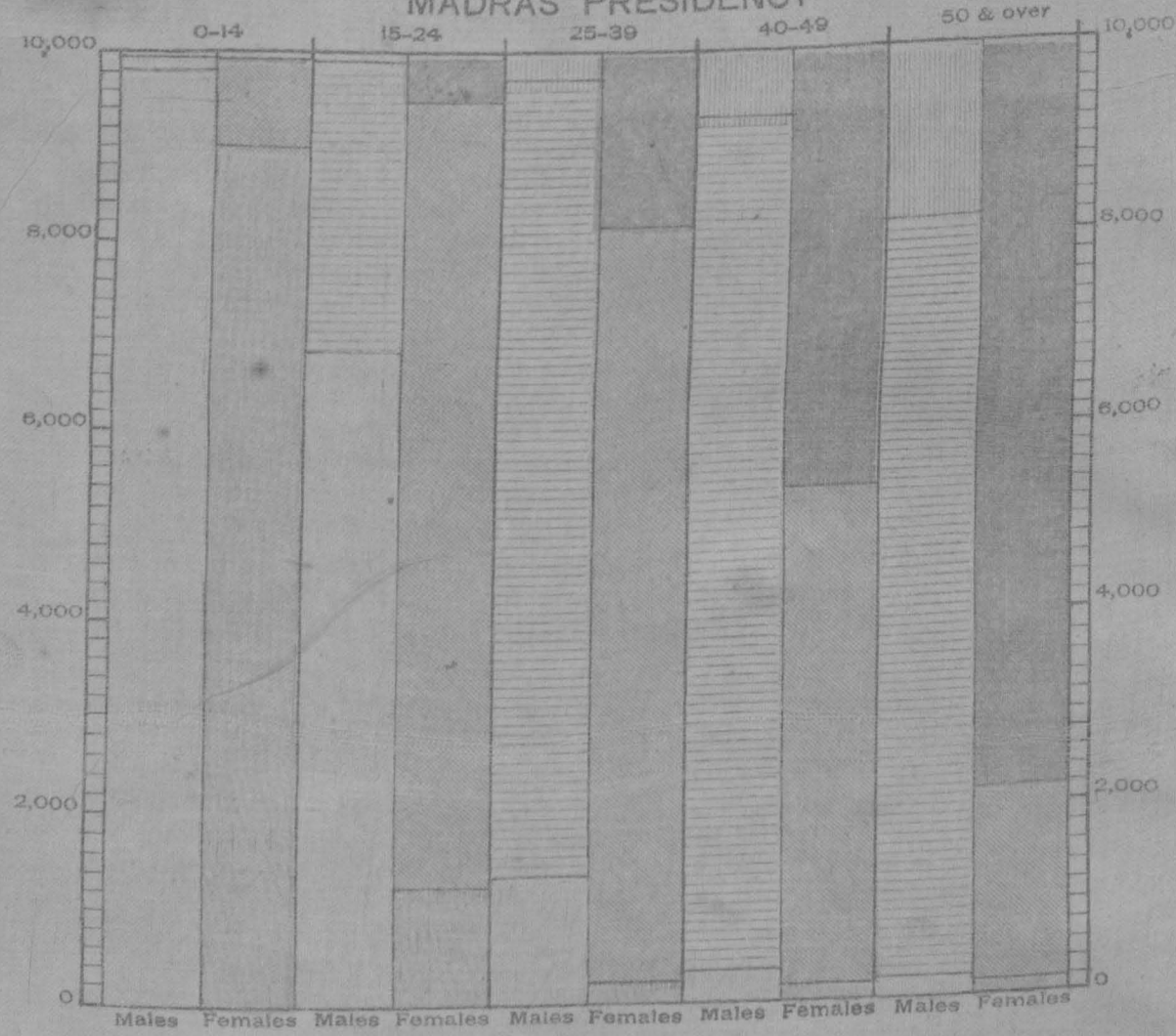
204. The following statement shows for 10,000 of the married and widowed the proportion in each of those conjugal conditions:—

