

ranges from 53 per cent. at Lashio to 102 per cent. at Thayetmyo; and there is sometimes a partial failure of the crops.

Assam.—The central part of Assam is formed of a crystalline mass (gneiss and schist) forming the Garo, Khasi, Jaintia and Mikir Hills. Between this and the Tertiary fringe of the Himalayan foot-hills, the Brahmaputra valley is filled with a broad belt of alluvium. On the east and south, Tertiary (and possibly Cretaceous) shales and sandstones form the long parallel ranges of the Naga, Manipur and Lushai Hills. The most characteristic feature of the climate is the great dampness of the atmosphere at all seasons, combined with a moderately high temperature. In the cold weather months thick fogs prevail along the course of the larger rivers, and rainfall occurs from time to time during the passage of cold weather storms across north-east India. In the spring season thunder-showers are frequent, and in the first half of June merge imperceptibly into the monsoon rainfall which lasts until October. December is the driest month of the year. Excluding the hills above 3,500 feet, where there is in some parts extraordinarily heavy precipitation, that at Cherrapunji being the highest registered anywhere in the world, the average rainfall is 92", the highest being 125" at Silchar and the lowest 63" at Gauhati. The variability ranges between 55 per cent. at Dibrugarh and 99 per cent. at Silchar.

Bengal.—Almost the whole of this division lies on the deltaic alluvium of the Ganges and Brahmaputra. On the west, Bengal embraces the granites and other crystalline rocks and laterite of Bankura and Burdwan, as well as a portion of the Raniganj coal-field. On the east, the hills of Chittagong and Hill Tippera are composed of soft Tertiary sandstone and shale, and on the north the sedimentary rocks of the outer slopes of the Darjeeling Himalaya rapidly give place to the gneisses, schists and granites, of which the whole of Sikkim and the greater part of the Darjeeling district are composed. The climate of this tract, like that of Assam, is very damp during the major part of the year, and the dry hot westerly winds which sweep down the Gangetic Plain in the spring months are either not felt at all or only occasionally. The cold season extends from December to February, sea winds beginning thereafter to blow from the head of the Bay, and resulting during April and May in frequent thunder-storms and "norwesters." The monsoon rains proper begin in the second week of June and end with the last week of October. Mean annual rainfall increases from 55" at Berhampore to 122" at Jalpaiguri near the foot of the hills, the average for the division being 76". The variability ranges from 81 per cent. at Calcutta to 116 at Saugor Island, and averages 94 per cent. for the whole division.

Orissa and Madras Coast, North.—This division, which includes the Tributary States, as well as the British districts, of Orissa and the coast districts of Madras from Nellore northwards, consists of Archaean schists and gneisses with a fringe of laterite and alluvium along the sea-coast. Small patches of sandstone and shale (Gondwanas) occur at Cuttack and in the small coal-field of Talcher. But little rain falls from December to February. Thunder-storms begin in March and give light to moderate rain in Orissa during the next two months, and in the southern half of the division in May. The south-west monsoon affects Orissa to a much greater extent than it does the north coast of Madras, so that while in the former locality rainfall diminishes considerably after September, on the Madras coast it is at its maximum in October. As most of the rainfall in this division occurs in connection with cyclonic storms, it is very irregular in its incidence, and severe droughts are of not infrequent occurrence, particularly in Ganjam. The annual rainfall of the whole division is nearly 50", but it varies from 35" at Nellore to 66" at Sambalpur. Variability increases from north to south, and is highest at Waltair, where it amounts to 167 per cent.

Bihar and the United Provinces, East.—Is bounded on the north by the Tertiary foot-hills of Nepal, and on the south and south-east by the Vindhyan sandstones of the Kaimur range in Mirzapur, the gneisses and granites of Gaya and Bhagalpur and the traps of the Rajmahal Hills. Otherwise the whole area is covered by the Gangetic alluvium. This tract lies within the influence of the winter storms, and receives occasional showers during the first two months of the year. Dry winds set in during March and continue

until about the middle of May. The current is, however, somewhat unsteady; damp easterly winds from the Bay penetrate at intervals well into the United Provinces and give rise to thunder-storms, particularly along the hills. The monsoon rains appear about the middle of June, and last till the end of September or the first part of October. The total rainfall received during the year over the division as a whole amounts to 47", and of this nearly half falls during July and August. It is very uncertain in the northern parts of Bihar; and in Purnea the variability is as high as 168 per cent.

United Provinces West, and Punjab East and North.—The south-western half consists of plains of Indo-Gangetic alluvium, whilst the north-eastern embraces the parallel ranges of the Himalaya consisting of (a) the Tertiary outer ranges including the Siwalik Hills and extending from Kangra at the one end to Nepal at the other, next, (b) the metamorphic and unfossiliferous sedimentary belt of the Lesser Himalaya; behind this (c) the great Himalayan range on which lie the high peaks and which consists chiefly of granite and metamorphic rocks, and behind this again (d) the eastern part of the Zaskar range of highly fossiliferous sediments, interrupted here and there by masses of intrusive granite. From about the middle of December to the end of March this region is influenced by winter storms which give light to moderate precipitation, especially along the hills. Hot weather conditions appear in April and continue until the third or fourth week of June when the rainy season sets in. During the hot season thunder-storms and dust-storms occur at short intervals, and in the hill districts are sometimes accompanied by heavy rain. The rains are on the whole heavier, steadier and of longer duration in the eastern half of the division than in the western. Very heavy downpours are occasionally experienced in connection with cyclonic storms. In October and November dry weather ordinarily prevails. The annual rainfall varies between 14" and 85", and is subject to large fluctuations from year to year, particularly in the region around Sirsa, where the percentage of variability is 174.

Kashmir.—The Kashmir area embraces the western extension of the Himalayan system, the Zaskar and Ladakh ranges, the Hindu Kush and the Karakoram ranges. They consist of granite and metamorphic rocks, chiefly developed in the Hindu Kush and Karakoram, with a great fossiliferous sedimentary series in the Ladakh range, whilst the wide intervening plains of the Tibetan uplands (Ladakh and Changchenmo) are covered with sands and gravels. The south-eastern border of the area includes the sedimentary rocks and granites of the Pir Panjal, and is fringed by the Tertiary belt of the outer ranges of Jammu, Mirpur and Punch. As might be supposed from its topographical characteristics, the climate of Kashmir is by no means uniform; and while snow begins to fall on the higher ranges in October or November, it is only by the end of December that the snowline has descended to the level of the Srinagar valley. In some localities the snowfall is very heavy and almost continuous; in others spasmodic and light. Kashmir is not quite beyond the influence of the south-west monsoon; in some years moderately heavy rain occurs in the summer months, and, coupled with the consequent melting of snow accumulations, gives rise to disastrous floods. The total annual precipitation varies between 3" at Leh and 78" at Sonamarg. Its variability is least at Skardu (66 per cent.) and greatest at Leh (266 per cent.).

The North-West Dry Area includes the south-west of the Punjab, the North-West Frontier Province, Sind and the west of Rajputana. The greater part of this area consists of alluvial plains. In the extreme north, however, it embraces the Tertiary beds of the North-West Frontier Province and the older sedimentary, metamorphic and granitic rocks of the Hindu Kush. In Western Rajputana desert conditions prevail, the surface being covered with sand through which crop out small exposures of rocks of a great variety of ages. This is on the whole the driest and hottest of all the divisions of India proper. The average rainfall for the year is about ten inches, and of this nearly two inches are contributed by winter storms. Owing to the peculiarities in the distribution of pressure, even the summer monsoon rainfall in this region is intermittent and comparatively light; and as it occurs chiefly in connection with cyclonic storms, or with the changes in the position of the semi-permanent barometric depression over Sind, it is necessarily very uncertain.

This tendency is especially noticeable in the case of Calcutta, as will be shown in paragraph 76.

Cities.

74. It is usual, when considering the statistics of towns, to give special prominence to those of cities, where the urban characteristics are most highly developed. With this object the information provided for all towns in Imperial Tables IV and V has been supplemented in the case of cities by a series of tables in the form of Imperial Tables VII, VIII, XI and XV showing the distribution of their population by age, civil condition, education, birthplace and occupation. The general practice of statisticians is to treat as cities only those places which have a population of more than 100,000. In some of the Provincial Reports a few other towns of local importance have been so treated, but in this report for the Empire as a whole the ordinary procedure has been followed. According to the above standard there are in India only 30 cities, with an aggregate population of 7,075,782 or 2·2 per cent. of the total population. Here again there is an extraordinary difference between the Indian conditions and those of western countries. In England the cities contain 45 per cent. of the total population, in Germany 21 and in France 14 per cent. But even in these countries the growth of cities is comparatively recent. In 1871 England had only 27 cities with 9·5 million inhabitants and Germany only 8 with 2 millions. There are signs that in India also the growth will be more rapid in the future than it has hitherto been. Between 1891 and 1901 the rate of increase in cities (excluding artificial changes) was 6·5 per cent. against only 2·5 in the general population. It is true that between 1901 and 1911 it was only 6·1, compared with 7·1 in the general population, but for this plague is entirely responsible. The mortality from plague was exceptionally severe in cities, and as already noted an epidemic was raging in many of them at the time of the census. It is also worthy of note that while the actual increase of population during the decade in cities was 441,033, it was only 340,321 in other towns with more than 10,000 inhabitants, while there was a decrease of 216,654 in the smaller towns. The population of cities has risen since 1872 by 64 per cent., and the net increase, comparing like with like, is 43 per cent. The most rapid growth during this period is shown by Rangoon which has trebled its population. Next comes Karachi with an increase of 168 per cent. and then Madura and Howrah with 158 and 113 per cent. respectively. Since 1901, two new places, Jubbulpore and Dacca, have entered the list of cities, while Baroda has disappeared from it. Eighteen cities have gained, and twelve have lost, population. Of the latter, a few like Mandalay are really decadent, but in most, such as Nagpur and Cawnpore, the loss was due wholly to the temporary influence of plague. The progressive cities are differentiated from those which are decadent by their large immigrant population. In Bombay, Calcutta and Howrah this exceeds 70 per cent. of the total; and in Rangoon and Karachi it is close on 60 per cent. In Patna, Mandalay and Bareilly, on the other hand, it is barely 10 per cent. We will now consider in more detail the statistics of the four largest cities of the Indian Empire.

Country.	Number of cities.	Population in millions.
England	44	16·4
Germany	47	13·7
France	15	5·8
United States	50	20·3

75. Just as, when speaking of London, we may mean either the Municipal and Parliamentary City of London with a night population of less than 20,000, or the administrative County of London with 4½ millions, or Greater London including the Outer Ring, that is, the Metropolitan and City Police districts, with 7½ millions; so also in speaking of Calcutta we may mean Calcutta proper, or the area administered by the Calcutta Municipal Corporation with the port, fort and canals, the population of which is 896,067, or this area plus the suburban municipalities of Cossipur-Chitpore, Manicktola and Garden Reach with 1,043,307 inhabitants, or lastly Greater Calcutta, which also includes Howrah, with an aggregate population of 1,222,313. The suburban municipalities differ from Calcutta only in respect of their Municipal govern-

ment. From a structural point of view they cannot be distinguished. The buildings are continuous throughout, and there is nothing to show where one municipality begins and the other ends. The suburban water-supply is drawn from the Calcutta mains. Howrah again is separated from Calcutta proper only by the river Hooghly. It is just as much a part of Calcutta as Southwark is of London. Like the suburban municipalities it is the dormitory of many persons who earn their living in Calcutta proper; and its industrial life is inseparable from that of the metropolis. Excluding Howrah, but including the three suburban municipalities, there are on the average 39 persons per acre. In Calcutta proper the number is 44, or 72 if we exclude the port, fort and maidan, which occupy two-fifths of the total area but contribute less than 4 per cent. to the population. The most crowded wards are in the north of the town, the maximum density being reached in Colootollah, where there are 255 persons per acre. The most sparsely inhabited ward is Alipore with only 16. The distribution of population in the suburban municipalities is remarkably uniform; it ranges from 21 persons per acre in Garden Reach to 25 in Manicktola. A striking feature of the statistics is the large number of immigrants. Less than 29 per cent. of the inhabitants of Calcutta proper claim it as their birthplace. The vast majority are immigrants, of whom 204,000 come from Bihar and Orissa and 90,000 from the United Provinces. Of the Bengal districts, the largest contributions are those from the 24-Parganas (88,000), Hooghly (48,000) and Midnapore (29,000). The volume of immigration is equally great in the suburbs and Howrah. Amongst the immigrants males largely preponderate. In the town as a whole, females are less than half as numerous as males, and the disproportion is steadily increasing.

76. The first regular census of Calcutta proper, taken in 1872, showed a population of 633,009. In 1881 there was practically no change, but in 1891 a gain of 11·4 per cent. was recorded. In 1901 there was a further increase of 24·3 per cent., but part of this was due to improved enumeration. At the present census the rate of increase in Calcutta proper has dropped to 5·7 per cent. The falling-off is due largely to the growing tendency of the inhabitants to make their home in the suburbs or even further afield. The suburban municipalities have grown during the decade by 45·3 per cent. Similar increases are shown by some of the outlying parts of Calcutta proper, e.g., Ballygunge and Tollygunge, where there has been a gain of 47 per cent. in ten years. This centrifugal tendency is due mainly to the removal of insanitary and congested *bastis*, the opening out of new roads, the acquisition of land on a large scale for public offices and institutions, the encroachment on the residential area of offices, shops and workshops due to the development of industry and trade, and the growing desire on the part of the better classes for purer air and more space than is available in the heart of the city. The decreases of 43 and 32 per cent. in the Baman-basti and Kalinga wards respectively are ascribed to the opening out or removal of congested *bastis*, and the loss of ten per cent. in Colootollah to the acquisition of land for educational and medical institutions: the decline of 3½ per cent. in Burra Bazar is due to trade expansion. At the same time, there has been a great improvement in the communications between Calcutta and its environs by tram, rail and river steamer. In illustration of the way in which the custom of sleeping beyond the city limits is growing it may be mentioned that in the course of ten years the number of season tickets issued by the East Indian Railway alone has risen to 54,000, or by 60 per cent. The birthplace statistics show that the number of persons born in Calcutta but enumerated elsewhere has risen during the same period from 36 to 88 thousand.

In 1901 a house in Calcutta was defined as the dwelling place of one or more families having a separate entrance. On the present occasion it was taken, as in 1891, to be a place bearing a separate municipal assessment number. The result is that the average number of persons per house is of no statistical value. The enquiries made in 1901* regarding the character of the houses, the number of rooms in each and their size have not been repeated.

77. Bombay, which has now a population of 979,445, was a petty town with about ten thousand inhabitants when it passed into the possession of the British in 1661. The population was estimated to be 100,000 in 1780,

* See para. 87 of the India Census Report for 1901.

the proportion of children under 10 years of age was much below the normal in 1901, but since then it has risen considerably, though in the two last mentioned areas it is still somewhat below the average for all India. In Burma, where there has been no famine, the proportion of children has remained practically unchanged since 1891. In the Bombay Presidency there has been a slight decline as compared with 1901, and a more marked one in the United Provinces and Madras. In the tracts which had suffered from famine shortly before the census of 1901, the proportion of old persons was then abnormally low; it has now again risen but it is still below that existing in 1891. In India as a whole the proportion of children under 10, though greater than in 1901, is still less than it was in 1891; while the proportion of persons over 60 has been exactly the same at each succeeding census.

Periodic variations
in the age distri-
bution.

209. It has already been stated that the age distribution varies from time to time. To some extent this is due to migration. Where whole families emigrate the age distribution is not affected, but the case is otherwise where adults only do so, as usually happens when the migration is of the temporary type. Such migrants are mainly males in the prime of life, and where the movement is large, its result is to disturb the proportion of persons between the ages of 20 and 45. The statistics of birthplace were not combined with those of age, but it is possible to gather some idea of the effect of this form of migration from the statistics for Burma, where the native inhabitants are mainly Buddhists and the Hindus and Muhammadans are nearly all immigrants. Amongst the Buddhists of that province only 35 per cent. of the males are from 20 to 45 years of age, but amongst Hindus and Muhammadans the corresponding proportions are 71 and 52 respectively. The difference is greatest at the age period '25—30' which contains only 76 males per mille in the case of Buddhists against 191 and 137 respectively amongst Hindus and Muhammadans. It is impossible in other provinces to throw light on the figures by a reference to the religious distribution, but there can be no doubt that the relatively high proportion of persons in the prime of life in Assam is due primarily to immigration, and the low proportion in Madras to emigration.

Variations in the age distribution are also due sometimes to epidemics, which have a tendency to attack persons at certain ages more than those at others. Thus in the Punjab in 1907, owing to a severe outbreak of plague, there was a great excess in the mortality of persons from 10 to 50 years of age and especially of those aged 15 to 40. But the most potent factor of all is famine. When this occurs the mortality rises in a greater or less degree according to the severity and duration of the calamity and the efficacy of the measures taken to combat it. All sections of the population, however, are not equally affected. The very old and the very young suffer most, while the mortality is comparatively small amongst those in the prime of life. The number of young children, moreover, is reduced not only by a high mortality, but also by a greatly diminished birth-rate. During the Madras famine of 1877 a Medical officer examined about 15,000 women of child-bearing age in the famine camps and relief works of the Nellore district and found that only 2·5 per cent., or one-ninth of the normal number, were pregnant.

A striking instance of the effect of famine on the infantile population is furnished by the figures for the Rajputana Agency. In 1891 the number of children under five years of age was 1,396 per 10,000 of the population. In 1901, after the famine of 1900, it fell to 914, and it has now risen to 1,445. The number of children under one year of age was three times as great in 1911 as it was in 1901. Very similar results are to be seen in the figures for the Central India Agency, Bombay and other tracts which suffered severely from the famine of 1900.

210. In paragraph 753 of the last Report it was shown that the decrease in 1901 of over 8 per cent. in the population of the Central Provinces due to the famines of 1897 and 1900 had occurred entirely at the two extremes of life. There was a loss of 20·6 per cent. amongst persons under ten and of 30 per cent. amongst those over sixty, whereas the number of persons aged 15 to 40 remained practically the same as at the previous census. It was therefore concluded that the process of recuperation would be rapid. This forecast has been substantiated. The population of the province as now constituted has

grown by 17·9 per cent. since 1901. The greatest gain is at the two extremes of life; there is an increase of 33·5 per cent. at the age period '0—10' and of 42·2 per cent. at '60 and over.' At the present time the general age distribution is very similar to that existing in 1881, but there are many fewer persons in the age group '10—20' which contains the juvenile population of the famine years. The persons in this group will soon enter the reproductive stage, and the secondary effects of the famines must then become apparent in a diminished birth-rate, and a consequent slackening in the rate of increase.

211. The Superintendent of Census Operations, Mysore, makes the following interesting observations showing how famine influences the age distribution for a series of decades:—

"A comparison of the figures for the last four censuses reveals unmistakable traces of the famine of 1876-77. Taking only the case of males, as their ages are likely to be more accurately returned than those of females, it will be noted that in 1881, close after the famine, the proportion of children aged 0-5 was considerably reduced, with a similar shrinkage in the age-groups comprising their survivors in the next three censuses, *viz.*, 10-15 in 1891, 20-25 in 1901 and 30-35 in 1911. So also is the rebound after famine visible in the large proportion of children aged 0-5 in 1891 and a perceptible increase due to the inclusion of their survivors in the age-group 10-15 in 1901 and in 20-25 in 1911. The statistics relevant to the subject are exhibited in the marginal statement where the inflated and reduced figures are shown in italics and marked (a) and (b) respectively.

Year.	Number per 10,000 males aged.			
	0-5	10-15	20-25	30-35
1881	915(b)	1,396	848	902
1891	1,384(a)	921(b)	860	859
1901	1,282	1,326(a)	664(b)	702
1911	1,157	1,256	865(a)	719(b)

"It will also be seen from the statement that the disparity in the italicized figures as compared with those against the same age-groups in other censuses becomes less and less marked as we recede farther and farther from the famine period 1876-77. The inflated figures for 1881 under the age-groups 10-15, 20-25 and 30-35 must be due to the circumstance that the majority of victims in the famine of 1876-77 were either children or aged persons."

It follows from what has been said above that, in tracts where famine occurs periodically, there can be no such thing as a truly normal decade. The age constitution is constantly changing. A famine is followed by a period of unusually rapid increase, and this again is succeeded by a period of retarded growth, when the generation born shortly before the famine, and reduced in numbers by it, arrive at the child-bearing ages.

212. The age distribution by religion is exhibited in Subsidiary Table II. The Animists have by far the largest proportion of children under 10. Their girls are usually married after the age of puberty to youths not much older than themselves. The proportion who become widows when still in the prime of life is thus comparatively small, while those who do so almost invariably marry again. They are thus very prolific. The Muhammadans and Christians also have a considerably larger proportion of children than the Hindus, whose social customs are less favourable to rapid growth. Hindu girls are, as a rule, married before puberty, and the difference in age between them and their husbands is often very great. A very large proportion of them become widows while they are still capable of bearing children; and these are frequently not allowed to marry again. The proportion of persons over 60 is lowest amongst the Animists. Though this is due partly to their greater number of children, which necessarily affects the proportions at other ages, it is also in part the result of their shorter duration of life. Their standard of comfort is very low; they subsist largely on jungle products, which at the best are not very sustaining; they lead a hard life; and many of them inhabit tracts which are particularly unhealthy. Apart from this, it seems not unlikely that the Dravidian and Mongolian races are by nature less long-lived than the Aryan. The Muhammadans have a larger proportion of males over 60 than the Hindus, but the latter have more elderly females. It has sometimes been said that Anglo-Indians, or the mixed race resulting from the union of Indians and Europeans, have very small families, but this does not appear to be the case. The children under 12 years of age constitute about one-fourth of their total population; and though this is considerably less than the corresponding proportion amongst the lower Hindu castes, it is higher than that existing amongst those at the top of the social ladder, such as Brahman, Khatri, Babhan and Kayastha. In this respect the results of the census are confirmed

Variations by
religion and caste.

All India and
England.
(Males and
Females.)
Tables IX and X.

Mortality of
Subordinate
Government
Employees.

246. The estimated expectations for male and also for female lives, for all India, lie below those of 1891 and 1901 at all ages, and are, as might be anticipated, materially below those deduced from English lives, both in 1901 and 1911, at all ages, the Indian expectation at birth being 22.59 years for males, and 23.31 for females, and the English in 1911, 46.04 years for males, and 50.02 for females, the differences diminishing at higher ages, but being quite marked throughout life. The expectations for female lives in all India are only slightly higher than for male lives, at all ages, the excess being 0.72 years at birth, diminishing to 0.11 at age 60; whilst in England, the superior expectation of female lives is 3.98 years at birth, and 1.43 years at age 60.

247. The separate investigation upon which I am engaged, under instructions from the India Office, as to the mortality experience of about 50,000 persons in subordinate Government employ in India, recorded during a period of 15 years, is only at the present time in the early stages of sorting, with a view to tabulating, and no results are therefore available for the purposes of comparison with those deduced in this Report and in previous Reports in respect of the population of India generally. It is probable, however, that no direct comparison between the results, if available, would be of very much service, as it is probable that the 50,000 lives referred to represent on the whole a select class of literate persons whose mortality experience would differ quite materially from that of the general Indian population. It is possible, however, that the cards supplied in respect of these 50,000 lives would give useful and trustworthy information as to age-distribution, which might form a useful basis for correcting the manifest errors of the Census Returns; but the age-distribution of these lives has not yet been taken out, and in any case it could throw no light upon the ages during the important period of infancy and childhood.

TABLE XI.

MALE LIVES.

Showing the number of registered deaths at all ages, and the estimated total number of deaths, also the registered death rate and the estimated birth and death rates in each Province.

Province.	Average population under registration 1901 Census Males.	Average population under registration 1911 Census Males.	Estimated numbers in last column aged 10 and over, being survivors of numbers in column (2).	Estimated net immigrants (+) or emigrants (-) during decennium.	Deaths in 10 years out of numbers in column (2) adjusted for migration (2) + (5) - (4).	Registered deaths aged 5 years and upwards 1901-11.	Registered deaths at all ages 1901-11.	Estimated deaths at all ages (6) x (8).	Death rate per 1,000 on mean population (9) 1901-11.	Registered death rate per 1,000 1901-11.	Estimated birth rate per 1,000 1901-11.
1	2	3	4	5	6	7	8	9	10	11	12
Bengal	40,273	43,198	30,068	143	10,348	8,705	14,060	16,714	40.0	34.9	40.7
Bombay	9,533	10,215	7,404	149	2,298	2,144	3,304	3,541	35.2	31.6	41.0
Burma	4,408	5,054	3,645	166	329	671	1,118	1,548	32.7	25.4	42.9
Madras	18,861	20,383	14,692	141	4,018	2,665	4,343	6,512	33.4	23.0	41.9
Punjab	12,035	12,158	8,365	11	3,181	2,884	4,752	6,241	43.2	39.5	44.3
United Provinces	24,617	24,642	18,211	104	3,802	5,331	9,580	11,325	46.0	38.9	44.5

NOTE.—In columns (2) to (9) inclusive, the figures have been divided throughout by 1,000.

Estimated Birth and Death rates in each Province, Table XI.

248. In Table XI, I have deduced estimated values of the mean birth and death rates in the areas under registration in each Province during the decennium, adopting similar methods to those employed by Mr. Hardy in Table IV included in his Report of 1901, but specifying separately the allowance for migration in column (5), and thus obtaining, in column (6), corrected figures for the deaths in the decennium amongst those in existence in 1901. It will be seen that the defects in registration of deaths, indicated by a comparison of columns (8) and (9), or columns (10) and (11) are much reduced, as compared with the figures deduced by Mr. Hardy in 1901, in columns (7) to (10) of his Table IV. The death and birth rates deduced in columns (10) and (12) of my Table XI can only be regarded as approximate. From a comparison of the deaths at grouped ages with those brought out by the rates of mortality

given in Tables E to R, it would appear, either that the rates of infantile mortality are decidedly lower than has been estimated, or, as seems to me more probable, that the incompleteness of registration becomes more marked in proportion as the youngest ages are approached. It further appears that the ages at death are mis-stated, in precisely the same way as the ages in the Census Returns; thus, a number of deaths have obviously been transferred from age-group 1—5 to age-group 5—10, and the same tendency is noticeable, though to a smaller extent, as regards age-groups 5—10 and 10—15. The registered deaths at ages 5 and upwards in column (7) are therefore doubly over-stated, as compared with the total deaths in column (8) firstly as being more completely registered, and secondly, as including certain deaths of persons at younger ages; but on the other hand, a certain addition should be made to the figures in column (7) in order to make them comparable with those in column (8), as the latter include deaths at infantile ages at the beginning of the decennium, which, owing to the heavy rates of mortality at these ages, outweigh the deaths at ages over 5, omitted at the end of the period. I find that, making such assumptions as appear reasonable in these respects, the neglect of this adjustment practically neutralizes the effect of the over-statement above referred to, and the rates in column (10) and (12) may be regarded as fair approximations, though, they are, if anything, somewhat below the truth.

TABLE XII.

Relative rates of birth and mortality for the period 1881-1911.

Province.	BIRTH RATES.			MORTALITY RATES.				
				ALL AGES.			OVER 5 YEARS OF AGE.	
	1881-91.	1891-01.	1901-11.	1881-91.	1891-01.	1901-11.	1881-91.	1891-01.
Bengal	52.9	43.9	46.7	45.9	38.9	40.0	28.8	29.6
Bombay	50.3	43.9	41.0	36.4	45.9	35.8	21.2	33.2
Burma	..	..	42.9	..	..	32.7	..	..
Madras	51.3	44.8	41.9	38.0	38.1	33.4	20.5	27.2
Punjab	46.8	47.1	44.3	37.0	40.3	43.3	25.3	25.1
United Provinces	45.1	44.7	46.5	38.6	43.4	46.0	24.7	27.7

249. In Table XII, the mean estimated birth and death rates, deduced as above, are compared with those deduced by Mr. Hardy over the two previous decenniums.* It will be seen that the birth rates are for Bombay, Madras, and the Punjab, below those of the previous periods, whilst in Bengal the rate for 1901—1911 lies between those for 1881—1891 and 1891—1901, and in the United Provinces exceeds the estimated rates for both previous periods. The mean death rates are given for all ages, and in respect of persons in existence at the date of the 1901 Census, the latter being approximately the rate in respect of deaths at ages 5 and over. The death rates at all ages for the period 1901—1911 are reduced as compared with previous periods in Bombay and Madras, in

* In a paper subsequently read before the Institute of Actuaries Mr. Ackland gave an alternative estimate of the birth and death rates in the decade 1901-11 as noted below:—

Province.	Estimated birth-rate per mille.	Estimated death-rate per mille.
Bengal	56.0	48.7
Bombay	50.8	45.6
Burma	42.5	31.4
Madras	47.2	38.7
Punjab	52.9	47.2
United Provinces	47.7	47.1
Combined Provinces	51.3	43.1

The death-rates are here estimated on the basis of the number of deaths which would occur at each year of life according to the mortality shown in the life tables E to R (pages 177-189). The birth-rates are based upon the movement of the whole population as shown by the Census returns of 1901 and 1911, after allowing for migration, and the estimated deaths calculated as above. Mr. Ackland thinks that on the whole these alternative estimates are probably nearer the truth than those given in his Table XII above (*Journal of the Institute of Actuaries*, July 1913, page 352).

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CENSUS OF INDIA, 1911

VOLUME I.

—
INDIA
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PART I.—REPORT



CENSUS OF INDIA, 1911

VOLUME I

INDIA

PART I.—REPORT

BY

E. A. GAIT, C.S.I., C.I.E., I.C.S.,
FELLOW OF THE ROYAL STATISTICAL SOCIETY



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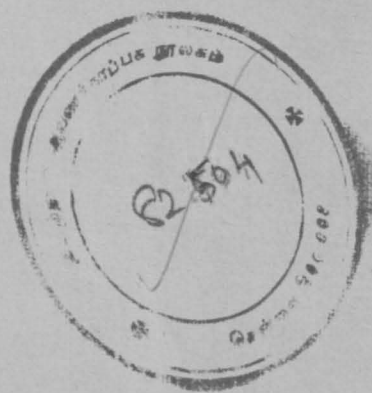
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India	I	2	Usually each report is in two parts, viz.:—Part I.—Report proper, bound in blue, and Part II.—Tables, bound in red. In the case of the smaller units both parts are bound together in a blue cover. In the case of Bengal, Bihar and Orissa, there is a single report for both Provinces, and a separate Tables Volume for each. Part II contains the Bengal Tables and Part III those for Bihar and Orissa. The third volume for the Punjab contains some lengthy Appendices to the Imperial Tables.
Andamans and Nicobars	II	1	
Assam	III	2	
Baluchistan	IV	1	
Bengal, Bihar and Orissa	V	3	
Calcutta City	VI	2	
Bombay	VII	2	
Bombay City	VIII	1	
Burma	IX	2	
Central Provinces and Berar	X		
Coorg	XI	1	
Madras	XII	2	
N.-W. Frontier Province	XIII	1	
Punjab	XIV	3	
United Provinces	XV	2	
Baroda State	XVI	2	
Central India Agency	XVII	1	
Cochin State	XVIII	1	
Hyderabad State	XIX	2	
Kashmir State	XX	2	
Mysore State	XXI	2	
Rajputana Agency and Ajmer-Merwara	XXII	2	
Travancore State	XXIII	2	

INTRODUCTION.

A FULL description of the arrangements for taking the census and tabulating the results has been given in a series of volumes compiled for the guidance of the Provincial Superintendents and their subordinates.* These have not been published, as they are too technical and elaborate for the general reader. But he will probably wish to know in broad outline how the work was done, and I propose, therefore, to repeat briefly the information on this subject which I gave in the Report on the Census of 1901. Previous census

In several provinces the custom of making periodic estimates of the population is of very old standing, but the first attempt to take a general census was made between the years 1867 to 1872. Even then, many of the Native States were left out of account. The enumeration, moreover, was non-synchronous; the arrangements for it were seldom very elaborate, and in some of the more remote tracts it was admittedly carried out in a very rough and imperfect manner. The experience gained, however, was valuable, and it paved the way for the first regular census on the modern system, which was carried out on the 17th February 1881. On this occasion the operations were extended to all parts of the Indian Empire as then constituted, except Kashmir and various small remote tracts. The count was a synchronous one, except in certain remote and jungly tracts where the Enumerators were unable to move about at night. In these tracts the final revision of the record was either carried out in the day-time or dispensed with altogether; and in some parts a simplified schedule was employed. Where there was no final revision, the schedules showed the persons ordinarily residing in each house and not, as elsewhere, those actually present on the night of the census.

The second general census of India was taken on the 26th February 1891. The general procedure was the same as before, but more elaborate arrangements were made to ensure completeness; the non-synchronous area was smaller; and Upper Burma, which had meanwhile been acquired, was included in the operations, as well as Kashmir and Sikkim. The third census followed on the 1st March 1901. Its operations embraced for the first time a large part of the Baluchistan Agency, the Bhil country in Rajputana, the settlements of the wild Nicobarese and Andamanese, and certain outlying tracts on the confines of Burma, the Punjab and Kashmir. The non-synchronous area was again reduced; and even where it was not found practicable to effect a final revision, the enumeration was ordinarily carried out on the standard schedule. In some of the newly added areas, however, no detailed enumeration was possible, and the population was estimated with reference to the ascertained number of houses or the returns of the tribal headmen.

The fourth general census was taken on the night of the 10th March 1911, or ten years and nine days after the previous one. The date was chosen, partly with the object of enabling the census staff to go about their work by moonlight, and partly in order to avoid, as far as possible, religious The Census of
March 10th, 1911.

* Imperial Census Code, Part I—the Taking of the Census, Part II—the Tabulation of the Results; Classification of Occupations and the Industrial Census; Miscellaneous Instructions; Notes for Report; Census Commissioner's Inspection Notes, 1st and 2nd series. In addition to the above, Provincial Superintendents were supplied with summaries in English of the contents of a number of foreign books and essays relating to caste, or the census, such as von Mayr's reviews of the Indian Census of 1901, Bouglé's *Essais sur le Régime de Caste*, etc.

festivals and fairs and the dates regarded as auspicious for marriages or for bathing in the sacred rivers. Unfortunately there was a serious recrudescence of plague, which interfered considerably with the enumeration in some parts of the country, and caused a large temporary decrease in the population of certain towns, such as Nagpur, Gaya and Indore, many of whose inhabitants had temporarily gone away. This census included within its scope the whole of Baluchistan, the Agencies and tribal areas of the North-West Frontier Province, and several remote tracts in Burma which had not previously been dealt with. In a few tracts where the previous count had been non-synchronous, a synchronous census was effected, and in a few others an actual enumeration took the place of an estimate.

The Enumeration
procedure.

The standard procedure to be followed was laid down by the Census Commissioner for India in a Code, on the basis of which the Provincial Superintendents prepared their local instructions with such modifications in matters of detail as were needed in order to meet local requirements. The general scheme provided for the division of the whole Empire into blocks, each of which (except in the non-synchronous tracts where they were larger) contained from thirty to fifty houses and was in charge of an Enumerator. Above the block came the circle, comprising from ten to fifteen blocks, or about 500 houses, under a Supervisor, who was responsible for the work of all the Enumerators in his circle. Circles were grouped according to tahsils, taluks or other recognized administrative divisions, into charges under Charge Superintendents, who exercised general supervision over the operations and tested a large proportion of the work of their subordinates. The total strength of the census staff was about two millions.

An Indian census is beset with special difficulties owing to the long lines of railway, the big rivers on which boats travel, sometimes for days, without coming to the bank, the forests to which wood-cutters resort, often for weeks at a time, and the numerous sacred places which, on occasion, attract many thousands of pilgrims. It would be tedious to describe the arrangements which were made in these and similar cases, but they were all carefully provided for. In the case of railways, for instance, all persons travelling by rail who took tickets after 7 P.M. on the night of the census were enumerated, on the platform if there was time, and if not, in their train. Those alighting at any station during the night were enumerated there, unless they could produce a pass showing that they had already been counted. All trains were stopped, and every carriage visited, about 6 A.M. on the following morning, in order to include any travellers who up till then had escaped notice. At one large junction alone, sixty special Enumerators were engaged for the census of travellers by rail.

In Europe the census schedules are usually filled in by the head of the family, but this is impracticable in a country where the great majority of the people are illiterate. As a rule, therefore, the schedules were filled in by the Enumerators. But as it was impossible for them to enter all the required particulars for all the persons in their blocks in the course of a few hours on the night of the census, and as owing to their generally low standard of education, the entries made by them required careful revision by the superior staff, it was arranged, as on previous occasions, to have the bulk of the work done beforehand. In the first instance, classes were held at which each grade of

census officers was trained by some officer of a higher grade. A rough draft of the census record was prepared by the Enumerators, a few weeks before the census, for all persons ordinarily residing in their blocks. This was carefully checked by the Supervisors and other superior officers, after which it was copied into the schedules. On the night of the census, the record was brought up-to-date by striking out the entries relating to persons no longer present and filling in the necessary particulars for new-comers. Some errors, of course, remained, but, on the whole, thanks to the careful preliminary training and the subsequent examination of the schedules, the work was well done. The entries, at any rate, were, as a rule, more accurate than those made by the limited number of private persons (chiefly Europeans) who filled in the schedules for themselves and their families. In the latter, owing to failure to read the instructions, numerous errors came to light. A High Court Judge, for instance, included in his schedule a relative away on a short visit, who was thus enumerated twice over. Many persons in hotels entered 'none' or 'traveller' as their means of subsistence, and the head of a large Government department was content to describe himself as a 'doctor.' The superiority of the work done by trained Enumerators over that of individual house-holders is now so well established that the tendency is to discourage the issue of private schedules, even to Europeans, and, as far as possible, to get the whole record prepared by the Enumerators.

On the morning of the 11th March the Enumerators of all the blocks in a circle met the Supervisor at a place previously arranged, and filled in a form showing the number of occupied houses and of persons (males and females) in each block. The Supervisor, after testing these figures, prepared from them a summary for his circle, which he transmitted to his Charge Superintendent. The latter dealt similarly with the figures for his charge. The charge summaries were added up at the district head-quarters, and the result was telegraphed to the local Provincial Superintendent and the Census Commissioner for India. Careful arrangements were made for checking the additions at each stage and for preventing the omission of the figures for any unit. The organization was so thorough that the results for the whole of India were received complete on the 19th March, i.e., within nine days of the census, and were issued in print next day with an explanatory note and details of the variations since 1901, not only for Provinces and Agencies, but also for the individual districts and States and the principal towns. The returns for many tracts came to hand much sooner. Within four days of the census, the figures had already been reported for a population of 134 millions, while on the sixth day they had been ascertained for 238 millions, or nearly four-fifths of the total population. The record was broken by two Native States (Rampur and Sarangarh), where, by dint of working all night, the local officers were able, with the aid of mounted messengers and other means of conveyance, to get the figures for all parts of the State to head-quarters in time for the telegram reporting the result to reach me in Calcutta by 8 A.M. on the following morning.

Apart from the extreme celerity with which this work was accomplished, which is not approached even in the smallest European States, the accuracy of the provisional totals is also noteworthy. The net difference in the whole of India between them and those arrived at after detailed tabulation was only

·04 per cent*; and for nearly half of this, a mistake in one district in Burma was responsible. The nearest approximation to the final results was obtained in Ajmer-Merwara, the Central Provinces and Berar, Madras, Hyderabad and Mysore, in all of which the error was less than ·01 per cent.

The information collected at the census included, as usual, sex, age, religion, civil condition, education, language, birthplace, caste or race, occupation (including subsidiary occupations and the means of subsistence of dependants) and certain infirmities. Sect was recorded for Christians, and in some provinces for other religions also. In a few provinces the sub-caste was entered as well as the caste. A novel feature of the present census was the introduction of a separate schedule for the collection of particulars regarding persons working in factories and other industrial undertakings in which not less than twenty hands were employed. Special returns were also obtained of the number of persons working on railways and canals and in the postal and telegraph departments on the date of the census.

Prior to 1901 the information contained in the schedules was extracted on abstraction sheets, one for each final Table, which were divided by lines into spaces corresponding to the headings of the Table concerned. A separate sheet was used for each Enumerator's book of schedules, and a tick was made in the appropriate column for every entry therein. When the whole book had been abstracted, the ticks were counted and totals struck. These were posted in tabulation registers of which there was one for each tahsil or other administrative unit. In 1901 this method was abandoned in favour of the slip system, which was invented by Herr von Mayr in connection with the Bavarian census of 1871. The system being new to India, a great deal of latitude was allowed to Provincial Superintendents in the manner of applying it. At the present census, in the light of the experience then gained, an uniform code of procedure was drawn up by the Census Commissioner for India, on the basis of which the Provincial Superintendents prepared their local codes. The required particulars were transcribed from the schedules on to small forms, or slips, measuring $4\frac{1}{2} \times 2$ ", a separate slip being prepared for each individual. Religion was denoted by the colour of the slips, and sex and civil condition by symbols printed on them. The selection of the proper slip from a rack in front of him thus rendered it unnecessary for the copyist to make any entry on account of the above particulars. The amount of writing required for the other entries was reduced by means of abbreviations; and each man was thus able, on the average, to prepare about 500 slips a day. The completed slips were compared with the original entries in the schedules, and their total number checked with reference to the Enumerator's abstract; if any difference was found the slips were again compared with the schedules. Those for each village were then sorted by sex and religion, and the results were recorded in the "village census tables," a volume compiled solely for purposes of district administration. The slips of the same sex and religion were then thrown together for the tahsil or other unit, and sorted and re-sorted for the different Tables into pigeon-holes labelled with the appropriate headings. This method of work is not only much simpler and more expeditious than the one which it superseded, but it is also more accurate, and can more easily be tested. Moreover, by sorting at once for a comparatively large unit, the laborious process of posting and adding up the

* The population of Kharan in Baluchistan has not been taken into account. For political reasons, the enumeration of this State was postponed until some months after the general census; and it was thus necessarily omitted from the provisional totals.

figures for individual villages is dispensed with. The system is especially advantageous in the more complicated tables, such as those relating to language, caste and occupation. Thus, in the case of occupation, two-thirds of the people of India are employed in agriculture, and most of the remainder on some fifteen to twenty simple avocations. By labelling the pigeon-holes for these occupations and sorting into them the slips on which they are shown, the great majority can be disposed of at a single sorting. Those remaining can be dealt with at a second, third, and, if necessary, a fourth, sorting; and, their number being comparatively small, much more attention can be devoted to their proper classification than would otherwise be feasible.

It may be asked why the Hollerith machine, or some similar mechanical device, has not been used. The answer is that in a country like India, where the lower kinds of clerical work are very cheap, while the supply of highly trained men is limited, the slip system is not only more economical than that of electrical tabulation, but also more reliable. There is more room for error in the perforation of the complicated cards which are a necessary adjunct of that system than in the preparation and sorting of our slips. It would, moreover, be difficult to apply the system of electric tabulation to our more complicated tables, such as those mentioned above.

The question whether it would not be expedient to dispense with the subsequent preparation of slips by taking the census on "*bulletins individuels*," or separate forms for each person, was considered, and decided in the negative for the following reasons:—

- (1) In the course of sorting, there is always a danger of the forms being damaged, destroyed, lost or mixed up with those for other areas, either wilfully or by accident. This had actually happened in some cases in 1901. So long as the original schedules remain available, such accidents can be remedied, but not otherwise.
- (2) It is useful to keep the original record intact for the purpose of reference where necessary. Doubtful entries can often be cleared up, if those for other persons in the same house or block can be examined.
- (3) The *bulletins individuels* would be much more cumbersome to handle than our slips, on which there are no columns for name, sex, religion or civil condition, while the other items are for the most part entered in a very abbreviated form.
- (4) The task of the Enumerator would be rendered more difficult, and the schedules would be twice as bulky, as one side only could be written on.
- (5) The use of symbols and colours is of great assistance in preventing and detecting errors in the primary sorting by sex, religion and civil condition.
- (6) The cost of preparing the slips in India is barely a shilling, or twelve annas, per thousand. After deducting the extra cost of paper, there would be very little economy in the alternative arrangement, and the sole advantage would be the saving of the time

taken up in slip-copying. This work, however, was completed in a few weeks, and even if the census were taken on *bulletins individuels*, at least ten days or a fortnight would be needed to get them ready for sorting.

The actual cost of the census operations to the Imperial Government was 20·3 lakhs of rupees (£135,000), or rather less than in 1901. This is not unsatisfactory, when it is remembered that there has been a marked rise in prices and wages during the decade, and that the population dealt with has increased by over 20 millions. The incidence of the cost per thousand persons enumerated slightly exceeded Rs. 5 in the Punjab, and it was less than Rs. 6 in Madras, Bengal, Bihar and Orissa and the United Provinces. The reduction in the total cost was due mainly to economies effected by the Provincial Superintendents of the Punjab, Burma, the Central Provinces and Berar and Madras. The Darbars of the Baroda, Cochin, Hyderabad, Kashmir, Mysore and Travancore States bore the whole cost of the census in their respective territories; in other States the cost was divided between the Durbar and the Imperial Government, the actual apportionment varying according to circumstances.

The work in each Province and in certain States was in charge of "Provincial Superintendents," who carried out the operations subject to the

Province, etc.	Name of Provincial Superintendent.
Andamans and Nicobars	Mr. R. F. Lewis.
Assam	Mr. J. McSwiney, I.C.S.
Baluchistan	Mr. D. deS. Bray, I.C.S.
Bengal and Bihar and Orissa	Mr. L. S. S. O'Malley, I.C.S.
Bombay	Mr. P. J. Mead, I.C.S. Mr. G. Laird MacGregor, I.C.S.
Burma	Mr. C. Morgan Webb, I.C.S.
Central Provinces and Berar	Mr. J. T. Marten, I.C.S.
Madras and Coorg	Mr. J. C. Molony, I.C.S.
Punjab	Rai Bahadur Pandit Hari Kishan Kaul, C.I.E.
N.-W. Frontier Province	Mr. C. Latimer, I.C.S.
United Provinces	Mr. E. A. H. Blunt, I.C.S.
Baroda State	Rao Bahadur G. H. Desai.
Central India Agency	Major C. E. Luard, I.A.
Cochin State	Mr. C. Achyuta Menon.
Hyderabad State	Mr. Abdul Mujeed.
Kashmir State	Maulvi Matin-uz-zaman Khan.
Mysore State	Mr. V. R. Thyagaraja Aiyar.
Rajputana and Ajmer-Merwara	Mr. E. H. Kealy, I.C.S.
Travancore State	Mr. N. Subramanya Aiyar.

by His Majesty the King-Emperor at Delhi. This involved the separation, at a late stage of tabulation, of the statistics of the new province of Bihar and Orissa, and the amalgamation of those of the rest of Bengal with the statistics of the Eastern Bengal districts, which had been compiled at Dacca by Mr. McSwiney, Superintendent of the defunct province of Eastern Bengal and Assam, whose own report refers only to the resuscitated Chief Commissionership of Assam. Mr. O'Malley has written a single report for the two provinces of Bengal and Bihar and Orissa taken together, but has published the Tables relating to each in a separate volume. These changes necessarily caused some delay in the completion of the work. Mr. O'Malley's Report, which reached me in May last, is full and interesting, and contains, in addition to a careful analysis of the statistics, a very valuable account of the system of caste government and other matters of ethnographic interest to which the special attention of Provincial Superintendents had been directed. Amongst

other reports deserving similar commendation, may be mentioned those of Mr. Blunt for the United Provinces, Rai Bahadur Pandit Hari Kishan Kaul, C.I.E. for the Punjab and Mr. Marten for the Central Provinces and Berar. Mr. Molony in Madras was highly successful in his arrangements for compiling the statistics, and his Report reached me complete early in July 1912, or more than five months sooner than any of those mentioned above; it is thus naturally less detailed, but it contains many shrewd observations, and is written with a humour and lightness of touch rarely met with in statistical publications. Mr. Morgan Webb, in spite of a very inferior staff, brought the work in Burma to a close in May 1912, with the issue of a Report which is not only of high statistical value, but also contains a great deal of interesting descriptive matter relating to the languages and marriage customs of the people of his Province. Bombay was unfortunate in losing Mr. Mead's services, owing to illness, after the work of tabulation had been commenced, but Mr. MacGregor, who succeeded him, brought it to a successful conclusion and, in collaboration with Mr. Mead, wrote an eminently readable report, which includes a very good glossary of the local castes and tribes. From a statistical point of view Baluchistan, with its scanty population, scarcely counts; but Mr. Bray's Report contains a mass of first-hand information of the highest linguistic and anthropological interest regarding the Brāhūi and other local tribes. Rao Bahadur G. H. Desai managed the operations in Baroda most successfully and published a very methodical and well-written report in less than a year from the date when the census was taken. In fine the work was done well everywhere, except in Hyderabad, where it has been unduly protracted. Several of the Imperial Tables were seriously delayed, owing to the non-receipt of the figures for Hyderabad, and the Report for that State has not yet reached me.

I have held the office of Census Commissioner for India from the commencement of the operations to the end, but since 1st April 1912, when I was appointed to a more responsible post, I have been able to devote to census work only such time as could be snatched from other engrossing duties. This has not only delayed the issue of the Report, though it still appears sooner than in 1901, but has also rendered it impossible to discuss certain questions as fully as I had originally intended. The latter consequence will perhaps be regretted by my readers less than by myself, but if omissions or other defects come to their notice, I would ask them to judge them leniently. Work of this kind demands a degree of concentration which it is difficult to bestow on a paragon. The present Report is in one respect more interesting than its predecessors, in that it contains a valuable analysis of the age statistics, and an estimate of the rates of mortality deduced from them, by Mr. T. G. Ackland, the well-known Actuary. On previous occasions similar actuarial reports were obtained, but, except in 1881, they were received too late for incorporation in the general Census Report.