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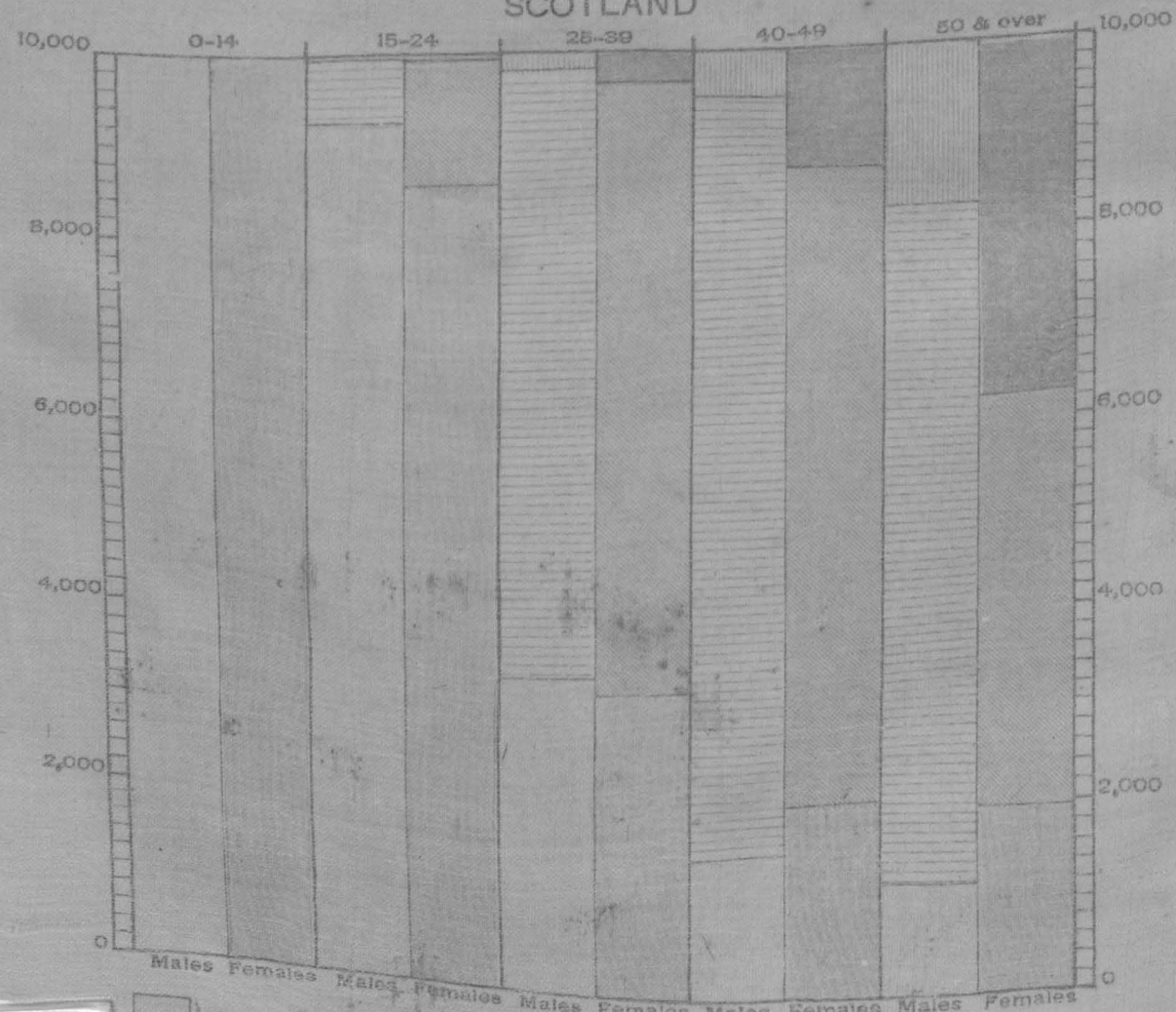
SHOWING CIVIL CONDITION AT DIFFERENT AGES

IN MADRAS AND SCOTLAND

MADRAS PRESIDENCY



SCOTLAND



REFERENCE
 Single
 Married
 Widowed
 Males & Females

END

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