In conclusion I have to express my obligations to Mr. Meikle, Superintendent of Government Printing, India, for the assistance which he has given by undertaking the printing not only of this Report, but also of several of those for individual Provinces and States; to Rai Mon Mohan Roy Bahadur, who was appointed my special assistant when I ceased to be whole-time Census Commissioner; and to my Head Clerk, Babu Anukul Chandra Mallik, on whom I have had to rely very largely for the detailed examination and checking of the statistical matter, and who has throughout performed his duties with the utmost zeal and efficiency.

E. A. GAIT.



REPORT

ON THE

CENSUS OF INDIA, 1911.

CHAPTER I.

Distribution of the Population.

Introductory Remarks.

The remark that India must be regarded as a continent rather than a country may be trite, but it is essential to bear the fact in mind when dealing with the statistics of the census. Though geographically a part of Asia, its connection with that continent is recent as geology reckons time. Prior to the tertiary period, when the Himalayas were thrown up, the present peninsula of India was bounded on the north by the great central sea known to geologists as Tethys, while on the south it was joined to the ancient land area which stretched from Madagascar to the Malay Archipelago. And even now it is largely isolated from the rest of Asia. The Himalayas form a mighty barrier, which cuts off all access by man except for a narrow strip at the two extremities, and impedes the air movements to such an extent as to give to India a practically independent meteorology. But it is chiefly in respect of its size, equal to that of all Europe excluding Russia, its teeming population—a fifth of that of the whole world—and still more its remarkable diversity of physical aspects, climate, soil, and races that it claims recognition as a continent, or collection of different countries. No one who travels through India can fail to be struck with the extraordinary variety of its physical aspects. In the north rise the highest mountains in the world. Their summits are clothed in perennial snow and their lower slopes buried in dense forest. At their foot is an extensive plain, arid and sandy in the west and overlaid with luxuriant verdure in the east. Further south is a great central plateau, bordered on the west by the rugged outline of the Western Ghats and on the south by the rounded peaks of the Nilgiris. Between the plateau and the sea are narrow low-lying plains covered with tropical vegetation. Included within the Indian Empire as the term is now understood are, on the west, Baluchistan, a country of bare hills and rocky deserts interspersed by a few scattered oases, and the mountainous region bordering on Afghanistan; and on the east Assam and Burma, with their mighty rivers flowing rapidly through fertile valleys, their impenetrable jungles, and their well-wooded hill ranges.

2. From the point of view of geology India has been described as the land of paradoxes. The peninsula is one of the oldest formations in the world and the Himalayas one of the most recent. Every geologic epoch is represented in one part or another of the Empire. As regards soils, those of alluvial origin are the most extensive; their consistence ranges from loose drift sands to very stiff clays. In the Deccan trap formation they are thin and poor on the higher levels, while in the low lands the well known black cotton soil predominates. In the rest of the peninsula area the soils are derived in the main from crystalline rocks, but they vary greatly in appearance, depth and fertility.

The flora of India is more varied than that of any other area of the same extent in the Eastern Hemisphere, if not in the world; and the species of animals

far surpass in number those found in Europe. The climate is equally diversified. In northern India there are great extremes of temperature. In the cold season the minimum falls to, or below, freezing point, while in the hot weather there are many places where the maximum has exceeded 120°: there is also a very great diurnal range. Further east, the variations, though still well marked, are slighter. In the south the diurnal changes of temperature are comparatively small; there is no cold season, and the coolest time is during the rains. There are remarkable contrasts in the rainfall, which in some localities exceeds 300 inches, and in others is less than 5; and while most parts depend mainly on the moisture brought by the south-west monsoon, some receive more rain from the north-east monsoon, and others from cyclonic disturbances; others again get little except from land-formed storms.

ethnic types,

3. Nowhere is the complex character of Indian conditions more clearly exemplified than in the physical type of its inhabitants. To the foreigner all Chinamen appear very much alike, but the most inexperienced eye cannot fail to note the remarkable contrasts presented by the natives of India. No one could confuse the main types, such as Gurkhas, Pathans, Sikhs, Rajputs, Burmans, Nagas, Tamils, etc.: nor does it take long to carry the differentiation much further. As noted by the Abbé Dubois more than a century ago—"A good observer will remark, under all general points of resemblance, as much difference between a Tamul and a Telinga; between a Canara and a Mahrata, as one would perceive in Europe between an Englishman and a Frenchman, an Italian and a German." The typical inhabitants of India—the Dravidians—differ altogether from those of Northern Asia, and more nearly resemble the tribes of Malaya, Sumatra and Madagascar. Whatever may be their origin, it is certain that they have been settled in this country for countless ages, and that their present physical characteristics have been evolved locally. They have been displaced in the north-west by successive hordes of invaders, including Aryans, Scythians, Pathans and Moghals, and in the north-east by Mongoloid tribes allied to those of Burma, which is India only in a modern political sense. Between these foreign elements and the pure Dravidians is a border land where the contiguous races have intermingled. The Hindus of Bengal have been classed by the late Sir Herbert Risley as Mongolo-Dravidian, those of the United Provinces and Bihar as Aryo-Dravidian, and those of Bombay as Scytho-Dravidian.* Owing to their religion there has been less fusion between the Pathans and Moghals and the earlier inhabitants than there was in the case of previous invaders. There are numerous local converts to Muhammadanism, some of whom have intermarried with those of foreign extraction. But the better class amongst the latter have, to a great extent, kept themselves aloof, and have thus preserved their original physical type.

To these differences of race are superadded others due to environment. The brave and sturdy peasant of the Punjab, who is so marked a contrast to the cultivator of the steamy delta of the Ganges, owes his physical superiority, not only to his ancestry, but also to the arid climate and comparatively hard life which have hitherto characterized the land of the five rivers, and to the constant operation there of the law of the survival of the fittest. What changes will be wrought in his character and physique by modern conditions of assured peace and an artificial water-supply the future alone can show.

4. The linguistic survey has distinguished in India about a hundred and thirty indigenous dialects belonging to six distinct families of speech. In the domain of religion, though the bulk of the people call themselves Hindus, there are millions of Muhammadans, Animists, Buddhists, Jains, Sikhs and Christians. Hinduism itself includes "a complex congeries of creeds and doctrines." It shelters within its portals monotheists, polytheists and pantheists; worshippers of the great gods Siva and Vishnu or of their female counterparts, as well as worshippers of the divine mothers, of the spirits of trees, rocks and streams and of the tutelary village deities; persons who propitiate their deity by all manner of bloody sacrifices, and persons who will not only kill no living creature but who must not even use the word "cut"; those whose ritual consists mainly of prayers and hymns, and those who indulge in unspeakable orgies in the name of religion; and a host of more or less unorthodox sectaries many of whom deny

* The above classification, so far at least as Bombay is concerned, must still be regarded as tentative.

the supremacy of the Brahmins, or at least have non-Brahmanical religious leaders. So also in respect of social customs. In the north near relatives are forbidden to marry; but in the south cousin marriage is prescribed, and even closer alliances are sometimes permitted. As a rule female chastity is highly valued, but some communities set little store by it, at any rate prior to marriage, and others make it a rule to dedicate one daughter to a life of religious prostitution. In some parts the women move about freely; in others they are kept secluded. In some parts they wear skirts; in others trousers. In some parts again wheat is the staple food; in others rice, and in others millets of various kinds. All stages of civilization are found in India. At one extreme are the land-holding and professional classes, many of whom are highly educated and refined; and at the other various primitive aboriginal tribes, such as the head-hunting Nagas of Assam and the leaf-clad savages of the southern hills who subsist on vermin and jungle products.

5. The heterogeneity of political conditions is equally great. When the Aryans first came to India they found the country in possession of scattered Dravidian tribes. Their own early traditions show that they themselves were divided into a number of independent communities; and we know that this was still the case at the time of Alexander's invasion. After his departure Chandragupta established his rule throughout northern India. His grandson Asoka extended his sway over a considerable part of the peninsula, but when he died, his Empire fell to pieces. The kingdoms carved out by Samudra Gupta and Siladitya were less extensive and equally ephemeral. After the death of the latter, the whole country remained split up into petty States until the Muhammadans restored some degree of political cohesion. The rule of the Delhi Emperors was mainly confined to the open plains of northern India. Aurangzeb added to the Imperial dominions the Muhammadan kingdoms of Golconda and Bijapur, but he was successfully defied by the Marāthās; nor did he succeed in conquering Assam in the east or the Hindu kingdoms in the extreme south. It may thus be said that a united India in the national sense is the creation of the British. And even now there are marked local differences. The greater part of India is under direct British administration, but more than a third is ruled by mediatized Native Chiefs. The area under British rule is divided into seven provinces, each under a Governor or Lieutenant-Governor, and seven under Chief Commissioners. The provinces are all under the superintendence and control of the Governor-General in Council, but there are important differences in their status, local laws and land revenue systems. Four of the major provinces have an area exceeding that of the United Kingdom, and two of them a greater population. The Native States vary enormously in size, status and development. The 342 minor States of the Bombay Presidency have an average area of 85 square miles and a population of less than 10,000, while Hyderabad is nearly as large as Great Britain and has more than thirteen million inhabitants. Several of the larger States are in direct political relation with the Government of India; others are grouped together under an Agent to the Governor-General, and others again are in political relation with local Governments. Some Chiefs enjoy almost complete freedom in administering their internal affairs, but some are little more than zamindars with limited magisterial powers. Some have almost a constitutional form of government while others are still in the tribal or feudal stage.

6. It will readily be understood that in a Report dealing with the whole of India it is necessary to confine the discussion to the more prominent aspects of the census statistics. The area and population are too vast, and the local conditions too varied, for it to be possible to deal exhaustively with local peculiarities or with individual provinces and peoples. All that can be attempted is a presentation of the main facts and an examination of the conclusions to be drawn from them. For details the Provincial Volumes written by the local Census Superintendents should be referred to. So also with the statistical data. In the tables forming Part II of this Report, the Province, State or Agency has been taken as the unit. The main figures for individual districts are given in a summary form in Table XIX; but for full details reference must be made to the corresponding Provincial Volumes, which also contain the more important statistics for the minor administrative units—tahsils, thanas or townships. In

addition to the statistics which have been prescribed by the Government of India, certain other tables have been prepared in each province for local use, including one showing the population by sex and religion of every village in the province. Such statistics, however, are of little general interest, and they are not included in the general series of Census Reports.

Climate and
rainfall.

7. In a country like India where the vast majority of the people are dependent on agriculture, the meteorology is a matter of primary importance. Its main feature is the alternation of seasons known as the north-east and south-west monsoons. During the winter months the prevailing wind is from the north-east. Coming overland, it is usually dry, but above it is a return upper current of moist air. This is precipitated on the occurrence of storms, which usually originate in Persia. The result is heavy snowfall in the middle and higher Himalayas and rainfall in the adjacent plains. These storms are almost the only source of rain in Baluchistan. The winds of the north-east monsoon also give fairly heavy rain in the south of India where they precipitate the moisture gained in their passage over the Bay of Bengal. As the temperature of the land area rises, at the end of the cold weather, the north-easterly breezes are gradually replaced by winds from the south-west. While the change is taking place, the convective air movements give rise to thunder-storms or "norwesters," chiefly in Bengal and Assam. The rain from these storms is of considerable value for the tea and early rice in these Provinces.

But it is from the moisture-laden winds of the south-west monsoon that India derives nine-tenths of her rainfall. From June to September they extend over practically the whole of India, and the crops of at least five-sixths of the Empire depend on the amount and distribution of the precipitation during this period. The south-west monsoon reaches India in two currents, one from the Arabian Sea and the other from the Bay of Bengal. Part of the latter current is directed towards Burma, but the major portion advances up the Bay and gives rain to Assam, Orissa, and most of the Gangetic Plain. Though its volume is much smaller than that of the Arabian Sea current, it is more effective as a rain-distributing medium. The greater part of the latter current, on reaching India, meets with an almost continuous hill range rising abruptly from the coast and, cooling rapidly as it ascends, deposits most of its aqueous vapour. The rest of the current takes a more northerly direction, across the sandy plains of Western Rajputana, but gives little rain, except in the coast districts, until it reaches the Aravalli Hills. Deflected from Sind by the action of the earth's rotation, it passes on to the Eastern Punjab, where it intermingles with the current from the Bay, and combines with it to give rain in the east of the Punjab and Rajputana and in the Western Himalayas. Between the two currents, from Agra to Puri, is a trough of low pressure along which cyclonic storms forming in the north of the Bay tend to advance, giving heavy rain in the rice-growing districts of the Central Provinces.

During the latter half of September and the first half of October the south-west monsoon withdraws from Upper India, and in the following month from the Peninsula area, giving during the process moderate to heavy rain in the Deccan and South Madras coast districts. At this time cyclonic storms form in the Bay of Bengal and often advance across Upper India, bringing heavy rain in their wake.

Although the greater part of India depends mainly on the rainfall of the south-west monsoon, there are great local variations in the amount of precipitation and in the regularity of the supply. Where the yearly total exceeds 70 inches, deviations from the normal seldom do much harm to the crops, and excessive rain is often quite as injurious as a deficiency. Where the precipitation is more scanty, any irregularity becomes serious, whether it takes the form of a delayed start, a prolonged break, or an unduly early cessation; but on the whole it may be said that the rainfall of the second half of the monsoon period is of major importance. A cessation of the rains in August may destroy the whole of the autumn crops and prevent the winter ones from being sown.

8. As already stated, India is divided into fourteen British provinces and a great number of Native States. In the British provinces and some of the

larger Native States the principal administrative unit is the district, in charge of a Collector or Deputy Commissioner. The total number of districts in British provinces is 275. The average area of a district is about 4,000 square miles, and the average population very little short of a million. As a rule each district is further sub-divided for revenue purposes into a varying number (usually from five to fifteen) of tahsils, taluks or townships. In Bengal and Bihar and Orissa, where, owing to the Permanent Settlement, these revenue sub-divisions do not exist, the thana, or police circle, takes the place of the tahsil for statistical and general administrative purposes. Except in Madras, the districts are grouped to form divisions. Each division contains from three to seven (in one case eight) districts, and is in charge of a Commissioner, who holds an intermediate position between the District Officer and the Government.

9. The partition of India into provinces, states and districts has been determined by political considerations, and does not always correspond to variations in the climate and soil, or the ethnic distribution of the people. The statistics of density and movement of population should therefore be discussed with reference both to the actual administrative units, which obviously cannot be ignored, and also to the "natural divisions." The latter must necessarily vary according to the criterion adopted. A distribution made on a purely ethnic basis will differ from one grounded on geological or geographical peculiarities, on the nature of the soil, or on meteorological conditions. Though there are many exceptions and limitations, in an agricultural country like India it is the rainfall, more than anything else, which determines the population that a given tract will support. There are places where no crops will grow owing to the poverty of the soil, the configuration of the surface, or the presence of the saline efflorescence known as *reh*; and there are others where the climate is so unhealthy as to be unfit for human habitation. But except where there is irrigation, the rainfall is ordinarily the most important factor. It was therefore decided at the census of 1901 to adopt a scheme of natural divisions (twenty in number), based chiefly on meteorological characters, drawn up by the late Sir John Eliot for use in the reports and maps showing rainfall and temperature, which are published daily for the information of the public. Experience has since shown that these divisions are not sufficiently well understood for practical use; and the scheme has been abandoned by the Meteorological department in favour of one based primarily on political divisions, which are sub-divided in cases where the climatic features require it.

The new "Rainfall Divisions" are as follows:—

Province or State.	Rainfall Division.
Andamans and Nicobars	1. Bay Islands.
Burma	2. Lower Burma.
"	3. Upper Burma.
Assam	4. Assam.
Bengal	5. Eastern Bengal.
"	6. Bengal.
Bihar and Orissa	7. Orissa.
" " "	8. Chota Nagpur.
" " "	9. Bihar.
United Provinces of Agra and Oudh	10. United Provinces East.
" " "	11. United Provinces West.
Punjab	12. Punjab, East and North.
"	13. Punjab, South and West.
Kashmir	14. Kashmir.
N.-W. Frontier Province	15. N.-W. Frontier Province.
Baluchistan	16. Baluchistan.
Bombay	17. Sind.
"	20. Gujarat.
"	26. Konkan.
"	27. Bombay Deccan.

Province or State.	Rainfall Division.
Rajputana	18. Rajputana West.
"	19. Rajputana East.
Central India	21. Central India West.
"	22. Central India East.
Central Provinces and Berar	23. Berar.
"	24. Central Provinces West.
"	25. Central Provinces East.
Hyderabad	28. Hyderabad North.
"	29. Hyderabad South.
Mysore and Coorg	30. Mysore with Coorg.
Madras	31. Malabar.
"	32. Madras South-East.
"	33. Madras Deccan.
"	34. Madras Coast North.

10. The above rainfall divisions are too numerous to be dealt with individually in a comprehensive review of the statistics for the whole of India. I propose, therefore, to group them excluding the Bay Islands, the population of which is negligible, under the sixteen heads given below which Dr. Walker has kindly suggested to me :—

Natural Division.	Rainfall Divisions included.	Administrative Divisions or Districts included.
I Lower Burma	2. Lower Burma	Arakan, Pegu, Irrawaddy and Tenasserim Divisions.
II Upper Burma	3. Upper Burma	Magwe, Mandalay, Sagaing and Meiktila Divisions; the Northern and Southern Shan States; Pakokku Hill Tracts and Chin Hills.
III Assam	4. Assam	The Province of Assam.
IV Bengal	5. Eastern Bengal 6. Bengal.	The Presidency of Bengal (except Darjeeling) and Sikkim.
V Orissa and Madras Coast North.	7. Orissa 34. Madras Coast North.	Orissa Division with Orissa Tributary States; Districts of Ganjam, Vizagapatam, Godavari, Kistna, Guntur and Nellore.
VI Bihar and United Provinces East.	9. Bihar 10. United East	Patna, Tirhut and Bhagalpur Divisions, and the district of Darjeeling; Lucknow, Benares, Gorakhpur, Allahabad (except Jalaun and Jhansi districts) and Fyzabad Divisions, and the districts of Pilibhit, Shahjahanpur and Farrukhabad.
VII United Provinces West and Punjab East and North.	11. United West. 12. Punjab East and North	Meerut, Kumaun, Rohilkhand (except Shahjahanpur and Pilibhit districts) and Agra (excluding Farrukhabad district) Divisions; the districts of Jalaun and Jhansi, and the States of Rampur and Tehri Garhwal; Delhi, Jullundur, Lahore and Rawalpindi (except Shahpur and Mianwali) Divisions, and all Native States in the Punjab, except Bahawalpur.
VIII Kashmir	14. Kashmir	Kashmir.
IX The North-West Dry Area.	13. Punjab South-West 15. North-West Frontier Province. 17. Sind. 18. Rajputana West.	Multan Division (including the Baloch Trans-frontier), the districts of Shahpur and Mianwali, and the Bahawalpur State; N.-W. F. Province; Sind with Khairpur State; Bikaner, Jaisalmir and Marwar.
X Baluchistan	16. Baluchistan	Baluchistan.
XI Rajputana East and Central India West.	19. Rajputana East 21. Central India West.	Ajmer-Merwara; all States in the Rajputana Agency, except Bikaner, Jaisalmir and Marwar; Indore and Gwalior Residencies, and the Agencies of Bhopawar, Malwa and Bhopal.

Natural Division.	Rainfall Divisions included.	Administrative Divisions or Districts included.
XII Gujarat	20. Gujarat.	Bombay Northern Division (except Thana; Cambay, Cutch, Kathiawar, and the Agencies of Palanpur, Mahikantha, Rewakantha and Surat; Baroda.
XIII Central India East, Central Provinces and Berar and Chota Nagpur.	22. Central India East 24. Central Provinces West. 25. Central Provinces East 28. Berar 28. Chota Nagpur	Bundelkhand and Baghelkhand Agencies; Central Provinces and Berar, and Chota Nagpur Division of Bihar and Orissa with Chota Nagpur States.
XIV The Deccan.	27. Bombay Deccan 28. Hyderabad North 29. Hyderabad South 30. Mysore with Coorg 33. Madras Deccan	Bombay Central Division; the districts of Belgaum, Bijapur, and Dharwar, the States of Akalkot, Bhor, Surgana, Kolhapur, S. M. Jaghirs and Savanur, and the Agencies of Khandesh, Satara, and Bijapur; Hyderabad; Mysore and Coorg; the Madras districts of Bellary, Kurnool, Anantapur and Cuddapah and the States of Sandur and Banganapalle.
XV Malabar and Konkan.	31. Malabar 26. Konkan.	The Madras districts of South Canara, Anjen-go and Malabar (excluding Laccadives) and the States of Cochin and Travancore; Bombay City; the districts of Thana, Kolaba, Ratnagiri and Kanara, and the States of Janjira, Jawahar and Savantvadi.
XVI Madras South East.	32. Madras South East	Districts of Madras, Chingleput, Chittoor, North Arcot, Salem, Coimbatore, South Arcot, Tanjore, Trichinopoly, Madura, Ramnad, Tinnevely, Nilgiris and the State of Pudukkottai.

11. The following brief description of the above natural divisions is based on notes which I have received from Mr. Hayden, Director of the Geological Survey, and Dr. Field, Officiating Director General of Observatories.

Lower Burma comprises the coast and deltaic districts of Burma from Arakan in the north to Mergui in the south. This tract falls geologically into three divisions, (a) the coastal strip of the Arakan Yoma, composed chiefly of Mesozoic and older Tertiary rocks, (b) the lower valleys and deltas of the Irrawaddy and Salween rivers covered by alluvium and soft beds of Upper Tertiary age, and (c) the high parallel ranges, composed of slates, schists and granite, of Tertiary age. The mean annual rainfall is a little below 150"; and of this over 95 per cent. occurs in the period from May to October. Humidity is high at almost all times of the year, while during the rains the atmosphere is very nearly saturated with moisture, even in the interior. The rainfall is very regular, the mean variability* being only 64 per cent. During the dry season the range of temperature is almost as great as in the Punjab, and the well-known unhealthiness of the climate may, in part at least, be due to this feature.

Upper Burma, or the rest of the province, falls readily into two parts, one on the west of the Irrawaddy, covered chiefly by the sandstones and shales of the Pegu and Irrawaddy series of the Tertiary system, and one on the east, including the Northern and Southern Shan States, and consisting of a great variety of sedimentary rocks, both Palaeozoic and Mesozoic, and a metamorphic series of gneisses and schists. The climate differs considerably from that of Lower Burma. The monsoon blows as a comparatively dry wind, with the result that the total rainfall received is not only much lighter than that in the region to the south but is also more irregular in its occurrence. The mean annual rainfall is 48", and but little falls from December to March. Thunderstorms occur at intervals in April and frequently in May. The variability

* The term "variability" is here used to signify the difference between the highest and lowest annual rainfall expressed as a percentage of the average. Thus if the average at a given place be 60 inches, the maximum 85 and the minimum 40, the variability would be $(85-40) \times 100 \div 60$, or 75. As a rule, the variability has been calculated on the observations made during a period of forty to fifty years. Except in Kashmir and Baluchistan, where all stations have been classed together, the figures for places more than 3,500 feet above sea-level have been left out of account.

ranges from 53 per cent. at Lashio to 102 per cent. at Thayetmyo; and there is sometimes a partial failure of the crops.

Assam.—The central part of Assam is formed of a crystalline mass (gneiss and schist) forming the Garo, Khasi, Jaintia and Mikir Hills. Between this and the Tertiary fringe of the Himalayan foot-hills, the Brahmaputra valley is filled with a broad belt of alluvium. On the east and south, Tertiary (and possibly Cretaceous) shales and sandstones form the long parallel ranges of the Naga, Manipur and Lushai Hills. The most characteristic feature of the climate is the great dampness of the atmosphere at all seasons, combined with a moderately high temperature. In the cold weather months thick fogs prevail along the course of the larger rivers, and rainfall occurs from time to time during the passage of cold weather storms across north-east India. In the spring season thunder-showers are frequent, and in the first half of June merge imperceptibly into the monsoon rainfall which lasts until October. December is the driest month of the year. Excluding the hills above 3,500 feet, where there is in some parts extraordinarily heavy precipitation, that at Chera-punji being the highest registered anywhere in the world, the average rainfall is 92", the highest being 125" at Silchar and the lowest 63" at Gauhati. The variability ranges between 55 per cent. at Dibrugarh and 99 per cent. at Silchar.

Bengal.—Almost the whole of this division lies on the deltaic alluvium of the Ganges and Brahmaputra. On the west, Bengal embraces the granites and other crystalline rocks and laterite of Bankura and Burdwan, as well as a portion of the Raniganj coal-field. On the east, the hills of Chittagong and Hill Tippera are composed of soft Tertiary sandstone and shale, and on the north the sedimentary rocks of the outer slopes of the Darjeeling Himalaya rapidly give place to the gneisses, schists and granites, of which the whole of Sikkim and the greater part of the Darjeeling district are composed. The climate of this tract, like that of Assam, is very damp during the major part of the year, and the dry hot westerly winds which sweep down the Gangetic Plain in the spring months are either not felt at all or only occasionally. The cold season extends from December to February, sea winds beginning thereafter to blow from the head of the Bay, and resulting during April and May in frequent thunder-storms and "norwesters." The monsoon rains proper begin in the second week of June and end with the last week of October. Mean annual rainfall increases from 55" at Berhampore to 122" at Jalpaiguri near the foot of the hills, the average for the division being 76". The variability ranges from 81 per cent. at Calcutta to 116 at Saugor Island, and averages 94 per cent. for the whole division.

Orissa and Madras Coast, North.—This division, which includes the Tributary States, as well as the British districts, of Orissa and the coast districts of Madras from Nellore northwards, consists of Archaean schists and gneisses with a fringe of laterite and alluvium along the sea-coast. Small patches of sandstone and shale (Gondwanas) occur at Cuttack and in the small coal-field of Talcher. But little rain falls from December to February. Thunder-storms begin in March and give light to moderate rain in Orissa during the next two months, and in the southern half of the division in May. The south-west monsoon affects Orissa to a much greater extent than it does the north coast of Madras, so that while in the former locality rainfall diminishes considerably after September, on the Madras coast it is at its maximum in October. As most of the rainfall in this division occurs in connection with cyclonic storms, it is very irregular in its incidence, and severe droughts are of not infrequent occurrence, particularly in Ganjam. The annual rainfall of the whole division is nearly 50", but it varies from 35" at Nellore to 66" at Sambalpur. Variability increases from north to south, and is highest at Waltair, where it amounts to 167 per cent.

Bihar and the United Provinces, East.—Is bounded on the north by the Tertiary foot-hills of Nepal, and on the south and south-east by the Vindhyan sandstones of the Kaimur range in Mirzapur, the gneisses and granites of Gaya and Bhagalpur and the traps of the Rajmahal Hills. Otherwise the whole area is covered by the Gangetic alluvium. This tract lies within the influence of the winter storms, and receives occasional showers during the first two months of the year. Dry winds set in during March and continue

until about the middle of May. The current is, however, somewhat unsteady; damp easterly winds from the Bay penetrate at intervals well into the United Provinces and give rise to thunder-storms, particularly along the hills. The monsoon rains appear about the middle of June, and last till the end of September or the first part of October. The total rainfall received during the year over the division as a whole amounts to 47", and of this nearly half falls during July and August. It is very uncertain in the northern parts of Bihar; and in Purnea the variability is as high as 168 per cent.

United Provinces West, and Punjab East and North.—The south-western half consists of plains of Indo-Gangetic alluvium, whilst the north-eastern embraces the parallel ranges of the Himalaya consisting of (a) the Tertiary outer ranges including the Siwalik Hills and extending from Kangra at the one end to Nepal at the other, next, (b) the metamorphic and unfossiliferous sedimentary belt of the Lesser Himalaya; behind this (c) the great Himalayan range on which lie the high peaks and which consists chiefly of granite and metamorphic rocks, and behind this again (d) the eastern part of the Zaskar range of highly fossiliferous sediments, interrupted here and there by masses of intrusive granite. From about the middle of December to the end of March this region is influenced by winter storms which give light to moderate precipitation, especially along the hills. Hot weather conditions appear in April and continue until the third or fourth week of June when the rainy season sets in. During the hot season thunder-storms and dust-storms occur at short intervals, and in the hill districts are sometimes accompanied by heavy rain. The rains are on the whole heavier, steadier and of longer duration in the eastern half of the division than in the western. Very heavy downpours are occasionally experienced in connection with cyclonic storms. In October and November dry weather ordinarily prevails. The annual rainfall varies between 14" and 85", and is subject to large fluctuations from year to year, particularly in the region around Sirsa, where the percentage of variability is 174.

Kashmir.—The Kashmir area embraces the western extension of the Himalayan system, the Zaskar and Ladakh ranges, the Hindu Kush and the Karakoram ranges. They consist of granite and metamorphic rocks, chiefly developed in the Hindu Kush and Karakoram, with a great fossiliferous sedimentary series in the Ladakh range, whilst the wide intervening plains of the Tibetan uplands (Ladakh and Changchenmo) are covered with sands and gravels. The south-eastern border of the area includes the sedimentary rocks and granites of the Pir Panjal, and is fringed by the Tertiary belt of the outer ranges of Jammu, Mirpur and Poonch. As might be supposed from its topographical characteristics, the climate of Kashmir is by no means uniform; and while snow begins to fall on the higher ranges in October or November, it is only by the end of December that the snowline has descended to the level of the Srinagar valley. In some localities the snowfall is very heavy and almost continuous; in others spasmodic and light. Kashmir is not quite beyond the influence of the south-west monsoon; in some years moderately heavy rain occurs in the summer months, and, coupled with the consequent melting of snow accumulations, gives rise to disastrous floods. The total annual precipitation varies between 3" at Leh and 78" at Sonamarg. Its variability is least at Skardu (66 per cent.) and greatest at Leh (266 per cent.).

The North-West Dry Area includes the south-west of the Punjab, the North-West Frontier Province, Sind and the west of Rajputana. The greater part of this area consists of alluvial plains. In the extreme north, however, it embraces the Tertiary beds of the North-West Frontier Province and the older sedimentary, metamorphic and granitic rocks of the Hindu Kush. In Western Rajputana desert conditions prevail, the surface being covered with sand through which crop out small exposures of rocks of a great variety of ages. This is on the whole the driest and hottest of all the divisions of India proper. The average rainfall for the year is about ten inches, and of this nearly two inches are contributed by winter storms. Owing to the peculiarities in the distribution of pressure, even the summer monsoon rainfall in this region is intermittent and comparatively light; and as it occurs chiefly in connection with cyclonic storms, or with the changes in the position of the semi-permanent barometric depression over Sind, it is necessarily very uncertain.

The variability ranges between 156 per cent. at Khushab and 354 per cent. at Karachi, which is the highest in India.

Baluchistan extends from the Suleiman range on the east to the Persian frontier on the west and from the southern limits of Afghanistan to the Arabian Sea. The hills are composed mainly of younger Mesozoic and Tertiary rocks—the lower levels being covered by wind-blown deposits. Unlike Kashmir, Baluchistan is nearly beyond the influence of the monsoon, and depends for its rainfall chiefly upon the depressions of the winter season. The average yearly rainfall is less than 9", and even this small amount is very uncertain. The variability, as determined from the data of the few stations available, is very high, and averages 160 per cent.

Rajputana East and Central India West.—This division lies between the Aravalli and Vindhya Hills and the Gangetic Plain. It is about 2,000 feet in elevation near the Vindhyas and Aravallis, but slopes north-eastwards and eastwards to the level of the Gangetic Plain. The north-west section consists of gneisses and granites with old schists and slates of the Aravalli range. The south-west portion is covered by basaltic lava-flows. Here, as in the Punjab, the year may be divided into three well-defined seasons. During the cold season, which lasts from December to March, light rain associated with disturbances of the cold weather type is liable to occur. Marked temperature changes usually precede and follow these cold weather storms; and occasionally very low temperatures are recorded. The hot season is characterized by the prevalence of very hot dry winds and severe dust-storms, particularly in the western parts of the division. The rains commence in the second or third week of June and last until the middle of September. October and November are as a rule dry months. The average rainfall is 25", the highest being 33", and the lowest 20". With a mean variability of 149 per cent. the rainfall of this region is quite as fitful as in the Deccan or the eastern parts of the Punjab, while even during the monsoon it is of an intermittent character; and in a bad season such as that of 1899 is liable to fail altogether.

Gujarat.—This tract includes Gujarat, Kathiawar and Cutch. Geologically it consists of flows of basaltic rock surrounded by a fringe of alluvium. This is one of the driest parts of India and is liable to severe droughts. Scarcely any rain falls from November to May. The summer rains begin in June and last up to about the middle of September. Cyclonic storms from the Bay occasionally pass through Gujarat, and give deluges of rain, resulting in destructive floods. The mean annual rainfall varies between 14" and 41". Its average variability is 188 per cent., being greatest in Cutch; at Bhuj the measure of variability is 245.

Central India East, Central Provinces and Berar and Chota Nagpur.—This division consists largely of gneiss, schist and granite, covered on the west by basaltic lava-flows (Deccan trap), on the north by the old sedimentary rocks of the Vindhyan system, and in the centre and south-west of the division by sandstones and shales of the Gondwana system. Between Jubbulpore and Hoshangabad the valley of the Nerbudda is filled with alluvium of pleistocene age. The dry season commences about the middle of October and lasts until about the second week in June. During January and February occasional light rain is received from winter storms, and the succeeding three months contribute light showers. Central India, like the United Provinces, is swept during the spring months by dry westerly winds, which extend as far as Ranchi. The rains set in during the first fortnight of June and last to the end of September or the earlier part of October. During this period cyclonic storms from the Bay frequently advance through the northern half of the division, sometimes producing very heavy downpours of rain. The annual rainfall averages 47". It varies considerably in amount, being heaviest at Ranchi in the east of the division, and lightest at Khandwa in the west. The variability is on the whole inversely proportional to the actual amount: it is least at Chaibasa (63 per cent.) and greatest at Akola (170 per cent.). The division is occasionally liable to a partial failure of the rains, due either to a weakness of the monsoon current or to its early withdrawal.

The Deccan.—This division comprises the Bombay Deccan, the Madras Deccan, Hyderabad and Mysore. The rocks consist of Deccan trap in the

northern and western half, with gneisses and schists on the east. In the southern part, the gneisses are associated with the schists of the Dharwar system, whilst an old series of pre-Cambrian sedimentary rocks is extensively developed in Cuddapah on the south-east. The winter rains of northern India do not, as a rule, extend southwards beyond the Satpura, and the period from December to February is accordingly dry. In the Bombay Deccan the dry season is prolonged into May, but elsewhere spring showers occur, sometimes in March and April, and more frequently in May. The Bombay monsoon sweeps across this region from June to September, but having deposited much of its moisture on the western face of the Ghats it gives comparatively light rain. In October and November easterly winds from the Bay prevail and, in conjunction with cyclonic storms, occasionally lead to heavy though local precipitation. The west monsoon thus lasts longer than in northern India. The average rainfall for the year over the division amounts to 30" but in the central parts, i.e., round about Bellary, it is only 20"; in this area of scanty rainfall famine conditions are of frequent occurrence. The average variability of rainfall is 136 per cent., ranging from 90 per cent. at Belgaum to 195 per cent. at Sholapur.

Malabar and Konkan.—This division comprises the coast districts of Bombay from Thana southwards to the South Canara and Malabar districts of Madras and the Cochin and Travancore States. It is covered in the northern part by Deccan trap and laterite. To the south it consists of gneiss and granite, with a fringe of recent deposits on the coast of Malabar and Travancore. In Malabar there is but little rain from December to March. Sea breezes set in in April and give rise to frequent and heavy thunder-showers which last till early June, when the true monsoon rains begin. The rainfall of the monsoon, lasting until the end of October or the middle of November, is heavy all along the coast. The annual aggregate is greatest at Mangalore, where it averages 127", and decreases rapidly southwards to 63" at Trivandrum. The variability of rainfall is greatest at Trivandrum (92 per cent.) and least at Cochin (72 per cent.). In the Konkan, owing to the absence of spring showers, the dry season is much more protracted than in Malabar, lasting practically from the latter part of October to the end of May. The summer monsoon rains appear in the first week of June, and continue until the middle of October. The rainfall decreases northwards from 122" at Karwar to 72" at Bombay; this district, especially in its northern parts, is largely influenced by any weakness in the monsoon or by an early retreat. The variability of rainfall averages 106 per cent. for the whole division.

Madras South-East includes the Madras districts lying south and east of Mysore. It is composed of crystalline rocks (gneiss and charnockite) and Archaean schists belonging to the Dharwar system. Some shales and sandstones of Upper Gondwana age are found near Madras and laterite and sandstone of comparatively recent (pleistocene) age along the coast. The climate of this division differs in some important respects from that of other parts of the Peninsula. The dry season lasts from about the middle of December to the end of June, with occasional thunder-showers in April and May. Showers become more frequent and heavier during the succeeding four months, but the total quantity of rain received is by no means large. Heavier rain commences about the middle of October and lasts till the middle of December, when the wet monsoon withdraws finally from the Indian Seas. It is in this period that severe cyclonic disturbances appear over the Bay and occasionally cross into Madras to give heavy downpours of rain. The mean rainfall of the year is about 39", and is subject to large vicissitudes, the measure of its variability being 135 per cent.

Area, Population and Density.

12. With the exception of a few sparsely inhabited and unadministered tracts on the confines of Burma and Assam, the statistics in these volumes cover the whole Empire of India, that is to say, the territories administered by the Government of India and the mediatized Native States. They do not include the Frontier States of Afghanistan, Nepal and Bhutan.

The scope of the statistics.

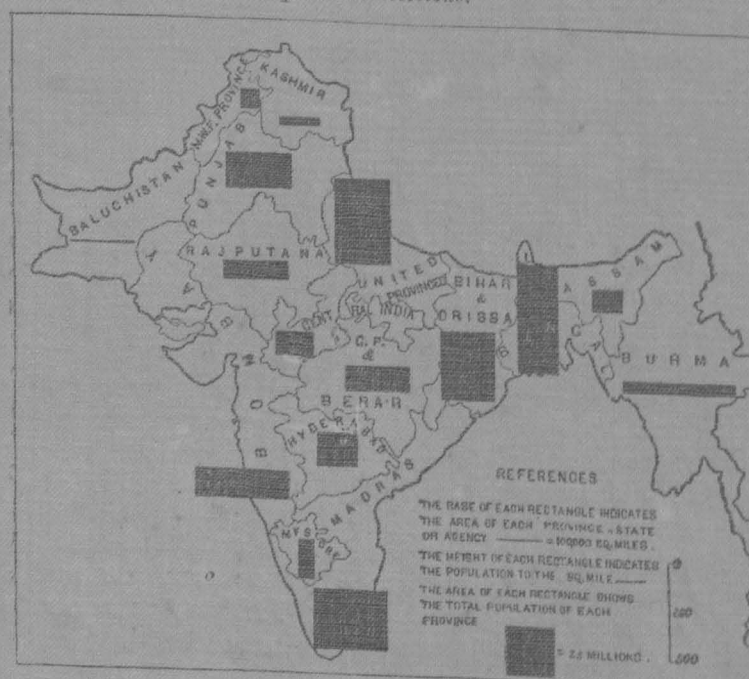
nor of course do they include the French and Portuguese Settlements. The area and population of these tracts are noted in the margin. The statistics for the French and Portuguese Settlements are based on a regular census, taken in the former case concurrently with that of British India, and in the latter, on the 31st December 1910.* The figures for Nepal are based on a pioneer census taken by the Durbar in March 1911. Those for Afghanistan and Bhutan are merely a very rough estimate on which no reliance can be placed.

State or Settlement.	Area in square miles.	Population.
Afghanistan	250,000	4,600,000
Nepal	54,000	5,639,092
Bhutan	20,000	350,000
French Possessions	193	282,386
Portuguese "	1,638	602,564

Main statistics of the whole Empire.

13. According to the revised areas adopted in the census of 1911, the Indian Empire contains 1,802,657 square miles, or some 36,000 more than in 1901. About 23,000 square miles have been added owing to the enumeration

Map showing the area, density and population of the main political divisions.



for the first time of the Agency tracts attached to the North-West Frontier Province. A further 6,500 represents the area of the Sunderbans, or swampy littoral of the Ganges delta, which was left out of account at previous enumerations. Finally the frontier State of Manipur has been found to contain about 5,000 square miles more than the estimate made in 1901. Various smaller changes are the result of new surveys and revised calculations. The provinces under

British administration comprise 1,093,074 square miles or 60·6 per cent. of the total. The remainder is included in the various Native States. The total population is 315,156,396, of which British territory contains 244,267,542 or 77·5 per cent. and the Native States 70,888,854 or 22·5 per cent. It may facilitate the comprehension of these stupendous figures if some comparison is made with the area and population of European countries. The Indian Empire is equal to the whole of Europe except Russia. Burma is about the same size as Austria-Hungary; Bombay is comparable in point of area with Spain; Madras, the Punjab, Baluchistan, the Central Provinces and Berar and Rajputana are all larger than the British Islands; the United Provinces and Bihar and Orissa than Italy; and Hyderabad and Kashmir than Great Britain, excluding Yorkshire. The population of India exceeds that of Europe without Russia, and is considerably more than three times that of the United States of America. The United Provinces and Bengal with the States attached to them both have as many inhabitants as the British Islands, Bihar and Orissa as France, Bombay as Austria, and the Punjab as Spain and Portugal combined. The population of the Central Provinces and Berar approaches that of Brazil; Hyderabad and Burma have as many inhabitants as Egypt, Central India and Rajputana as Scotland and Ireland combined, and Assam as Belgium. In the whole Empire there are on the average 175 persons to the square mile, or much the same as in Europe outside Russia. In British territory the number to the square mile is 223 and in the Native States 100; the former figure exceeds by 34 the density ratio in France and the latter is identical with that in Spain.

* The figures for the Portuguese Possessions are provisional. The results of the detailed tabulation for 1910 were not available when this Chapter went to press.

MAP OF INDIA

SHOWING

THE DENSITY OF POPULATION

IN EACH DISTRICT AND STATE.

REFERENCES

- PUNJAB**
1. KAPURTHLA
 2. NAHNA
 3. MULLER KOTLA
 4. LUDHIANA
 5. DILLI
 6. PATNA
- KASHMIR**
1. BUDHAI
- SALUCHISTAN**
1. HOLAN
 2. MAH BUDY COUNTRY
 3. BHI ADMINISTERED AREA
- RAJPUTANA**
1. JISANDHAR
 2. PARTHAGARH
 3. TONK
- UNITED PROVINCES**
1. BEMERES R.
- BOMBAY**
1. MUMBAI
 2. SURAT
 3. VADODRA
 4. AMALNER
 5. RAJAPUR
 6. SATARA AGENCY
 7. SOLAPUR AGENCY
 8. KARJAT
 9. SAVANTVADI
 10. SOUTH COAST MARATHA AGES
 11. DARGA
 12. PAKHAR MAHALS
 13. BUKAT

CENTRAL PROVINCES & BERAR

1. MARRA
2. KANARHIA
3. SAKET
4. SARANGGARH
5. BHANDARGARH
6. RAJGARH
7. CHANDRAGARH

CENTRAL INDIA

1. STAMAU
2. INDORE
3. KHILCHIPUR
4. NARAINPUR
5. RAJGARH
6. RAJGARH
7. SANTALPUR
8. KOTAH
9. SOHAWAL
10. JAO
11. CHANDRAGARH

MADRAS

1. MADURAI STATE
2. NAGARAVALLI STATE
3. PADUNJOTTAI STATE

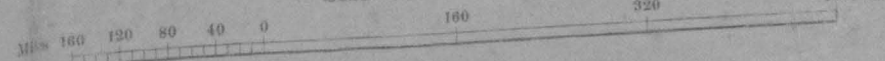
BENGAL

1. MURSHIDABAD
2. HOWRAH

REFERENCES TO COLOURS

- Below the Average
- 1 Under 25 persons per square mile
 - 2 25-75
 - 3 75-125
 - 4 125-175
- Above the Average
- 5 175-250 persons per square mile
 - 6 250-400
 - 7 400-600
 - 8 600 and over

Scale 1 Inch = 160 Miles.



There are great local variations in density. In nearly two-thirds of the districts and States the number of persons to the square mile is less than 200, and in about a quarter it ranges from 200 to 500. The units with less than 100 persons to the square mile cover two-fifths of the total area but contain only one-eleventh of the population, while those with more than 500, though their area is only one-eleventh of the whole, contain one-third of the population. The centre of the population, that is to say, the point of intersection of two lines drawn, the one north and south and the other east and west, each dividing the population of India into two equal parts, is at the southern extremity of the Panna State in the Central India Agency, in $23^{\circ} 49' N.$ and $80^{\circ} E.$

14. We may now proceed to consider in more detail the statistics of the individual Provinces and States and of the various natural divisions already described. It will be convenient to deal first with the former. But before doing so, it must be explained that the natural divisions which will be referred to in this part of the discussion are not those described in paragraph 11, which have been selected with the object of throwing light on the density of population in the whole of India as determined by its varying physical and meteorological characteristics, but smaller ones selected by the Provincial Superintendents for the purpose of distinguishing between the different parts of their individual Provinces and States. It is obvious that when a single Province or State is being dealt with, more minute distinctions can be recognized than is possible for the purpose of broad generalizations regarding the population of the Empire as a whole.

15. Assam, which was originally administered as part of Bengal, was made into a separate province under a Chief Commissioner in 1874. Thirty-one years later the burden of administering the overgrown satrapy of Bengal with its population of eighty millions was again found too heavy. The three northern and eastern divisions were accordingly cut off, and Assam was amalgamated with them to form a new province under a Lieutenant-Governor. These arrangements have recently been revised, and Assam is now once more a separate province under a Chief Commissioner.

With an area, including Manipur, of 61,471 square miles, Assam has only 7,059,857 inhabitants, or 115 to the square mile. The province falls naturally into three parts. The first two consist of the valleys of the Brahmaputra and Surma rivers, and the third of the intervening hills together with Manipur and the Lushai country in the south. The rainfall is abundant everywhere, and the variations in density are determined by other factors. In the Brahmaputra valley the rivers have a rapid flow, eroding their banks and depositing sand in the tracts flooded by them. In the strath of these rivers permanent cultivation is out of the question. Along the foot of the hills the climate is malarious; and here also the population is sparse, except where tea gardens have been opened out. For more than half a century before the annexation of the valley in 1824, extensive tracts had been depopulated in the course of the Moamaria insurrections and Burmese invasions. In more recent times the population sustained a severe set-back by the *Kalā Ajār* epidemic that prevailed for nearly twenty years and has only lately subsided. These causes, partly physical and partly historical, account for the low density in the Brahmaputra valley, where there are only 126 persons to the square mile. The Surma valley, with 406, is far more densely populated. In this natural division the rivers have a less rapid flow, the climate is more healthy, the greater part of the area is a fertile rice plain, and the conditions are generally similar to those prevailing in the adjoining parts of Eastern Bengal. The Hills division has only 34 inhabitants to the square mile, the smallest number being found in North Cachar and the Lushai Hills, where there are only 16 and 13 respectively.

16. "Baluchistan," says Mr. Bray, "is a land of contradictions and contrasts. From a bird's-eye view the general impression would probably be a chaotic jumble of mud-coloured mountains, for all the world like a bewildered herd of titanic camels. Yet it contains many a rich valley and upland plateau, and at least one broad plain as flat and low-lying as any in India. For a brief and fitful season its rivers are rushing torrents; for the greater part of the year there is hardly a trickle in their giant beds. On the maps there are three large lakes of limpid blue—very different from the gloomy swamps of reality. But

Density by political divisions.

Baluchistan.

the maps are crammed full of unconscious irony; and if you come to the country after poring over these elaborate patchworks of well-defined rivers, refreshing oases of green, and named localities innumerable, small wonder if you condemn it on sight as a land of rivers without water, of forests without trees, of villages without inhabitants. The whole outlook seems bleak and bare. Yet you have only to scratch the soil and add a little water and you can grow what you please. But often enough nature is so perverse that where there is land, there is no water, and where there is water, there is no land. Probably no province in India can show so vast a range of climate. The winter cold of the uplands baffles description. As for the mid-summer heat of the Kachhi plain, I can only fall back on the hackneyed local proverb of the superfluity of Hell to depict that burning fiery furnace. On first acquaintance a newcomer is tempted to sum up Baluchistan as 'a vast country, mostly barren,' unconsciously echoing the unflattering verdict passed on Makran more than a thousand years ago by the Arab traveller and historian, Al Istakhri. Yet among those who have sojourned long enough in Baluchistan for their first impressions to fade away, there are few who have not fallen under the mysterious spell cast by this wild country and its wild inhabitants."

In few parts of this un-Indian country, which geographically and racially belongs rather to Central Asia, does the rainfall exceed seven or eight inches. This is insufficient to support any but a very precarious form of agriculture. Though the soil itself is often extraordinarily fertile, cultivation is possible only with the aid of irrigation, the characteristic form of which is from the laboriously-constructed *karez*, or underground channel, along which the fertilizing water is sometimes carried for miles. In the low country on the northern boundary of Sind there is some irrigation from the Sind canal system. And in the Kachhi plains due north of it, extensive use is made of the flood water from the hill torrents, which is carried over the country in numberless channels and held up by an ingenious system of dams. The total amount of irrigation in the country is, however, very small. Large numbers of the inhabitants are pastoral nomads, not merely by habit but by necessity, wandering from place to place in search of grazing grounds for their sheep and goats, and warlike, is necessarily sparse. Though larger than the British Islands, Baluchistan has only 834,703 inhabitants, or six to the square mile. It contributes about 8 per cent. to the area of the Indian Empire, but less than 0.3 per cent. to its population. In Chagai there is only one inhabitant to the square mile. The only three districts where the density is markedly in excess of the average are Quetta-Pishin (24 to the square mile), Sibi administered territory (21) and Loralai (11). The Quetta-Pishin district consists in the main of upland valleys surrounded by hills, the snow on which feeds numerous springs and streams, whose water is distributed to the fields by means of *karezes*. In the Quetta tahsil, with its large military station which provides an excellent market for the local products, there are 100 persons to the square mile, or 40 if the town of Quetta be excluded. Sibi owes its position mainly to the southern tahsil of Nasirabad with its irrigation from the Sind canals. Loralai, with a density about half that of Sibi, enjoys what is for Baluchistan a fairly copious rainfall of 11 inches.

17. At the time of the census of 1901 the territories which now comprise the provinces of Bengal and Bihar and Orissa formed a single province with a population (including its Native States) exceeding 78 millions, or considerably more than a quarter of that of the whole Indian Empire. It was impossible to administer satisfactorily so unwieldy a charge. Accordingly, in 1905, three divisions—Dacca, Chittagong and Rajshahi (which was given the Malda district in lieu of Darjeeling)—were joined with Assam to form a new province called Eastern Bengal and Assam, under a Lieutenant-Governor. At the same time the five Hindi-speaking States on the borders of Chota Nagpur were transferred to the Central Provinces in exchange for the district of Sambalpur and five Feudatory States whose vernacular was Oriya. This measure was unpopular with the Bengali Hindus, who viewed with dislike and suspicion the division of their race between two administrations. Accordingly, on the occasion of the Coronation Durbar at Delhi in December 1911, His Majesty the King-Emperor

announced a fresh scheme of division. Assam again became a separate province under a Chief Commissioner. The rest of "Eastern Bengal and Assam" was reunited with the Presidency and Burdwan divisions of Bengal and the district of Darjeeling to form the Presidency of Bengal under a Governor in Council; and Bihar, with Chota Nagpur and Orissa, was made into a separate province under a Lieutenant-Governor in Council. These changes took effect from the 1st April 1912, or more than a year after the date of the census, but for convenience' sake the statistics have been rearranged according to the provinces as now constituted, and a separate volume of tables has been prepared for each. Assam also has a separate Report; but the discussion of the results of the census in the other two provinces is contained in a single volume written by Mr. O'Malley, the Bengal Provincial Superintendent.

18. The Presidency of Bengal, including the States of Cooch Behar and Hill Tippera, has a population of 46,305,642 persons and an area of 84,092 square miles. Though somewhat smaller than Great Britain, it contains nearly a million inhabitants more than the whole of the British Isles. It is the smallest of the main provinces, but its population is exceeded only by that of the United Provinces of Agra and Oudh. It contains on the average 551 persons to the square mile, or many more than any European country except England and Belgium. Its density is far greater than that of any other Indian province; it is nearly double that of Madras, more than three times that of Bombay, and more than four times that of the Central Provinces and Berar. As now constituted, Bengal is perhaps the most homogeneous of all Indian provinces. Practically the whole of it is a fertile alluvial plain, in which rice is almost everywhere the predominant crop; and the differences between its four

Natural Division.	Number of persons per square mile.
West Bengal	607
Central Bengal	634
East Bengal	516
North Bengal	622

natural divisions are not at first sight very apparent. They are dependent more on historical and sanitary considerations, and on the extent to which the soil is enriched by silt deposited when the rivers are in flood, than on any striking contrasts in the climate, people or physical features. The region of swamp and forest along the sea coast, known as the Sunderbans, is practically uninhabited. The population is sparse in the north where there are extensive areas of hilly country and reserved forest which are not available for cultivation; in the west, on the borders of Chota Nagpur where the alluvium gives way to laterite, except in the Raniganj Sub-Division where coal more than compensates for an infertile soil; and in the hills to the south-east, between Chittagong and Burma. The highest density is found in the metropolitan districts of Howrah and the 24-Parganas. The former has 1,850 persons to the square mile. Even if Howrah city be excluded it still has 1,523; and in no thana in the district does the number fall below 1,293. The district is the home of many who earn their living in Calcutta; and the river bank is lined with jute mills, brick fields, lime kilns and other industrial concerns. The conditions are very similar in the 24-Parganas. Excluding the portion in the Sundarbans, this district has a mean density of 777, rising to 1,540 in the Barrackpore sub-division with its numerous towns, factories and mills, and tailing off to a hundred in the thanas adjoining the Sunderbans. Away from these two districts and Hooghly, the greatest density is found in several districts of East Bengal, where the climate is salubrious and the rainfall ample, and the Ganges and Brahmaputra vie with each other in replenishing the soil with fresh deposits of silt. In this tract the cultivation of jute is rapidly being extended. The Dacca district has a mean density of 1,066, rising in one sub-division to 1,794 and in one thana (Srinagar) to 1,996. This thana is largely inhabited by the educated classes, who find employment in all parts of Bengal and Assam; only half its inhabitants are supported by agriculture. In Tippera the density is 972, and it is equally great in parts of Faridpur, Mymensing and Noakhali. In Central Bengal, excluding the 24-Parganas, the conditions are less favourable. The Ganges, having strayed further east, has ceased to enrich the soil with its fertilizing silt. The numerous distributaries down which it once found its way to the sea have degenerated into stagnant lagoons, and the health of the people has thus been seriously affected. In this part of the province the mean density is lower than in the districts already mentioned, but here and there favoured tracts are found where it is very high.

Murshidabad, for instance, has four thanas with a density exceeding a thousand. North Bengal also is full of silted-up river beds, and parts are very unhealthy. In Jalpaiguri and Darjeeling there are extensive reserved forests; and in the south-central portion is an extensive elevated tract with an infertile quasi-laterite soil. The density is greatest in the districts bordering on the Brahmaputra. One of the thanas in Pabna has 1,209 inhabitants to the square mile and another in Rangpur 1,188. These figures are in marked contrast to those of the Jalpaiguri district, where the Alipur thana has only 162.

Bihar and Orissa.

19. With a larger area than Bengal (111,829 square miles), Bihar and Orissa has a smaller population (38,435,293). The province comprises three tracts with very divergent physical characteristics—the open plains of Bihar, the coast districts of Orissa and the hills and uplands of the Chota Nagpur plateau. This latter term is used to denote the whole of the elevated tract which divides Bihar from Bengal and Orissa; it includes the Sonthal Parganas, the Chota Nagpur Commissionership, Sambalpur, Angul and all the Feudatory States. Bihar again falls naturally into two parts, the one north and the other south of the Ganges. North Bihar is a level alluvial formation which ordinarily enjoys a copious rainfall and contains many tracts of great natural fertility. South Bihar has a strip of alluvium along the course of the Ganges, but further south the country rises towards the Chota Nagpur plateau, and the soil becomes less fertile. The rainfall is frequently deficient, but is supplemented to a varying extent by irrigation.

In respect of its density of 344 persons to the square mile, Bihar and Orissa stands third amongst the main British Provinces. In British territory the density ratio is 415 against only 138 in the Native States. On the whole the local variations depend less on the rainfall than on the configuration of the surface. In the plains the density is everywhere high, while in the hills it is almost universally low. It is highest in North Bihar, especially in

the centre and south-west, where in eight thanas it exceeds a thousand to the square mile. In the Sitamarhi sub-division of Muzaffarpur it is 1,037, and in that district as a whole it is 937. In the east and north-west of this natural division the density is much lower, owing to the existence of numerous lakes and swamps which have made the climate unhealthy and limited the area available for cultivation. In Purnea there are also extensive sandy wastes caused by the vagaries of the Kosi river. The riparian part of South Bihar has a high density (734), but further south, on the borders of Chota Nagpur, it is much lower (268). In Orissa there are similar local variations. This natural division may be divided roughly into three strips, one along the coast, a second bordering on the hills, and a third between these two. The strip along the coast, where the soil is swampy and impregnated with salt, and the comparatively barren country bordering on the hills are alike sparsely inhabited. The intermediate zone has a fertile alluvial soil and a considerable amount of irrigation; and it supports a large population, rising to 963 to the square mile in one thana of Cuttack. In the Chota Nagpur plateau, save in a few States adjoining Orissa where the conditions are not typical, the population is everywhere sparse. In this tract the surface is often very uneven and the soil poor; large areas are under forest or unfit for tillage; and the aboriginal tribes who form the bulk of the inhabitants are very poor cultivators. The density reaches its minimum for British territory (93 to the square mile) in the Khondmals sub-division of Angul, and for Native States (38) in Rairakhol. Both these tracts are still mainly under forest. In Manbhum the development of the coal industry accounts for a much larger population than would otherwise find subsistence there; two thanas in the coal-field area have each about 650 inhabitants to the square mile, while a neighbouring thana where there are no collieries has only a third that number.

Bombay.

20. Bombay, including its States, though larger (186,923 square miles) than any other province except Burma, holds only the fifth place in respect of its population. This is 27,084,317, or 145 to the square mile, *viz.*, 160 in the British districts and 116 in the States. The greatest density (433) is found in

Natural Division.	Number of persons per square mile.
Konkan	227
Deccan	172
Karnatak	190
Gujarat	276
Sind	75

Note.—The figures for Natural Divisions refer to British districts only.

Kaira, a district of Gujarat, and the least (25) in the Khandesh Agency. The most sparsely peopled British district is Thar and Parkar in Sind where there are 33 inhabitants to the square mile. Excluding Aden, five natural divisions may be distinguished. In the south is the Konkan, a narrow strip of land between the Western Ghats and the sea. Exposed to the full force of the south-west monsoon, its normal rainfall is upwards of 100 inches. The staple crop is a coarse rice. The mean density is not very high, but this is because there are extensive forest reserves and other uncultivable areas. In proportion to its cultivable area, the Konkan supports a larger population than any other division. The soil is not especially fertile, but the heavy rainfall is constantly replenishing the terraced rice fields with detritus from the higher slopes. There is a thriving fishing industry, and many natives of Ratnagiri and Kolaba are employed as police sepoy, chaukidars and labourers in Bombay, and as lascars on ocean steamers. Such persons remit a large portion of their earnings for the support of their families at home. Four-fifths of the Kanara district in the south of this division is covered with valuable forest; but calculated on the cultivable land, the population is very dense, rising to over 1,100 inhabitants per square mile in the coast taluks. East of the Konkan, and separated from it by the rugged line of the Ghats, are the Deccan districts in the north and the Karnatak further south. Sheltered by the Ghats from the onset of the south-west monsoon, the Deccan receives a light and precarious rainfall, and the population is generally sparse. The greatest density, 405 per square mile of cultivable area, is found in the fertile valley of the Tapti in East Khandesh. Irrigation on a large scale is as yet confined to the Nira and Mutha canals. The Deccan may be further sub-divided into three tracts running parallel to the ghats—the western or hilly tract, called *Dang* or *Mawal*; the central tract or transition; and the eastern tract, or black soil plain called the *Desh*. The “transition” is more populous than the *Mawal*, and the *Mawal* than the *Desh*. The *Desh* is the most healthy, but its rainfall is scanty and precarious; it is thus necessarily a dry crop area. The Karnatak, which comes under the influence of the north-east, as well as of the south-west, monsoon, has a more certain and copious rainfall than the Deccan, and its soil, especially towards the south, is more fertile. In spite of a somewhat unhealthy climate these advantages have given it a slightly higher density. It has the same three zones as the Deccan, with the same variations in density; that of the “transition” varies from 322 to 597 per square mile of the cultivable area; of the *Mallad* from 260 to 290, and of the *Desh* from 170 to 210. North of the Konkan is the rich and fertile alluvial plain of Gujarat, the garden of the Presidency. The rainfall is much the same as in the Deccan, but it is less variable and better distributed. The mean density is 276 per square mile, or 357, if the cultivable area alone be taken into account. The rice-growing tract along the coast supports a larger population than the portion further inland, which has a smaller rainfall.

21. Sind, in the north of the Presidency, forms part of the North-West Dry Area. Having only a nominal rainfall, it is a sandy desert except in the neighbourhood of the Indus, which intersects it from north to south and supplies water to an extensive system of canals. The tract which is thus irrigated supports a fairly dense population, but in some of the other parts a few scattered nomad graziers are almost the only inhabitants. The mean density in this division is only 75 to the square mile; it varies from 17 in parts of Thar and Parkar to 387 in parts of Hyderabad. In the Hyderabad *taluka*, excluding the town, the area actually cultivated supports 933 persons to the square mile.

Except in Sind, where cultivation is possible only with the aid of irrigation, and in a few unhealthy tracts where malaria keeps down the population, the rainfall is the main factor in determining the density. The configuration of the surface is an important secondary factor; and in the eastern portion of the Konkan where the ground is much broken, the arable land is confined to patches on the slopes of the hills or the depressions between them. The quality of the soil also enters into the question. It is this which accounts mainly for the

relatively high density in Gujarat. Rice, it is said, supports a greater population than any other crop; but it needs a heavy and certain rainfall, and the unfavourable meteorological conditions of recent years has led to its being supplanted by dry crops, such as *bajri* (*Penicillaria spicata*), in parts of Gujarat.

22. Though Burma is by far the largest province in point of area (230,839 square miles) its population of 12,115,217 is only about a quarter of that found in Bengal, Madras and the United Provinces. Including the Specially Administered Territories, the average population per square mile is only 52; and even excluding them it is but 65. In only six of its 193 townships does the rural population exceed 250 to the square mile, and in not one does it reach 300. Mr. Webb thus explains the low density of his province:—

"The greater portion of the country is of a wild mountainous character unable to support a large population with the necessities of life, while the growth of population in the more fertile tracts has been impeded by the comparatively late evolution of national life and the still later introduction of the security of peaceful and settled Government."

Taking as the main line of cleavage the distinction between high land and low, the reason for which will appear further on, Mr. Webb divides the province into five natural divisions. The Deltaic Plains, the home of the ancient Telaing race, which was overthrown by the Burmese under Alomphra, is a level alluvial tract containing the mouths of the Irrawaddy and other rivers, with a mean rainfall of 117 inches and 124 inhabitants to the square mile. The Central Basin, or valley of the Irrawaddy above the delta, is the tract where the Burmese nation was gradually evolved by the fusion of many petty tribes. In marked contrast to the Deltaic Plains it has a very scanty rainfall (38 inches), but its soil is fertile, and it enjoys a considerable irrigation, with the aid of which it supports 93 persons to the square mile. The Northern Hill Districts enclose the upper course of the Irrawaddy and have a rainfall of 67 inches. But the country is a medley of hill ranges in which the area fit for permanent cultivation is extremely limited. The density is thus only 15 persons to the square mile—the lowest in Burma: it would be even less, but for the inclusion of Katha, which has a relatively large population in the south, where it impinges on the Central Basin. The Coast Ranges, comprising the maritime districts on either side of the delta, have the heaviest rainfall (174 inches); but here also the surface is so broken that there is but little cultivable land, and the density ratio is only 38. The last natural division is made up of the Specially Administered Territories—the Shan States, Chin Hills and Pakokku hill tracts—where no attempt has been made to introduce the ordinary form of Government. The mean rainfall is 82 inches. No agricultural statistics are available, but the area fit for cultivation is no doubt larger than that in the other hilly tracts. There are on the average 23 persons to the square mile.

It will be seen that in this province there is not that close connection between population and rainfall which often exists elsewhere. The explanation is that such a correlation can occur only where other conditions are fairly similar, whereas in Burma there is great dissimilarity, not only in the configuration of the surface, but also in the recent political conditions and in the character of the inhabitants. However favourable the rainfall may be, a hilly country where there is but little arable land, can never compete in respect of population with a level one where, though the rainfall is less, practically the whole area can be brought under the plough. The greatest density will always be found in the level plains and the lowest in the broken uplands. It is less easy to say why the density in the Central Basin should approach so nearly to that in the Deltaic Plains although the rainfall is relatively very deficient. To some extent this is accounted for by irrigation; 18 per cent. of the cultivated area in the Central Basin is irrigated, against little or none in the Deltaic Plains. But the growth of irrigation is recent; and the main reason seems to be that the Central Basin includes the site of most of the old capitals, including Prome, Ava, Sagaing, Shwebo, Pagan, Amarapura and Mandalay, which were formerly great centres of attraction. In 1856 when they were brought under British rule, the

Delta Plains owing to internecine wars had relapsed into jungle; and their present relatively high density is the result of recent settlement.

23. The Commissionership of Berar was assigned to the British Government on lease by the Nizam of Hyderabad in 1853 and was administered by the Resident at Hyderabad until 1903. In that year the lease was made permanent, and Berar, though still recognized as His Highness' territory, was placed under the administration of the Central Provinces, and the combined area is now known as the Central Provinces and Berar. At the original partition of Bengal in 1905, five Oriya-speaking States and the greater part of the district of Sambalpur were transferred to that Province, in exchange for five Hindi-speaking States previously attached to the Bengal Commissionership of Chota Nagpur. Finally, in 1907, a small portion of the Chanda district was transferred to Madras. The total area of the Central Provinces and Berar as now constituted is 130,997 square miles and the population 16,033,310. Mr. Marten divides

Natural Division.	Number of persons per square mile.
Nerbudda Valley Division	136
Marāthā Plain Division	152
Plateau Division	102
Chhattisgarh Plain Division	111
Chota Nagpur Division	65

his province into five natural divisions, with reference mainly to considerations of race and language. The greatest density is found in the Marāthā plain division, which includes the Berar and Nagpur Commissionerships. It would exceed by fifty per cent. the figure shown in the marginal statement if the extensive forests of the Chanda and Balaghat districts and the large area of uncultivable waste land were left out of account. Berar and the districts of Nagpur and Wardha have a black soil, highly suitable for cotton; and practically all the cultivable land is occupied. There are also numerous cotton mills. In the valley of the Wainganga rice is the main crop and there is considerable irrigation. In the Nerbudda valley division wheat is the principal crop, but cotton takes its place wherever the characteristic black soil is found. In places the growth of the *Kans* grass (*Saccharum spontaneum*) makes agriculture difficult. In some parts of this division there are large herds of buffaloes, and *ghee* is extensively made. The Chhattisgarh plain division comprises the open country forming the upper basin of the Mahanadi. The density is low because of the inclusion of the sparsely-peopled state of Bastar, which consists largely of hill and forest and has only 33 inhabitants to the square mile; in the British districts and the seven Native States in the open country, it is almost equal to that of the Marāthā plain division. Rice flourishes on the red or yellow soils which cover the greater part of the Chhattisgarh plain, and wheat is largely grown on the heavier soils. The Plateau division lies on the Satpura range. A large part of it consists of rugged forest-clad hills, but the more open tracts contain narrow fertile valleys. The most valuable crops are wheat and hemp. The Chota Nagpur division, like the one last mentioned, consists largely of forest and hill with occasional tablelands. The inhabitants are mainly aborigines, who are very poor cultivators. The density ranges from 89 in Jashpur to 27 in Chang Bhakar.

Mr. Marten has examined at some length the various factors determining density. The conclusion he comes to is that variations in the rainfall and in the crops grown have less effect than the physical characteristics of the country and its past political conditions. Much the same density of population is found in tracts whose rainfall varies greatly and where different crops are grown.

The statistics of density by tahsils show that about half the population is concentrated in tahsils covering a quarter of the total area, while the remaining half is spread over three-quarters of the area. It must be remembered, however, that there are great variations in the area of forest and other land not available for cultivation.

24. Including the Native States of Cochin, Travancore, Banganapalle, Madras, Pudukkottai and Sandur, the Madras Presidency has an area of 152,879 square miles and a population of 46,217,245 or 302 persons to the square mile. The Durbars of the Cochin and the Travancore States, however, took their census independently, and the statistics of these States have been excluded from consideration in the Madras Census Report. Excluding them the area is 143,924 square miles and the number of inhabitants 41,870,160 or 291 to the square

mile. The conditions in different parts of the Presidency are far from uniform and the density varies greatly. The maximum is reached in the extreme south of the peninsula, and it diminishes slightly as one proceeds northwards along the East Coast. In the Deccan the number of persons to the square mile is only half the provincial average; but it is twice as great as in the Agency tracts. The last mentioned division consists of forest-clad ranges and contains comparatively little level land fit for permanent

cultivation. It has no railways and hardly any good roads, and is inhabited by improvident and ignorant aboriginal tribes. There is an extraordinary difference in the rainfall of the two most densely peopled tracts. The East Coast South has on the average only 32 inches while the West Coast has 110 inches. In the former tract the area which is waste and unfit for cultivation is very small; the palmyra palm flourishes and a great business is done in jaggery. There is extensive irrigation in the fertile delta of the Cauvery and the country commanded by the wonderful scheme whereby water has been brought from the Periyar river, where it was running uselessly to waste, by a long tunnel through the Western Ghats to this region of comparatively scanty rainfall. In the West Coast division, where the surface is much broken by the Western Ghats, only about half the total area is cultivable, as compared with three-fourths in the East Coast South, and the proportion actually cultivated is only one-fourth as compared with one-half. It supports almost the same population to the square mile because of its heavy rainfall, its extensive rice cultivation and its numerous cocoanut plantations, from which the profits are very large at the present time. The Central and Northern divisions of the East Coast have a heavier rainfall than the Southern, but the proportion of the cultivable and cultivated area is smaller, and their Telugu and Oriya inhabitants are less efficient cultivators than the Tamils of the Southern division. In the Deccan the rainfall is the most scanty and also the most precarious in the Presidency; the black cotton soil is very productive if the rainfall is suitable, but in many parts the soil is stony and barren. Excluding the small district of Anjengo, which forms an enclave of the Travancore State, the most thickly peopled districts are Tanjore with 634, Godajore has a rainfall of 44 inches and the most extensive system of irrigation in the Presidency. Three-fourths of the cultivated area, moreover, is under rice, which is almost always found capable of supporting a larger population than other crops. A striking instance of this is furnished by South Canara where there is most rice cultivation. In this district, though the proportion of the total area which is cultivated is only half the provincial average, its density is equal to that of the Presidency as a whole.

25. The North-West Frontier Province, which was carved out of the Punjab in 1901, is the tract bordering on Afghanistan, which stretches from Baluchistan to Kashmir. It comprises five British districts and an extensive tribal area (three-fifths of the whole) inhabited by turbulent Pathan tribes who for the most part are left to manage their own affairs so long as they abstain from committing offences in the administered districts. The total area is 38,918 square miles or much the same as that of Bulgaria. It consists largely of mountain chains and their spurs, on the barren slopes of which cultivation is impossible. There are some fertile valleys, but most of the cultivable land is found in a narrow strip along the banks of the Indus. In the comparatively small area east of that river (Hazara and part of Kohistan), the annual rainfall is about 40 inches. West of it the rainfall is more scanty (from 11 to 22 inches), but the deficiency is to some extent made up by irrigation. The climate is marked by great extremes of temperature. The winters are cold, while in summer the thermometer at Peshawar rises to 120°. The main staples are wheat, barley and maize. The total population is 3,819,027. In the five British districts there are 2,196,933 inhabitants, or 164 to the square mile. Except in the few British posts there was no regular census in the Agencies and Tribal areas, but an estimate was made which is believed to be fairly accurate. The population thus arrived at is 1,622,094 or 64 persons to the

square mile. The greater density in the British districts is due partly to their containing a larger amount of cultivable land, partly to their enjoying a more settled Government and partly to irrigation. The number of persons to the square mile in these districts varies from 332 in Peshawar to 74 in Dera Ismail Khan. In the former district three-quarters of the total area is shown in the agricultural returns as cultivable and half is actually cultivated, one-third of the cultivated area being irrigated. There is but little correspondence between the crops grown and the number of inhabitants: the all important considerations are the rainfall and the amount of irrigation.

26. Since the last census the Punjab has been reduced in size by the excision of the North-West Frontier Province. It now has an area of 136,330 square miles and a population of 24,187,750 or 177 to the square mile. The province contains four tracts with very different characteristics. The Himalayan region in the north-east, which includes the Simla hills, has a temperate climate and a comparatively high rainfall of 61 inches, but the surface is very broken.

Natural Division.	Persons per sq. mile of	
	Total area.	Net cultivated area.
Himalayan	78	965
Sub-Himalayan	305	612
North-West area	99	482
Indo-Gangetic Plain, West	286	435

Note.—The figures for the cultivated area refer only to British territory. Statistics for the Native States are not available.

According to the revenue returns only one-fifth of the area is fit for cultivation, and only one-tenth is actually cultivated. A large proportion of the inhabitants find a livelihood in the grazing of cattle and the exploitation of the extensive forests. The result is that while the density calculated on the cultivated area is the highest in the province, it is the lowest when calculated on the total area. The Sub-Himalayan districts, in spite of great extremes of temperature, are usually healthy. The surface is more level than in the first mentioned tract, and two-thirds of the total area is cultivable and half actually cultivated. The rainfall of 33 inches is supplemented in two districts by irrigation from perennial canals and elsewhere from hill streams which enrich the soil by annual deposits of silt. The density is the highest in the Punjab. The rest of the province is a continuous plain interspersed in the west with low hills; but it may be differentiated with reference to the rainfall, the western portion, which lies in the North-West Dry Area, having on the average only 13 inches; while the eastern, which forms part of the Indo-Gangetic Plain West, has 27 inches. But in neither tract is the rainfall alone sufficient to support extensive cultivation, and the population varies generally with the facilities for irrigation. In both divisions, but mainly in the western one, there are extensive tracts which, when unirrigated, are a sandy desert, useless except for precarious grazing, but which can be converted by irrigation into fertile wheat fields. In the eastern division as a whole the density is three times as great as in the western, but there are marked local variations. The copiously irrigated districts in the north of the former support twice as many inhabitants as the sandy unirrigated tracts in the south, whose population is rapidly being surpassed by that of the tracts in the dry area to which irrigation has been brought by the Chenab and other canals. The extraordinary results which have followed from irrigation in the barren wastes of the Rechna Doab will be described briefly in the next Chapter. Here, it must suffice to say, that the Lyallpur district, which twenty years ago supported with difficulty a few scattered pastoral nomads, now has a flourishing wheat-growing population of 272 to the square mile. Of the individual districts and States, Jullunder and Amritsar in the Indo-Gangetic Plain West have densities of 560 and 550 compared with only 52 and 42 respectively in two Native States—Bahawalpur in the North-West Dry Area and Chamba in the Himalayan region. The Mianwali district in the dry area has the smallest density (63) of any British district.

27. Though its area (112,346 square miles) is less than that of five other United Provinces, the United Provinces of Agra and Oudh with 48 million inhabitants excels all others in respect of its population. It is, however, less by 30 millions than that of Bengal prior to the partition of 1905. The mean density, 427 persons to the square mile, is exceeded only in Bengal. Except for the Himalayan tract in the north-west and Bundelkhand and Mirzapur in the south, the whole province is a level alluvial plain with a copious rainfall, a fertile soil

and a considerable amount of irrigation, especially in the Jumna-Ganges Doab. It enjoys exceptionally good railway communications. It also contains most of the capitals of the old Muhammadan rulers, many of which are still important cities. Following the classification adopted at the previous census, Mr. Blunt

Natural Division.	Number of persons per square mile.
Himalayan Area	96
Sub-Himalaya, West	450
East	586
Indo-Gangetic Plain, West	538
Central	550
East	706
Central India Plateau (Bundelkhand)	211
East Satpuras (Mirzapur)	205

subdivides the plains north of the Jumna into five natural divisions, *viz.*, the western and eastern sub-montane tracts and the western, central, and eastern parts of the Indo-Gangetic plain. The Himalayan area, though it has the heaviest rainfall, has a lower density than any other division. The greater part of this division consists of mountains and broken country where cultivation of an inferior kind is possible only in the narrow valleys and on the more gentle slopes. It contains the hill-stations of Naini Tal, Almora and Mussoorie, and also Dehra Dun, the sub-montane part of which is much more highly cultivated than the rest of the division, and has attracted many European settlers. One of its districts, Garhwal, is the most sparsely peopled in the province. Bundelkhand and Mirzapur in the south have also a very scanty population. The black cotton soil of the former tract is peculiarly retentive of moisture, while when dry it becomes so hard as to be almost unworkable. The crops are thus liable to damage both when the rainfall fails and also when it is in excess. Cultivation, moreover, is rendered impossible in some parts by the luxuriant growth of the weed called *Kans* (*Saccharum spontaneum*), which strikes its roots deep into the soil. Prior to its annexation in 1804, this tract was a constant scene of warfare, and the land revenue settlements made in the early days of British rule were unduly high. The greater part of Mirzapur is covered with forest and low hills. Throughout the remaining natural divisions the conditions are fairly homogeneous, and the variations in the density are not very great. The relatively low figure for the Sub-Himalaya, West, is due mainly to the presence of extensive areas of forest. If these be excluded from the calculation its density is very nearly equal to that in the eastern Sub-Himalayan area. The maximum density in the latter tract is reached in Gorakhpur (707) where European planters have been instrumental in opening out waste lands and introducing valuable crops and improved methods of agriculture. In the Indo-Gangetic plain the density of population increases steadily from west to east. The western portion, though better irrigated, has a less favourable rainfall. In the latter respect there is little difference between the central and eastern portions of the Gangetic plain, but in the eastern division a larger area is double cropped, there is more irrigation, and far more rice is grown. The most thickly peopled district is Benares, with 890 persons to the square mile, but if the city population be excluded, Jaunpur in the eastern division takes the first place with 726. Mr. Blunt is inclined to think that ethnic considerations help to account for the growing density from west to east. He notes that the Aryan element in the population gradually becomes weaker in this direction. The lower castes are relatively more numerous; their standard of living is lower, and the absence of the restrictions which place an artificial check on the growth of population amongst the higher castes enables them to increase more rapidly. A further reason for the higher density in the eastern districts is that (excluding Oudh) they came under British rule at an earlier date, and have thus been longer in the enjoyment of peace and settled conditions. If the tahsil be taken as the unit, it appears that in about a quarter of the total area there are less than 300 inhabitants to the square mile, in a fifth there are 300 to 450, in nearly a third there are 450 to 600, and in a fifth there are over 600. Mr. Blunt examines at some length the various factors affecting density. In this province the rainfall is every where sufficient, and does not therefore account, to any appreciable extent, for the local variations which exist. In the Himalayan region and the country south of the Jumna the surface is so broken that cultivation can never be very extensive, but elsewhere the main factors are the fertility of the soil, the area available for cultivation, including that double-cropped, and the nature of the crops grown. To some extent rice seems capable of supporting a larger population than other cereals. The density is also affected by the salubrity of

the climate, the past history of a tract and the social habits of the people, including their standard of comfort.

28. The area of the Baroda State is now returned as 8,182 square miles and the population as 2,032,798. There are on the average 248 persons per square mile, or somewhat fewer than in the British districts of Gujarat. The greatest density (719) is found in the fertile and highly cultivated Gandevi taluka in the south of the Navsari division, and the lowest (54) in the Songhad taluka in the east of the same division, where an extensive area is under forest; the surface is hilly and the inhabitants are mainly Bhils and other forest tribes. About three-quarters of the total area of the State is cultivated, the principal crops being *bajri*, *jowar* and cotton. Baroda.

29. The Central India Agency, with an area of 77,367 square miles and a population of 9,356,980, or 121 to the square mile, contains about 130 States of all sizes, ranging from petty chiefships with one or two villages to Gwalior, which is as large as Greece and has a greater population. The Agency falls naturally into three divisions—the Plateau, Low-lying and Hilly. The first of these includes the uplands, 1,600 feet and more above sea level, stretching from the great wall of the Vindhya to within 50 miles of Gwalior city. It enjoys an equable climate and a fertile soil; the rainfall is about 30 inches. The population, however, is only 120 to the square mile, which is far below that of the contiguous British territory to the east. There can be no doubt that in favourable conditions this tract is capable of sustaining a much larger population than it has at present. The Low-lying division embraces northern Gwalior, Bundelkhand and Baghelkhand as far as the Kaimur range. Its rainfall exceeds that of the plateau and its surface is more level; but the soil is less fertile. It contains 157 inhabitants to the square mile, which again is considerably below the average in the adjoining British districts to the north. The Hilly tract lies along the ranges of the Vindhya and Satpuras and their offshoots. It is inhabited largely by Bhils and other aborigines, whose agricultural methods are of a very low order. The density is 93 to the square mile, but it would be much lower if the fertile valleys which run into the hills were excluded. Central India.

30. The total area of the little Cochin State is 1,361 square miles, and its population 918,110, or 675 to the square mile. This high density, which is greater than that of any other Native State, is due to the heavy and regular rainfall and to the nature of the crops. More than two-fifths of the total cropped area is under rice and there is extensive cultivation of cocoanuts, which are even more profitable. Phenomenal densities (1,852 and 1,747) are found in the two coast taluks where the soil is especially congenial to the growth of the cocoa palm. Cochin.

31. The Hyderabad State extends over 82,698 square miles, and has 13,374,676 inhabitants or far more than any other Native State in India. Although nearly equal in area to the Presidency of Bengal, it has only two-sevenths of the population of that province; the average number of persons to the square mile is only 162. Both physically and ethnically it is divided into two nearly equal natural divisions, *viz.*, Telingāna in the east and Marāthwāra in the west. Both the divisions are hilly, but, while Telingāna has a large forest area and a sandy soil with a high rainfall and extensive rice cultivation, Marāthwāra is devoid of forests, and has a scanty rainfall and a clay soil suited to the cultivation of wheat and cotton. The Telingāna division is inhabited by Dravidian races speaking Telugu, while Marāthwāra is peopled in the north by Marāthās and in the south by Canarese-speaking people. The density ratio of Telingāna is 163 and of Marāthwāra 161. The advantages derived by Telingāna from its high rainfall and extensive rice cultivation are counterbalanced in the other division by the more open nature of the country and the rich black cotton soil of a large part of it. In the districts of the former division the density ranges from 214 in Medak to only 85 in Adilabad. Medak has a very small area of forest, coupled with a copious rainfall, extensive tank irrigation and a fertile soil highly suited to the cultivation of rice; it benefits also by its proximity to the city of Hyderabad. The Adilabad district is a medley of hills and forests with occasional patches of cultivation, and has necessarily a sparse population. In the Marāthwāra division the density is more uniform, the maximum being 186 in Nander and the minimum 140 in Aurangabad. Hyderabad.

Nander enjoys a comparatively high rainfall (32 inches), and its rich alluvial black soil yields the finest variety of cotton in the Deccan. In spite of its low rainfall (26 inches) the district of Osmanabad ranks next in point of density, chiefly owing to its black cotton soil, which is very retentive of moisture. Aurangabad consists for the most part of hilly country, inhabited mainly by Bhils; and it has suffered during the past twenty years from famine and, more recently, from plague.

Kashmir.

32. The Kashmir State contains a narrow strip of level land along the Punjab border, and the fertile elevated valley of Kashmir proper. But almost everywhere else the surface is extremely broken, though there are sporadic oases in the deep cañons of the mighty rivers; but the mountains are the predominating feature in the landscape. These include in the north-west some of the highest peaks of the great Himalayan range. In such a country the population must necessarily be sparse. The total area, 84,432 square miles, exceeds that of the Hyderabad State, but the population, 3,158,126, is less than a quarter as great; it is in fact much smaller than that of the Mymensingh district in Bengal. The number of persons to the square mile is only 37, or less than in any other important political division except Baluchistan. The local variations in density are very marked. Jammu district with only 1.4 per cent. of the total area has 10.3 per cent. of the population, while Ladakh with more than half the area has only 6 per cent. In the latter tract and in the Frontier Ilakas there are only 4 persons to the square mile, against 228 in Kashmir South and 280 in the Jammu district.

Mysore.

33. Including the civil and military station of Bangalore, Mysore has an area of 29,475 square miles and a population of 5,806,193, or 197 to the square mile. The State naturally falls into two divisions, the Malnad or hilly tract sloping down from the Western Ghats, with a density of 151, and the Maidan, or open country to the east, with 214. The relatively low density in the Malnad is due entirely to the configuration of the surface; it has a greater rainfall and better irrigation facilities than the Maidan, but the area fit for cultivation is much more restricted. In this tract indeed the density varies, not directly but inversely, with the rainfall, the tracts where it is most copious being those where the surface is most broken. In the Maidan or eastern division, on the other hand, the correlation between rainfall and density is complete: the Bangalore district, for instance, which has the heaviest rainfall, has also the highest density, and Chitaldrug with the lightest rainfall the lowest.

Rajputana and Ajmer-Merwara.

34. With a total area of 128,987 square miles, the 21 States and Chiefships of the Rajputana Agency have only 10,530,432 inhabitants or 82 to the square mile. The individual States vary greatly in size, from Marwar, which is larger than Scotland, to Jhalawar, which is considerably smaller than an average English county. The Chiefships of Shahpura and Kushalgarh and the Thakurate of Lawa are of course smaller still.

The little province of Ajmer-Merwara, the census of which was taken by the Census Superintendent of Rajputana, is situated in the middle of the Agency and has an area of 2,711 square miles and a population of 501,395, or 185 to the square mile.

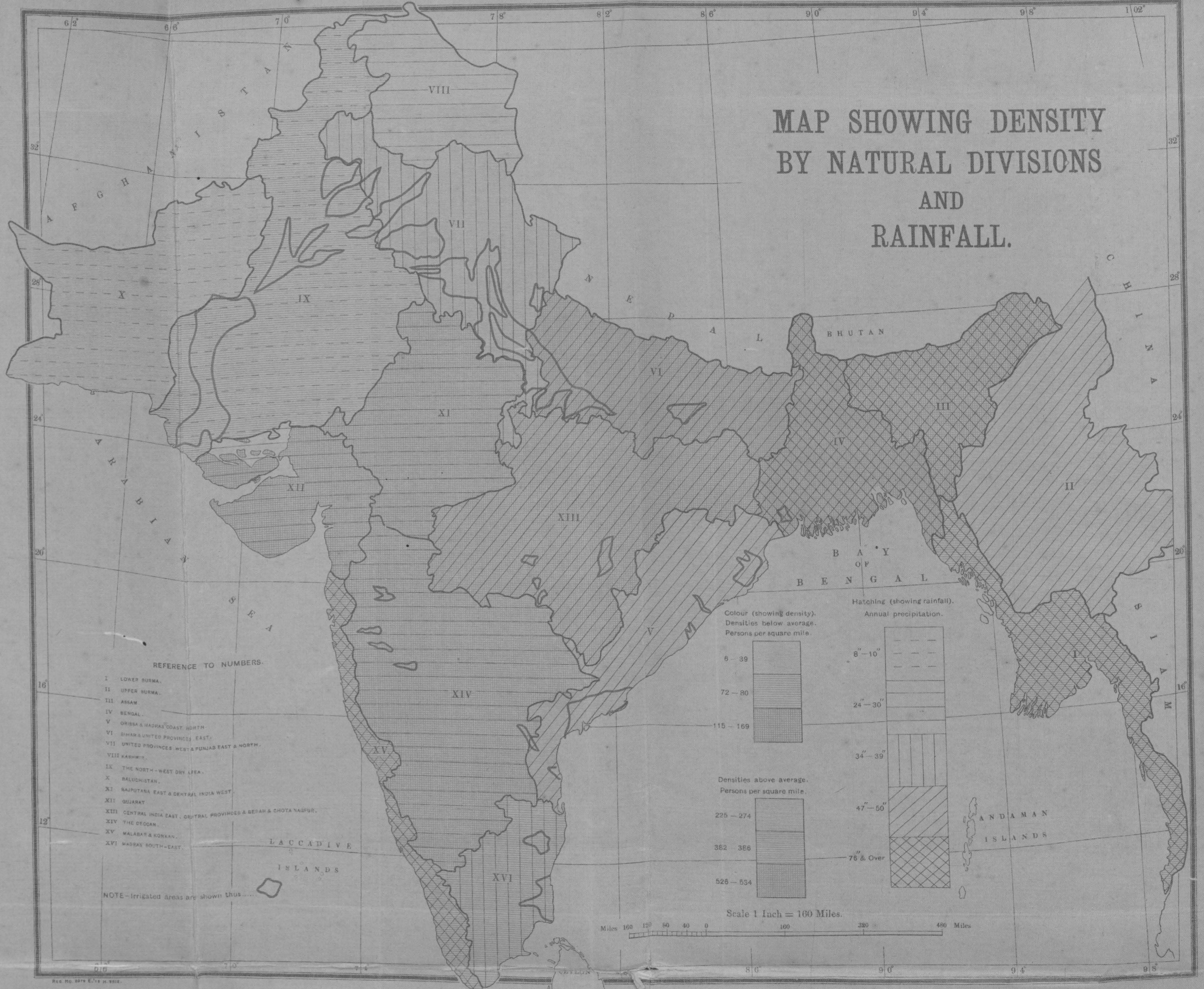
Mr. Kealy divides his charge, as was done at the two previous censuses, into three natural divisions—the Eastern, Southern and Western. The first-mentioned division resembles the adjoining part of Central India. There is a sprinkling of rocky hills, but on the whole the surface is level and the soil fertile, and there is generally sufficient rain. This division is intersected by several rivers. It is better served by railways and has more and better roads than the other parts of the Agency. The Southern division consists mainly of forest-clad hills enclosing fertile well-watered valleys, but occasionally more open tracts are met with. The Western division, which is by far the most extensive, forms part of the North-West Dry Area. It has a very scanty rainfall and its liability to famine is proverbial.* The physical characteristics of these divisions are clearly reflected in the density of their population. In the Eastern division there are 164 inhabitants to the square mile, in the Southern 103, and in the Western

* Mr. Kealy quotes two proverbs referring to the frequency of famines:—

"His feet are in Pungal, his head is in Merta, his belly's in Bikaner.
In forgetful moments he'll visit Jodhpur; but he's always in Jaisalmer";

and
"Expect one lean year in three, one famine year in eight."

MAP SHOWING DENSITY BY NATURAL DIVISIONS AND RAINFALL.



only 38.* In the Jaisalmer State, in the west, there are only 5 inhabitants to the square mile, or even fewer than in Baluchistan: in the four most thinly peopled parganas of this State there are only two people to the square mile. The antithesis to this is found in the State of Bharatpur on the eastern border of the Agency, where there are 282. Except where the surface is much broken, the density varies more or less closely with the rainfall. In the Western division it is greatest (59 persons to the square mile) in Marwar, which has twelve inches, and least, as we have just seen, in Jaisalmer, which has less than seven. The general low density throughout this division is due entirely to its scanty rainfall. The soil itself is often fertile, and if irrigated would no doubt, in some parts at least, be capable of supporting as great a population as the canal colonies of the Punjab.

35. Travancore in the extreme south-west of the peninsula has a population of 3,428,975 and an area of 7,594 square miles. It falls naturally into two parts—the Western, littoral and deltaic, and the Eastern, mountainous and sub-montane. There are on the average 452 persons to the square mile, but there are extraordinary local variations; in the Western division the number is 1,081 against 252 in the Eastern. The latter tract has a heavier rainfall, but the surface is so broken that half the total area is unfit for cultivation; the soil is relatively very poor, and the climate unhealthy. Along the coast, on the other hand, the level soil is rich, and is fertilized every year by fresh alluvial deposits; there is also some irrigation. The staple crop is rice, but there are many other highly profitable products, including cocoanuts and other palms. Three talukas in the Western division have a density exceeding 1,500 to the square mile.

36. It remains to consider the distribution of the population with reference to the natural divisions described in paragraphs 10 and 11. Their density is correlated in Subsidiary Table I at the end of this Chapter with the rainfall, the cultivated, cultivable and irrigated areas, and the principal crops grown. In the previous part of this Chapter the political divisions have been taken in turn, and an attempt has been made to explain the local variations in their density with reference to the rainfall, fertility of the soil and other factors which appear to account for them. It will now be convenient to reverse the process, and to consider the influence of the various factors on which the growth of the population depends by correlating them with the density in natural divisions where they operate to a varying extent. In other words, the density factor and not the locality will now form the foundation for the discussion.

The predominant density factors in India are by no means those which count for most in Western countries, where the variations in the population depend mainly on the progress made in commercial and industrial development. In England, next to London and its environs, we find the most teeming population in Lancashire with its cotton mills, and Durham with its numerous collieries. The density in these two counties is more than five times that in pastoral and agricultural counties such as Oxfordshire, Lincolnshire, Norfolk and Devonshire. In the latter the number of persons to the square mile nowhere exceeds 200, and in some it is much less; and it would seem that Trunnier's dictum regarding Germany to the effect that agriculture alone is unable to support more than 250 persons to the square mile† is equally true of England, and in fact of all parts of Europe. The conditions are quite different in India, where two-thirds of the population is directly dependent on agriculture, as compared with less than 7 per cent. in England. In large areas, such as the natural divisions which here form the basis of the discussion, manufactures and trade affect the density to a comparatively small extent; and even the number of individual districts whose density is greatly affected by the existence of trading and industrial centres is still comparatively small. Moreover, while in Europe, as we have seen, agriculture is unable to support more than 250 persons to the square mile, in India there are some purely agricultural tracts where it already supports three or even four times that number and others where it cannot support a tenth of it. The variations in the productiveness of the land are far greater than they are in Europe; and it is the causes which

* If Ajmer and Merwara be left out of account, the density in the Eastern division is 162, and in the Southern, 100.

† Beiträge zum Problem der Volksdichte.

the canals. The natural division which contains the coast districts of Orissa and north Madras, with a rainfall of 50", has a relatively low mean density, but this is because it includes on the west a considerable hilly area, while on the east near the sea the ground is swampy and impregnated with salt. In the intermediate strip between the littoral and the hills the density is as great as in many parts of the lower Gangetic Plain. Want of water is the main explanation of the comparatively sparse population in several more or less level tracts, such as Gujarat, Rajputana East and Central India West, and the North-West Dry Area. In Assam there are extensive tracts of hill and jungle, and sandy stretches in the strath of the Brahmaputra river, where permanent cultivation is out of the question. The agricultural returns show that three-quarters of the whole area is cultivable, but this simply means that crops of some kind can occasionally be grown. The proportion of the area fit for permanent cultivation must be less than half that shown in the returns.

41. In Assam, moreover, the climate has to be reckoned with. The country is extremely malarious; and even in tracts which could support many more inhabitants than they at present possess, the population is practically stationary. This question of unhealthiness is also a serious one in the United Provinces West and Punjab East and North. Here also the growth of the population is retarded, not because the limit of the soil's capacity has been reached, but on account of the ravages caused by malaria and, in recent times, by plague. Numerous local instances of the influence of climate on the density of the population have been given in the preceding paragraphs, and others will be found in the next Chapter.

42. Many parts of Burma are level enough, and in the deltaic districts the rainfall is more than ample. Here the low density is explained by the past history of the country. Before its annexation it had suffered for several generations from misrule and internecine wars, in the course of which the population had been almost exterminated. Since the advent of peace and good government the population is growing rapidly; and it is not improbable that a hundred years hence many parts will contain three or four times their present number of inhabitants. Very similar conditions prevailed a century ago in Assam, but that province has had more time in which to recover from the murderous raids of the Moajias and Burmese that preceded the introduction of the *Pax Britannica*. At different times many parts of India have been almost depopulated by marauding armies. The Nimar district of the Central Provinces was devastated during the Marāthā and Pindāri wars in the early part of the last century; and although many parts have been reclaimed in recent years from the jungle into which they had relapsed, some tracts of considerable natural fertility still remain almost uninhabited.

43. To any one accustomed to European conditions it will seem strange that no mention should yet have been made of what is there the most important factor of all, *viz.*, the nature of the soil. The reason is that in India the soil itself counts for very little as compared with the rainfall and the physical configuration. That there are great differences in the quality of different soils is undeniable; and where other conditions are the same, the outturn of the crops must vary accordingly. But the variations due to this cause are, generally speaking, far less marked than those due to differences in the rainfall or in the shape of the surface. The valleys of the Ganges and the Indus are alike alluvial formations, but while the one is the most densely, the other is almost the most sparsely, peopled tract in India. The ingredients of the soil are probably much the same, but in the Lower Ganges valley the rainfall is ample, while in that of the Indus it is lamentably small. As stated in the Imperial Gazetteer: "The soil of Sind is plastic clay deposited by the Indus. With water it develops into a rich mould; without water it degenerates into a desert." A further reason why soil cannot be taken into account when dealing with large areas, is that the variations are comparatively minute; except in the great alluvial plains the same natural division often contains many different kinds of soil. Instances of this will be found in Mr. Marten's discussion of density in the smaller natural divisions of the Central Provinces and Berar which he has distinguished for the purpose of his Provincial Report.

In view of the impossibility of isolating the soil factor it is impossible to form any opinion as to the kind of soil which is capable of supporting the heaviest population. The fertility of black cotton soil has often been lauded, but nowhere is it associated with a density approaching that supported by the alluvial soils of the lower Gangetic plain.

44. It is equally difficult to correlate density and crops. The same crop may be far more productive in one place than in another. There are also varieties of the same crop which produce very different results. Thus in Chota Nagpur the upland rice, which is sown broadcast, is in the nature of a catch crop which gives a fair yield in seasons of regular and abundant rainfall and in other seasons may fail altogether; while the transplanted variety in the levelled and embanked valley bottoms, which always have plenty of water, yields plentifully every year. These and other disturbing factors make it difficult to arrive at any wide generalization. In the Bengal Report for 1901 where a more minute analysis was possible than in a Report for the whole of India, the conclusion was arrived at that in Bihar "the tracts which can support most people are those where rice is grown." This is also the opinion of several of the Superintendents of the Census of 1911. In the Central Provinces and Berar, on the other hand, Mr. Marten is unable to trace any connection between density and particular crops. On the whole, however, it would seem that in most of the more densely peopled tracts rice is the predominant crop.

Towns and Villages.

45. The definition of a town was the same as in 1901. For the purpose of the census the term was held to include—

- (1) Every Municipality.
- (2) All Civil Lines not included within Municipal limits.
- (3) Every Cantonment.
- (4) Every other continuous collection of houses inhabited by not less than 5,000 persons, which the Provincial Superintendent may decide to treat as a town for census purposes.

A few places, chiefly in Native States, which do not satisfy the above requirements have been treated as towns for special reasons, but their number and population are too small to have any appreciable influence on the statistics. Our definition has been criticised by a distinguished German statistician on the ground that the adoption of a double criterion—introduces an element of uncertainty. He also holds that in taking 5,000 as the minimum population of a town the standard is drawn too high. In framing the definition the object in view was, as far as possible, to treat as towns only places which are of a more or less urban character. In most provinces there is a provision of the law which prohibits the creation of Municipalities in places which contain a large proportion of persons dependent on agriculture for their subsistence. It may thus be assumed that all places which are under Municipal government possess some urban characteristics. The converse proposition, however, is not always true; and it sometimes happens that places of a distinctly urban nature have not yet been raised to Municipal rank. If therefore the first criterion alone had been adopted, various places which deserve to be treated as towns would have been excluded from the return. It was for this reason that the second criterion, that of population, was introduced. The Provincial Superintendents were, however, instructed, when considering the question of treating places as towns on the basis of their population, to take care to exclude such as are merely overgrown villages and have no urban features. It is true that the discretion thus allowed has occasionally led to a certain want of uniformity. In the Punjab, for instance, there has been a decrease of 64 towns of this class at the present, as compared with the preceding, census. But on the whole inequalities due to the idiosyncrasies of the local census officers may be regarded as balancing one another when the statistics for the whole of India are considered; and it may safely be said, as a general rule, there is no marked difference in kind between the places which have been treated as towns in

accordance with the population criterion and the smaller towns which have been classed as such because they are under some form of Municipal administration. It may be noted that of the 29·7 million persons enumerated in the 2,153 places classed as towns only 5·5 millions or 18·6 per cent. were found in the 574 places which were so classed by virtue of their population; of such places 205 with a population of 2·2 millions are in the Madras Presidency.

46. It remains to consider the suitability of the standard which has been taken for the population test. In Germany "landstädte," or places with a population of 2,000 to 5,000, are included in the urban category; in America the same category is used to include all "incorporated" places with a population of 2,500 and upwards, and in England all sanitary districts with 3,000 or more inhabitants. In fixing the standard for India at 5,000, however, we have certainly not erred in the direction of over-exclusiveness. The local conditions are wholly different from those prevailing in western countries; and the great majority of places with that number of inhabitants, whether Municipalities or not, partake rather of the nature of overgrown villages than of towns as the term is understood in Europe. Trade and industry are still to a great extent monopolized by the larger towns. With the spread of railways and the general improvement in means of communication, the smaller towns are growing in importance as distributing centres, but the process is a slow one and comparatively little progress in this direction has yet been made. The small market town so common in Europe and America is rarely found in India. Nor as a rule do the smaller Indian towns possess the other amenities associated with urban life in Europe, such as a better class of schools and public institutions of various kinds. It is true that a new type of town is springing up in the neighbourhood of important railway stations with stores and provision shops and a considerable coolie population, and that these in many cases have not yet reached the prescribed standard of population. But the total number of such places is still small, and their exclusion has had no material effect on the statistics. On the other hand, if the standard had been lowered, many places would have been included which bear no resemblance to the ordinary conception of a town; and thus would have obscured the statistics, especially those relating to the distribution of the population of towns by sex and religion.

The population of towns at each succeeding enumeration and the distribution of their inhabitants by sex and religion are shown in Imperial Tables IV and V. The principal features of the statistics contained in these Tables are exhibited in Subsidiary Tables IV to VII at the end of this Chapter.

47. In Assam only three per cent. of the population reside in places classed as towns. Excluding the conglomeration of villages which make up Imphal, the capital of Manipur, there is not a single town which contains twenty thousand inhabitants, and there are only five with more than ten thousand. Of the larger towns the only progressive ones are Dibrugarh and Shillong, the head-quarters of the local administration.

In the ordinary sense of the term a village is a collection of houses. But there is also the survey village or the revenue unit of area. For the purpose of the census the latter has this great advantage that it is a perfectly definite entity. This is not the case with the residential village, and it is often very hard to say whether an outlying house or group of houses should be assigned to one such village or to another. For this reason, in spite of the fact that the survey village does not always correspond to the residential, it has been taken for census purposes wherever it exists and is sufficiently well known. In Assam it was so taken in the greater part of the Brahmaputra valley and in Cachar. Elsewhere the residential village was taken. As a rule, the houses are scattered through the rice fields and are rarely collected on a central village site. In the hill districts the houses were formerly packed closely together on the hill-tops for the purpose of defence and mutual protection, but the present tendency is to build them near the cultivated land, which is often miles away from the old village sites. The average population of a village is 233. It is greatest in the Brahmaputra valley and lowest in the hill districts.

48. Society in Baluchistan is based on an interesting and archaic tribal

system (analysed by Mr. Bray in some detail), and urban development is necessarily slow. Seven per cent. of the people live in the nine places treated as towns; but these are either overgrown villages or garrison towns of recent growth. Quetta, the capital of the province, is almost entirely the creation of British rule and owes its rapid growth mainly to strategic considerations; not many years ago it was hardly more than a cluster of mud huts. This single town contains over half the total urban population. Of its 33,922 inhabitants—its summer population is at least 34 per cent. greater—only 1,427 are indigenous Brahui, Baloch and Pathans; and that most even of these were casual visitors is shown by the fact that there were amongst them only 385 females. The statistics of villages are not worth considering. In the districts, the revenue unit of area was taken, but even that is an artificial and recent creation. In the States the village was merely an arbitrary group of hamlets, sometimes even of nomadic encampments, which one day may contain a few black blanket tents stretched on poles and next day may be devoid of inhabitants.

49. In the Bengal Presidency 124 places were treated as towns. They contained 6 per cent. of the total population and had on the average about 24,000 inhabitants. If, however, Calcutta and its suburbs including Howrah, which contain 41 per cent. of the dwellers in towns, be left out of account, the number of inhabitants per town is less than 15,000 and the proportion of the urban to the total population falls to 4 per cent. Small as is this proportion, it is made up largely of foreigners—traders from Rajputana, servants from Bihar and Orissa, and coolies from the same parts and from the United Provinces.

The ordinary Bengali is not a lover of town life, though the upper classes are coming more and more to appreciate the social, intellectual and sanitary amenities of Calcutta and other large centres. Of the Hindus, nearly 10 per cent. are found in towns and of the Muhammadans less than 4 per cent. The local Muhammadans are mostly of the cultivating class; and although more than half the people of Bengal profess this religion they contribute less than a third of the urban population. As usual in Indian towns females are in marked defect. Their proportion is highest in the minor towns which are often merely overgrown villages; it is much smaller in the main centres of trade and industry, and smallest of all in Calcutta, where only one person in three is a female.

During the last decade the urban population has registered a gain of 14 per cent. against only 8 per cent. in the general population. The main factors in the growth of towns at the present day are the extension of railway communication and the development of large industries of the western type. The progressive towns are those at important points on the railways or where mills of various kinds have been established. A striking instance of the former is furnished by Kharagpur, an important junction on the Bengal-Nagpur Railway. In 1901, shortly after railway communication was established, it had less than 4,000 inhabitants, but ten years later it had nearly 19,000. The most progressive industrial towns are those on the banks of the Hooghly, in the neighbourhood of Calcutta. Titagarh has nearly trebled, and Bhatpara has more than doubled, its population in the last ten years. Bhadreswar in the Hooghly district has a gain of over 60 per cent. Two of the suburban municipalities, which have grown equally rapidly, owe their advancement partly to industrial expansion and partly to the tendency of the people who earn their living in Calcutta to make their home in the suburbs. The comparatively small gain recorded in Howrah (13·6 per cent. against 35 in the previous decade) is to some extent fortuitous. The jute trade was dull when the census was taken, and the mills were not in full work; some of them, moreover, had closed down for the week-end. Dacca, the third city in the province, owes its growth of 21 per cent. largely to the circumstance that it was made the capital of the ephemeral province of Eastern Bengal and Assam. The older towns are many of them decadent. Most of them were built on the banks of rivers, which were formerly the principal means of communication. Trade has transferred its allegiance to the railways; and the rivers themselves have often taken a new course. The towns on the banks of their old channels, which are often little better than chains of stagnant pools, have thus become hot-beds of malaria. Murshidabad, a former capital

of Bengal, has thus barely half the number of inhabitants which it had forty years ago; the population of Krishnagar is dwindling, and that of Jessore is stationary.

50. The census village corresponds to the mauza or survey unit of area in the Burdwan and Presidency divisions and Cooch Behar, and elsewhere to the residential village, or collection of houses bearing a common name with its dependent hamlets. As a rule, the difference between the mauza and the residential village is small; but this is not so in tracts which were uninhabited at the time of the revenue survey, and so were not properly subdivided. A striking instance of this is found in the western part of the Midnapur district, known as the Jungle Mahals, where nineteen mauzas contain more than 20,000 villages and hamlets. The village is thus a somewhat indeterminate entity, but taking the statistics as they are, it may be noted that the average number of inhabitants per village is 352. There is a marked difference in the size of villages in West and Central Bengal. In the former the average population is only 326, while in the latter it is 574. These statistics cannot properly be compared with those for East and North Bengal, which are based on the residential village; in North Bengal the average population per village is only 261 against 391 in East Bengal.

Except in places where markets are held once or twice a week, the villages are, for the most part, of a purely rural type, and contain very few shops; but under modern conditions, villages of a new kind, consisting chiefly of shops, godowns and the quarters of coolies, are springing up in the neighbourhood of railway stations, mills and mines. In Central and West Bengal, though the houses are seldom unduly crowded together, and each has its own patch of homestead land, they are generally constructed on a single village site. Many of the villages are situated on the banks of silted-up rivers and buried in a mass of bamboos and other vegetation, and are very unhealthy. In the other two natural divisions there is often no regular village site and the houses are very scattered. In East Bengal they are sometimes erected in straggling rows along the high banks of rivers, or in small clusters on mounds raised to a height of from twelve to twenty feet, which form small islands when the country is inundated in the rainy season.

51. The province of Bihar and Orissa contains an even smaller urban population than Bengal. Only 3.4 per cent. of its people live in the 76 places classed as towns. Modern industrial enterprise has as yet made hardly any impression on the economic conditions of this province. Excluding Jamalpur, where the East Indian Railway has extensive workshops, the only truly industrial town is Sakchi in the Singhbhum district, the head-quarters of the Tata Iron and Steel Works. Although at the time of the census it had only recently come into existence, it already contained nearly 6,000 inhabitants. The great majority of the towns are old established centres which owe their origin to a state of things that has long since passed away. The diversion of trade due to the construction of railways has robbed them of much of their former importance; and such industries as they possess, being of the cottage type, are decadent. Some of them like Bihar, Patna, Rajmahal, Monghyr and Cuttack, have lost the political importance which they once enjoyed. The natural tendency is thus downwards; and this tendency has been greatly accentuated in Bihar in recent years by repeated outbreaks of plague. Patna City, which has been chosen as the capital, has a slight increase over the regular census of 1901, but at that time plague was raging and the population was abnormally small; as compared with a count taken later on in the same year there is a drop of more than 11 per cent. Practically all the towns in South Bihar show similar losses, the only noticeable exception being Jamalpur, of which mention has been made above. In North Bihar also most of the towns have lost ground, especially those of the Saran district. It is only in Chota Nagpur that any marked growth is noticeable; the towns there are still in an early state of development, but Ranchi, Daltonganj and Purulia have all grown by more than 20 per cent. This is due largely to improvements in railway communications.

The proportion of females (932 per thousand males) is unusually high in the towns of this province. This is a natural corollary of the conditions described above. Where towns are decadent and immigrants are few in number, the proportions of the sexes tend naturally to approximate to those in

the general population. Though the Muhammadans form less than one-tenth of the total, they constitute more than one-fifth of the urban population. Eight per cent. of their number reside in towns, against only 3 per cent. in the case of Hindus. The Muhammadans of Bihar belong to a very different class from those of Bengal. They include a considerable number of people of good family, descended from the aristocracy of Moghal times, and a large proportion of weavers and other artisans.

52. Except in three districts where the residential village was taken, the mauza or survey unit of area was everywhere adopted as the census village. The residential village is very indeterminate; there are many groups of houses which one person would class as hamlets and another as independent villages. The statistical value of a village thus defined would therefore be small, while the administrative convenience of taking the survey unit of area is very great. It enables the local staff to make absolutely certain that no tract, however remote, is left out of account. In some places the census village or mauza includes several residential villages, but in spite of this its average population is only 344. Only 14 per cent. of the rural population reside in villages with more than two thousand inhabitants. Large villages are particularly rare in the Chota Nagpur plateau. As in Bengal, shops are rarely found in the ordinary mufassal villages; they are confined mainly to those where markets are held and to the bazars which are springing up near important railway stations. In the typical Bihar village the houses are closely packed together, and there are no intervening homestead lands. In Orissa each house has its own small compound and resembles the Bengali homestead. In Chota Nagpur the village site is usually on a ridge, or near the crest of a slope, where there is a long straggling row of houses, or two rows on opposite sides of a pathway. Throughout the province very little care is taken by the people to secure the cleanliness of their villages, which in this respect are inferior to those of Bengal.

53. Owing to its greater industrial development Bombay has a larger urban population than almost any other part of India. Of every hundred inhabitants, 18 live in towns and 82 in villages. Towns of from ten to fifty thousand inhabitants contain one-third of the total urban population and the five cities of Bombay, Ahmedabad, Karachi, Poona and Surat another third; about a quarter lives in towns with less than ten thousand inhabitants. As usual in Indian towns, females are in marked defect. There are only 83 of this sex per hundred males, as compared with 93 in the province as a whole. The Muhammadans, amongst whom is a large proportion of traders, are more addicted to town life than the Hindus; they form only 18 per cent. of the total, but 23 per cent. of the urban population. The proportion of Christians is three times, and that of Jains nearly twice, as great in towns as it is in the total population. But it is the Parsis who are the most inveterate town-dwellers: there are 84,000 Parsis in the Presidency, and of these all but 11,000 were enumerated within urban limits. There has been little change in the number or population of towns since 1901. Urban industries, especially cotton mills, have continued to grow; but on the other hand plague seems to have become endemic in many towns. The presence of this disease operates in three ways: it kills off large numbers, it deters many from immigrating to towns, and it induces many of those who earn their living in towns to seek their dormitory in the healthier and less crowded suburbs. This latter tendency has been encouraged in the case of Bombay by the improvement in the means of communication between the city and its suburbs.

The revenue village has been taken as the census unit. This corresponds fairly closely to the residential village, except in the wilder tracts which were often surveyed in large blocks, some of which now contain several residential villages. The ordinary Bombay residential village consists of a cluster of houses on a comparatively elevated position, in the midst of cultivated lands. The depressed castes live outside in a rookery of their own. In the Marāthā country, the villages are congregated on a central site. Those which were once the capital of a Marāthā feudal chief are surrounded by high walls of rubble and concrete, and entered by gates guarded by watch towers. These defences are no longer needed and are now crumbling away. In the

Konkan, especially in Kanara, there is often no regular village site; each family has its homestead amongst the fields or spice gardens belonging to it.

54. In Burma 9·3 per cent. of the people live in towns, but Mr. Webb points out that of the 63 places so classed only fourteen have marked urban characteristics; the rest are merely "country towns occupying an intermediate position between the central and industrial units on the one hand and the petty rural communities on the other." The two cities of Mandalay and Rangoon contain between them about two-fifths of the total urban population. The former, the last capital of the Kings of Ava, shows a decline of 25 per cent. since 1901; repeated epidemics of plague and an extensive fire have combined to accelerate the natural process of decay, due to the disappearance of the Court and the diversion of trade resulting from the extension of the railway to Lashio. Rangoon, with its important industries and commerce, has continued to grow rapidly. There has been some slackening in the rate of increase, but the actual addition to the population, though less than in 1891-1901, is about the same as in the preceding decade. To illustrate the great contrast between the conditions in these two cities, it may be noted that in Rangoon three-fifths of the inhabitants are born outside the province, against only one-tenth in Mandalay, and that the number of females per hundred males is only 41 compared with 98. Of the other towns, those which are favourably situated for trade, or which have well established industries, are growing, but elsewhere a movement back to the land seems to be in progress. "The Burman, though fond of the amenities of town life, is most averse to the hard, rigid discipline essential to modern urban industry." Of the places treated as towns in 1901, thirty have added 17·4 per cent. to their population and seventeen have lost 15 per cent. A striking feature of the statistics is the extent to which the immigrant population from India concentrates itself in towns.

55. Prior to the British occupation the village in Burma had no territorial connotation. Except in the Specially Administered Areas, two local units of area have now been recognized—the "village tract" or administrative unit, which includes a residential village, or in many cases a portion only of a main residential village, together with the subsidiary hamlets and the lands in which the residents have most of their cultivation, and the *Kwin*, or survey unit, which was fixed solely for survey purposes with reference to natural features.

In 1901 a village was defined for census purposes as the hamlet, or "smallest collection of houses known by a separate name." At the present census, as in 1891, the "village tract" was taken as the census village, except in the Specially Administered Areas, where the residential village was taken. The advantage of taking the village tract as the census unit is that it facilitates the arrangements for the census, and enables the local population to be compared with the agricultural statistics. There is, however, little or no correspondence between the village tract and the residential village, and no conclusions can be drawn from the figure, as to the manner in which the people are distributed over the country. There are in all 37,678 census villages with an average population of 292. In Burma proper there are 18,640 village tracts with an average of 509 inhabitants, and in the Specially Administered Areas 19,038 residential villages with an average of 79 inhabitants.

56. In the Central Provinces and Berar 8 per cent. of the population live in towns, but the proportion varies greatly in different parts. It is 11 per cent. in the Nerbudda valley and Marāthā plain divisions, against only 4 in the Plateau, and 3 in the Chhattisgarh plain division; in the Chota Nagpur division there are no towns at all. Of the townspeople, nearly one-third live in places with upwards of 20,000 inhabitants and more than one-third in those with 5,000 to 10,000.

The Muhammadans, Christians and Jains are most prone to town life, and the Animists are specially averse from it. It is impossible to gauge the growth of the urban population, which is undoubtedly taking place, from the returns of the present census. At the time when it was taken plague was extraordinarily prevalent, and many of the towns were almost deserted. The result was an apparent decrease of 94,000 or 7 per cent. The artificial and temporary character of this decline is clearly seen from the results of a fresh

enumeration of some of the larger towns effected about six months later. Thus Ellichpur, which had a population of 13,909 at the time of the general census, was found to have 24,435 at the recount in the following September. This province contains two cities, Nagpur and Jubbulpore. According to the general census Nagpur had a population smaller by 21 per cent. than in 1901, but at the recount in September it was found to have 134,712 inhabitants, or nearly 5 per cent. more than in that year, and 59 per cent. more than in 1872. This city is not only the seat of Government, but is also an important centre of the cotton trade and weaving industry. Jubbulpore, which takes rank as a city for the first time, has grown during the decade by 11 per cent.

The construction of railways has greatly stimulated trade in this land-locked province, whence the export of surplus produce was previously almost impossible. There has in consequence been a rapid growth of many towns, including Chanda, Dhamtari, Chindwara and Seoni.

The revenue mauza was everywhere treated as the census village, except in the Chota Nagpur division, where the residential village was taken as the unit. The majority of the villages are small. The largest ones are found in the Marāthā districts, where considerably more than half the rural population live in villages with a population of 500 to 2,000. In the Nerbudda valley division, on the other hand, more than half live in villages with less than 500 inhabitants.

57. Of the total population of the Madras Presidency 11·7 per cent. live in towns. The proportion is highest (15·9 per cent.) in the East Coast South, and lowest (8·1) on the West Coast. Most of the towns are overgrown villages with few urban characteristics. They have on the average 17,570 inhabitants. Towns with from ten to fifty thousand inhabitants contain more than half the total urban population. The Muhammadans, who are mostly traders and artisans, affect town life more than the Hindus and Christians; nearly a quarter of their number are found in towns, against one-fifth of the Christians and less than one-ninth of the Hindus.

In this Presidency the proportion of females to males is almost the same in towns as it is in the general population. There are few places with manufactures of any importance; the bulk of the urban population is of a settled character, and even amongst immigrants the proportion of females is higher than in the north of India owing to the weakness of the *parda* system and the greater readiness of women to work in public.

The urban population has risen since 1901 by only 15 per cent. against 25 per cent. in the previous decade. Favourable agricultural conditions have enabled the labouring classes to obtain employment near their homes, and fewer have found it necessary to seek a livelihood elsewhere. Of the more important towns, Madura, with its growing textile industry, shows the largest increase (26·6 per cent.). There has been a falling-off in Coimbatore, Salem and Bellary owing to an outbreak of plague at the time of the census.

The revenue unit of area, which often includes two or more residential villages, was taken as the census village. Half of the total rural population live in villages (as thus defined) with from 500 to 2,000 inhabitants.

58. Excluding the Agencies and Tribal areas, the population of which is wholly rural, 13 per cent. of the inhabitants of the North-West Frontier Province live in the nineteen places classed as towns, but the majority of these are merely overgrown villages. The province is practically without manufactures, and the industrial element is very small. Nearly a quarter of the oppidan population was enumerated in cantonments, which are a very artificial form of urban aggregation. The only other towns of any importance are those at the headquarters of the five districts; these are conveniently placed on the trade routes which connect India with the trans-border tribal territories and the marts of Afghanistan and Central Asia. The average number of inhabitants per town is about 15,000; and three-fifths of the total urban population is found in towns with more than 20,000 inhabitants. Only 10 per cent. of the Muhammadans of the province live in urban areas against 54 and 55 per cent. of the Hindus and Sikhs respectively. The explanation is that the great majority of the natives of the province are Muhammadans, while the Hindus and Sikhs are chiefly immigrant traders and sepoys.

As usual in towns, females are in marked defect, there being only 626 of that sex per thousand males, as against 900 in rural areas. The proportion is lowest in cantonments; if they be left out of account it rises to 803. Since 1901, the urban population has grown by 13 per cent., but this is due mainly to the inclusion of new "towns" and the expansion of the cantonments. The rate of growth in the places, other than cantonments, classed as towns in 1901 is only half that in the population as a whole. It is greatest in towns with between ten and twenty thousand inhabitants.

The census village corresponds to the revenue unit of area and has no necessary connection with the residential village. The character of the latter varies considerably in the different parts of the province. In the more hilly tracts of the Hazara district, scattered homesteads are very common, but elsewhere the houses are often closely packed. This is notably the case in parts of the Peshawar district.

Punjab.

59. The number of towns in the Punjab has fallen from 228 in 1901 to 174. The change is the net result of the omission of 64 * places, chiefly notified areas, which, though twenty of them have more than 5,000 inhabitants, are merely overgrown villages and have no urban characteristics, and the inclusion of twelve others, all but two of which have more than 5,000 inhabitants. On the basis of the present classification 10.6 per cent. of the population live in towns and 89.4 per cent. in villages. The tendency to urban aggregation is greatest in the Indo-Gangetic Plain West, where the proportion of town-dwellers is 14.5 per cent., and least in the Himalayan area where it is only 2.9. The three cities of Delhi, Lahore and Amritsar have between them 614,280 inhabitants, or 24 per cent. of the total urban population; 32 per cent.

Year of census.	VARIATION PER CENT. IN THE POPULATION.	
	Total	Urban.
1911	-1.7	-1.7
1901	+6.9	+4.7
1891	+10.0	+7.4

Note.—The population of the places classed as towns at each census is here compared with the population of the same places at the previous census.

is found in other towns with a population exceeding twenty thousand, 38 per cent. in towns with from five to twenty thousand, and the remainder (6 per cent.) in smaller towns. The proportion of the urban population has been gradually falling during the last thirty years. The improvement of communications tends to encourage the opening of local shops, thereby reducing the trading population at the larger centres, and the industrial development is not these losses. It may be noted, however, that the towns with a population exceeding 50,000 are growing fairly rapidly. Delhi, the largest industrial centre in the province and an important railway junction, has gained 11.6 per cent. during the decade, while the district in which it lies has lost 4.6 per cent. Lahore, Sialkot and Multan also show large increases. As usual in Northern India, the urban population contains a relatively large proportion of males. The Jains, who are nearly all traders, show a special predilection for town life; and more than half the total number in the province reside in places classed as towns. A special hot weather census of several summer resorts in the hills gave interesting results. In Simla the population during the season was thus found to be 37,895 against 19,405 in March, at the time of the regular census, and in Murree 16,934 as compared with 1,705.

The revenue unit of area was usually taken as the census village. In the east and the south this corresponds fairly closely to the residential village with its dependent hamlets, but in some parts it is a more or less artificial division, including a number of scattered hamlets. More than half the rural population live in villages with a population of 500 to 2,000 each, and over a quarter in villages with less than 500.

United Provinces.

60. Including the 24 places treated as cities by the Provincial Superintendent there are 435 towns in the United Provinces. These contain between them 10.2 per cent. of the total population, the remaining 89.8 per cent. being resident in villages. Many of the larger towns, including Agra and Lucknow, were founded by the Muhammadans; others, such as Benares and Muttra, owe their importance to their religious sanctity; and a few, like Cawnpore and

* This is exclusive of Jutogh and Kasumpti, which, though treated as separate units in 1901, have now been taken as part of the Simla town.

Meerut, to modern political conditions or industrial development. The average number of inhabitants per town is 11,585. One-fourth of the total urban population is resident in the cities and two-fifths in towns with from five to twenty thousand inhabitants. The proportion of females to males is 853 per mille, against 915 in the general population. In the cities, where immigrants are more numerous, it is only 809; while in Cawnpore, the most important industrial centre, it is only 728. Of the Muhammadans of the province, 27 per cent. are resident in towns, and of the Hindus only 7 per cent. The Muhammadans of this part of India are, in the main, of foreign extraction, and far fewer are descended from local converts than in Bengal. Many of the larger towns were founded by Musalman rulers and their followers naturally congregated in them.

61. The ravages of plague make it impossible to institute any effective examination of the variation in the urban population since 1901. There has been a considerable apparent decline, but it is by no means all genuine. By far the greater part of it is due to a temporary exodus on account of an epidemic which was raging at the time when the census was taken. A fresh count of some of the towns, made about three months later, when the epidemic had subsided, showed very different results. The town of Mirzapur, for example, which according to the general census showed a decrease of 51 per cent. was found at the second count to have lost only 16 per cent., although there had been further heavy losses from plague in the meantime. Taking 1872 as our starting-point, however, we may notice certain general tendencies. The chief of these are the decadence of the medium-sized towns with from twenty to fifty thousand inhabitants, which now contain only one-ninth of the urban population compared with one-fifth in 1872, and the rapid growth of the cities and of towns with from five to twenty thousand inhabitants. The advancement of the cities, which now contain one-fourth of the total urban population against one-seventh in 1872, has been fostered by the tendency of modern industry to concentrate itself in a few large centres. The proportion of persons resident in places with from five to twenty thousand inhabitants is now five times as great as it was in 1872. These towns perform an important function as local distributing centres, but the large increase is due partly to the inclusion of places whose population was previously counted as rural.

Throughout the province the revenue mauza or survey unit was taken as the census village. It corresponds fairly well to the residential village, except in tracts which were uninhabited when the mauzas were first formed. In the western districts the villages occupy a compact central site, but in the central and eastern tracts they are more scattered. About half the rural population live in villages with from 500 to 2,000 inhabitants, and less than ten per cent. in larger villages.

62. While the total population of the Baroda State has risen by 4 per cent. that of the places classed as "towns" has fallen by 7.8 per cent. In 1901 owing to the famine, there was an unusual influx to the towns of persons seeking alms. At the time of the present census, on the other hand, the prevalence of plague had in some cases caused an exodus. But apart from these casual fluctuations, there has been a genuine falling-off in the urban population. It is said that shops are being established in the larger villages, which were formerly dependent on towns for their supplies of articles not produced locally, and that the extension of railway communication has reduced the importance of some of the old trading centres. Baroda city, which with its cantonment had 116,000 inhabitants in 1872, has now only 99,000. The number of hangers-on of the Court has been greatly reduced, and the State troops and their followers are fewer in number.

The proportion of the urban to the total population, though it has now fallen to 20 per cent., is still about twice that of India as a whole. Seventeen per cent. of the rural population live in villages with from two to five thousand inhabitants and 83 per cent. in smaller villages.

63. The statistics of the urban population of Central India in 1911 are vitiated by the fact that plague was prevalent when the census was taken, the result being that Lashkar and Indore contained barely half their ordinary population, while in many other towns it was far below that recorded ten years previously.

Central India.

It is not worth wasting time in discussing figures which are so obviously abnormal. In the towns where plague was not prevalent the population was about the same as in 1901. With the exception of Lashkar, Indore and Bhopal, the towns of the Agency resemble overgrown villages and true urban characteristics are lacking. Only eight persons in every hundred live in towns.

Cochin. 64. Twelve per cent. of the people of Cochin live in the nine towns. The indigenous Malayālis dislike town life; and it is the Indian Christians, Musalmans and Hindu immigrants from outside who form the bulk of the town dwellers. The population of towns has increased by 26 per cent. since 1901 while that of the State as a whole has grown at only half that rate.

The survey unit has been taken as the census village. The Malayāli likes privacy; and the houses are generally well separated, except in a few villages inhabited mainly by Christian converts or immigrants. The depressed classes generally live in detached huts on the outskirts of the village.

Hyderabad. 65. Nearly ten per cent. of the inhabitants of the Hyderabad State live in the 85 places treated as towns. The average population of a town is 15,239, but if Hyderabad city be excluded, it falls to less than two-thirds of this figure. Of the urban population, 39 per cent. are found in the city, ten per cent. in towns with from twenty to fifty thousand inhabitants, 18 per cent. in towns with from ten to twenty thousand and 33 per cent. in smaller towns. The excess of males over females is considerably greater in towns with 10,000 inhabitants and upwards, which contain a large number of immigrants, than it is in the general population. In the smaller towns, where the population is of a more settled character and the decay of the old home industries has driven many of the males to seek a livelihood elsewhere, the females outnumber the males. Of the Parsis, 778 per mille were enumerated in towns, and of the Christians and Musalmans 383 and 318 per mille, respectively. Of the Hindus, who form the bulk of the agricultural population, the corresponding proportion was only 71 per mille.

In spite of the net addition of seven to the number of towns, the urban population has grown by only 15 per cent., or at a considerably slower rate than the population as a whole. For this the prevalence of plague in the Marāthwāra division is largely responsible; Telingāna, the other natural division, has an increase of 14.7 per cent. in the number of town-dwellers.

The revenue unit was taken as the census village. In Marāthwāra, the typical village consists of a group of flat-roofed houses in a walled enclosure situated on a mound, which is usually near some river or stream. This is a survival from the turbulent days when life and property were insecure, and the village partook of the character of a rude fort. In Telingāna the village site is more open, and the houses, which generally have thatched roofs, are more scattered, an arrangement which is prompted by considerations of individual convenience rather than of common defence. In both the divisions there are separate quarters inside the village fence for each of the higher castes, while the depressed classes live outside in a cluster of huts. The average population per village is 599, viz., 664 in Telingāna and 548 in Marāthwāra.

Kashmir. 66. More than 9 per cent. of the people of the Kashmir State live in the 61 places which the local Superintendent has treated as towns, but the proportion falls to 6.6 per cent. if we exclude those with less than five thousand inhabitants which is the general standard prescribed in the Imperial Census Code. The two main towns are Jammu and Srinagar, the winter and the summer capital. The former has lost 11 per cent. of its population since 1901, chiefly owing to plague. The latter has a small gain of 3 per cent. Gulmarg, the famous summer resort, is practically deserted in the winter; and at the time of the census it had only 70 inhabitants.

Thirteen per cent. of the Hindus live in towns, as against 9 per cent. of the Sikhs and Muhammadans and only 4 per cent. of the Buddhists. In the settled areas, the revenue unit, and in the unsettled areas the residential village, was taken as the census village. In the plains the houses are collected in groups of varying size. In the hilly tracts they are scattered, and villages in the ordinary sense of the term do not exist.

67. Eleven per cent. of the people of Mysore live in the 91 towns, which have an average population of 7,234. There are four large towns—the Bangalore Civil and Military Station, the city of Bangalore, Mysore city and the Kolar Gold Fields.* Excluding them the average population per town is only 4,010. Most of the towns are old-established centres, and the proportion of females does not differ much from that in the general population; but it is only 739 per thousand males in the Kolar Gold Fields where immigrants are exceptionally numerous. Seventy per cent. of the Christians live in towns, 35 per cent. of the Muhammadans and only 9 per cent. of the Hindus, who are mostly agriculturists.

There has been a considerable fall in the number of towns since 1901 consequent on a change of classification due to the passing of a new Municipal Regulation. Plague has been very severe in many towns and there has been a heavy fall in the urban population, if that of the four largest towns be excluded. The latter all show an increase, varying from 4.7 per cent. in Mysore to 27.7 per cent. in Bangalore city. The Kolar Gold Fields, which increased by 439 per cent. between 1891 and 1901, has now added another 27 per cent. to its population. In 1902 the gold mining industry there received a fresh impetus by the substitution for steam of the cheaper electric power generated from the Cauvery falls. Bangalore possesses an excellent water-supply, drainage and lighting system, is a large railway centre and is of growing industrial importance.

The revenue village was ordinarily taken as the census unit. In the whole State there are only two villages with a population of more than 5,000. About 54 per cent. of the rural population live in small villages with less than 500 inhabitants and only 4 per cent. in those with two to five thousand. In the Maidān the villages are usually compact, but in the Malnad they generally consist of a number of scattered homesteads.

68. According to local statistics nearly 13 per cent. of the people of Rajputana live in towns. In that Agency, however, many places were thus classed whose population was below 5,000. Excluding these the proportion falls to 11 per cent. In Ajmer-Merwara the town dwellers form no less than 28 per cent. of the total population; but this is so small that the proportion is of no statistical value; it is due mainly to the figures for Ajmer city and two cantonments which have between them over 111,000 inhabitants. Mr. Kealy attributes the relatively high proportion of town-dwellers in Rajputana to the present and past political conditions in the States forming this Agency. Each Chief attracts to his capital a considerable body of troops, State servants, and traders, and the nobles also often have petty capitals of their own; while in former times, when wars were frequent, people often lived in towns for the sake of safety. The Muhammadans, in proportion to their numerical strength, resort to towns more freely than the Jains, and the Jains than the Hindus. The local towns are for the most part old-established centres, and the proportion of females in them is higher than in the general population. The places classed as towns in Rajputana in 1901 have since then lost 6.7 per cent. of their population, while the rural population has increased by 9.2 per cent. The smaller towns have grown, but many of the larger ones are losing ground. The extension of railway communications has led to the establishment of new markets which have diminished the importance of the older trading centres.

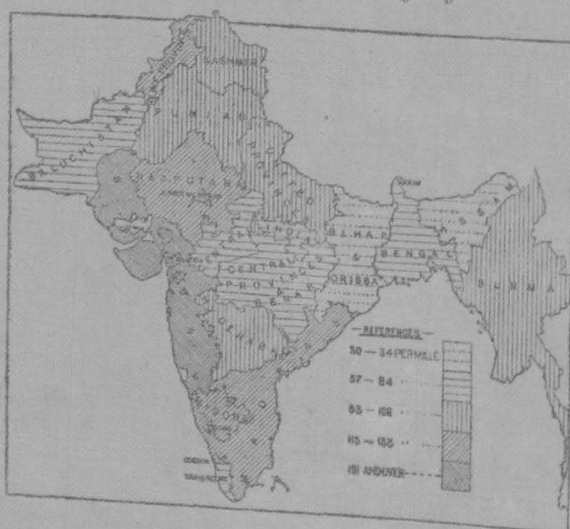
69. For the peninsula Travancore has a relatively small urban population, namely, 6.2 per cent. One-third of the total is accounted for by the capital—Trivandrum. There are in all only eleven towns. Excluding two places newly added to the list, the increase in the urban population during the decade is only 9.6 per cent.

For census purposes, the Kara or residential village has been taken as the unit. There are 3,955 such villages with an average of 813 inhabitants. The recent growth of population is most marked in the largest villages and least so in the smallest.

* The two first are structurally a single unit; but while the Civil and Military station is under British administration, Bangalore city is under that of the Durbar.

General distribution of urban population.

70. Only 9.5 per cent. of the population of India are found in towns as defined above, compared with 78.1 per cent. in England and Wales and 45.6 per cent.* in Germany. Rather more than half the urban population of India is found in towns containing upwards of 20,000 inhabitants, about one-fifth in towns with from ten to twenty thousand, and the same proportion in those with from five to ten thousand; the remainder, about one-fifteenth, live in towns with less than five thousand. The tendency to urban aggregation is most marked in the west of India and least so in the north-east. The proportion of the urban to the total population in the main provinces ranges



from 18 per cent. in Bombay to only 3 per cent. in Assam. The reasons for these variations were discussed in the last Census Report where the suggestion was put forward that they are largely a matter of race. The Mongoloid element in the population of Eastern India appears to be less inclined to congregate in towns than the Dravidian and other races. The distribution is also affected by political and historical considerations. The urban population of Upper India is much larger than it otherwise would be because of the numerous old capitals which are found there. In the future the main factors will no doubt be the expansion of trade and industrial development.

Sex and religion in towns.

71. In respect of the distribution by sex, the urban population in India presents a striking contrast to that of European countries. In Europe the proportion of females is larger in towns than in the general population, but in India it is considerably smaller, and the number of females per thousand males is only 847, compared with 953 in the population as a whole. The reason is that in this country the great majority of the domestic servants, shop hands and factory employes are males. The disproportion is most marked in large trading and industrial centres where the number of immigrants is large. In Calcutta, for example, the foreign-born population contains only 357 females per thousand males.

The extent to which towns attract persons of different religions is shown in Subsidiary Table V. Of the Parsis no fewer than six out of every seven are resident in towns; of the Jains the proportion is nearly one-third, and of the Christians more than one-fifth. There is a marked contrast between these proportions and those for Hindus and Muhammadans who form the bulk of the population. Of the Muhammadans less than one-eighth, and of the Hindus less than one-eleventh, reside in towns. In the case of the former the proportion rises to one-sixth if we exclude the figures for Bengal, where the majority of the Muhammadans are the descendants of local converts. Amongst the Hindus the higher castes have hitherto shown a greater predilection for town life than the lower, but the disproportion is gradually disappearing; modern industrial developments are attracting the lower castes to towns in ever-increasing numbers.

72. The proportion of the urban to the total population has fallen during the decade from 9.9 to 9.5 per cent. The main explanation of this is undoubtedly the fact that plague has been far more prevalent in towns than in rural areas. This scourge has now spread to all parts of the Empire except the east and south. At the time of the census an epidemic was raging in many towns especially in those of the United Provinces, Central India and the Central Provinces and Berar, and a large number of the regular inhabitants had gone

* Excluding "landstädte" or places with from two to five thousand inhabitants. The proportion of the inhabitants of Germany residing in such places is 11.8 per cent. against 13.2 per cent. in India.

away. As will be seen from the figures for a few towns noted in the margin, a fresh count, taken a few months later, when the majority of the refugees

Town.	POPULATION (000's OMITTED)	
	At general census.	At subsequent recount.
Cawnpore.	179	195
Mirzapore.	32	55
Indore.	45	69
Nagpur.	101	135
Gaya.	50	70

had returned, often disclosed a far larger population than that enumerated at the general census. In addition, however, to driving people away, plague has been responsible in many towns for a terribly heavy mortality. So far as the foreign-born inhabitants are concerned the losses on this account, at least during the earlier epidemics, have no doubt since been repaired, to a great extent, by fresh immigration. But even so the frequent outbreaks of plague must have acted as a serious drag on industrial progress, hampering alike the opening of new factories and the extension of old ones. There must also have been a large and unreplaced loss due to deaths in the families of permanent residents. It is impossible to make any estimate of the direct and indirect effects of plague on the growth of towns, but it is quite certain that they have been enormous.

73. We cannot draw any conclusions as to the tendency to urban aggregation from a comparison of the statistics of the present census with those of the previous one, when plague was still a new, and more or less local, visitation, but there can be no doubt that there is a growing tendency for people to congregate in towns of a certain kind. The introduction of machinery is rapidly causing the old cottage industries to be replaced by mills and factories; and these are necessarily located at those places where there are the best facilities for collecting the raw material and distributing the manufactured article. The jute industry is practically confined to the banks of the Hooghly near the port of Calcutta. Cotton mills are found chiefly in Western India and woollen and leather factories at Cawnpore and Delhi. Bhatpara on the Hooghly affords a striking instance of the rapid expansion of industrial towns: owing to its prosperous jute mills it has grown by 134 per cent. during the last decade, and its present population of over 50,000 is four-and-a-half times that recorded in 1872. The increasing trade of the country and the improvements in railway communications also encourage the growth of towns. Not only are the great sea ports attracting an ever-growing population, but various inland towns are benefiting from the same cause. It is its growing importance as a big railway centre which, in spite of several virulent plague epidemics, has given Delhi its increase of 12 per cent. during the last decade, while the district in which it is situated has lost 4.6 per cent. The extent to which modern conditions of trade and industry are causing the growth of towns is obscured not only by plague, which is generally far more prevalent in towns than in rural areas, but also by the decay of old centres of population, which owed their importance to past political and economic conditions. Throughout India there are many former capitals of defunct dynasties whose population is steadily dwindling. During the last ten years, Mandalay, the last capital of the kings of Ava, has lost a quarter of its population. There are other towns, such as Baroda, which, though still the capitals of Native-Chiefs, are losing population because their rulers, more enlightened than their predecessors, no longer think it essential to their dignity to maintain in the vicinity of their palace a large rabble of useless parasites. Other towns again were important distributing centres in the days of river-borne trade, but are decadent now that the railways have become the chief means of transport. Patna is a case in point; but it may confidently be anticipated that the selection of this ancient city as the capital of Bihar and Orissa will restore its waning prosperity, and that it will soon recover its lost ground, just as did Dacca during the brief period for which it was the capital of the short-lived Province of Eastern Bengal and Assam. While fostering the growth of some towns the improvement of communications by rail often has a bad effect on others. It encourages the opening of shops in the smaller towns and large villages, where people in the neighbourhood can get their supplies instead of, as formerly, having to make a journey to a more distant market; and it enables the residents in many of the larger towns to make their home in the suburbs or even further away.

Variation since 1901.

This tendency is especially noticeable in the case of Calcutta, as will be shown in paragraph 76.

Cities.

74. It is usual, when considering the statistics of towns, to give special prominence to those of cities, where the urban characteristics are most highly developed. With this object the information provided for all towns in Imperial Tables IV and V has been supplemented in the case of cities by a series of tables in the form of Imperial Tables VII, VIII, XI and XV showing the distribution of their population by age, civil condition, education, birthplace and occupation. The general practice of statisticians is to treat as cities only those places which have a population of more than 100,000. In some of the Provincial Reports a few other towns of local importance have been so treated, but in this report for the Empire as a whole the ordinary procedure has been followed. According to the above standard there are in India only 30 cities, with an aggregate population of 7,075,782 or 2·2 per cent. of the total population. Here again there is an extraordinary difference between the Indian conditions and those of western countries.

Country.	Number of cities.	Population in millions.
England	44	16·1
Germany	47	13·7
France	15	5·8
United States	50	20·3

In England the cities contain 45 per cent. of the total population, in Germany 21 and in France 14 per cent. But even in these countries the growth of cities is comparatively recent. In 1871 England had only 27 cities with 9·5 million inhabitants and Germany only 8 with 2 millions. There are signs that in India also the growth will be more rapid in the future than it has hitherto been. Between 1891 and 1901 the rate of increase in cities (excluding artificial changes) was 6·5 per cent. against only 2·5 in the general population, but for this plague is entirely responsible. It is true that between 1901 and 1911 it was only 6·1, compared with 7·1 in the general population, but for this plague is entirely responsible. The mortality from plague was exceptionally severe in cities, and as already noted an epidemic was raging in many of them at the time of the census. It is also worthy of note that while the actual increase of population during the decade in cities was 441,033, it was only 340,321 in other towns with more than 10,000 inhabitants, while there was a decrease of 216,654 in the smaller towns. The population of cities has risen since 1872 by 64 per cent., and the net increase, comparing like with like, is 43 per cent. The most rapid growth during this period is shown by Rangoon which has trebled its population. Next comes Karachi with an increase of 168 per cent. and then Madras and Howrah with 158 and 113 per cent. respectively. Since 1901, two new places, Jubbulpore and Dacca, have entered the list of cities, while Baroda has disappeared from it. Eighteen cities have gained, and twelve have lost, population. Of the latter, a few like Mandalay are really decadent, but in most, such as Nagpur and Cawnpore, the loss was due wholly to the temporary influence of plague. The progressive cities are differentiated from those which are decadent by their large immigrant population. In Bombay, Calcutta and Howrah this exceeds 70 per cent. of the total; and in Rangoon and Karachi it is close on 60 per cent. In Patna, Mandalay and Bareilly, on the other hand, it is barely 10 per cent. We will now consider in more detail the statistics of the four largest cities of the Indian Empire.

75. Just as, when speaking of London, we may mean either the Municipal and Parliamentary City of London with a night population of less than 20,000, or the administrative County of London with 4½ millions, or Greater London including the Outer Ring, that is, the Metropolitan and City Police districts, with 7½ millions; so also in speaking of Calcutta we may mean Calcutta proper, or the area administered by the Calcutta Municipal Corporation with the port, fort and canals, the population of which is 896,067, or this area plus the suburban municipalities of Cossipur-Chitpore, Manicktola and Garden Reach with 1,043,307 inhabitants, or lastly Greater Calcutta, which also includes Howrah, with an aggregate population of 1,222,313. The suburban municipalities differ from Calcutta only in respect of their Municipal govern-

ment. From a structural point of view they cannot be distinguished. The buildings are continuous throughout, and there is nothing to show where one municipality begins and the other ends. The suburban water-supply is drawn from the Calcutta mains. Howrah again is separated from Calcutta proper only by the river Hooghly. It is just as much a part of Calcutta as Southwark is of London. Like the suburban municipalities it is the dormitory of many persons who earn their living in Calcutta proper; and its industrial life is inseparable from that of the metropolis. Excluding Howrah, but including the three suburban municipalities, there are on the average 39 persons per acre. In Calcutta proper the number is 44, or 72 if we exclude the port, fort and maidan, which occupy two-fifths of the total area but contribute less than 4 per cent. to the population. The most crowded wards are in the north of the town, the maximum density being reached in Colootollah, where there are 255 persons per acre. The most sparsely inhabited ward is Alipore with only 16. The distribution of population in the suburban municipalities is remarkably uniform; it ranges from 21 persons per acre in Garden Reach to 25 in Manicktola. A striking feature of the statistics is the large number of immigrants. Less than 29 per cent. of the inhabitants of Calcutta proper claim it as their birthplace. The vast majority are immigrants, of whom 204,000 come from Bihar and Orissa and 90,000 from the United Provinces. Of the Bengal districts, the largest contributions are those from the 24-Parganas (88,000), Hooghly (48,000) and Midnapore (29,000). The volume of immigration is equally great in the suburbs and Howrah. Amongst the immigrants males largely preponderate. In the town as a whole, females are less than half as numerous as males, and the disproportion is steadily increasing.

76. The first regular census of Calcutta proper, taken in 1872, showed a population of 633,009. In 1881 there was practically no change, but in 1891 a gain of 11·4 per cent. was recorded. In 1901 there was a further increase of 24·3 per cent., but part of this was due to improved enumeration. At the present census the rate of increase in Calcutta proper has dropped to 5·7 per cent. The falling-off is due largely to the growing tendency of the inhabitants to make their home in the suburbs or even further afield. The suburban municipalities have grown during the decade by 45·3 per cent. Similar increases are shown by some of the outlying parts of Calcutta proper, e.g., Ballygunge and Tollygunge, where there has been a gain of 47 per cent. in ten years. This centrifugal tendency is due mainly to the removal of insanitary and congested *bastis*, the opening out of new roads, the acquisition of land on a large scale for public offices and institutions, the encroachment on the residential area of offices, shops and workshops due to the development of industry and trade, and the growing desire on the part of the better classes for pure air and more space than is available in the heart of the city. The decreases of 43 and 32 per cent. in the Baman-basti and Kalinga wards respectively are ascribed to the opening out or removal of congested *bastis*, and the loss of ten per cent. in Colootollah to the acquisition of land for educational and medical institutions: the decline of 3½ per cent. in Burra Bazar is due to trade expansion. At the same time, there has been a great improvement in the communications between Calcutta and its environs by tram, rail and river steamer. In illustration of the way in which the custom of sleeping beyond the city limits is growing it may be mentioned that in the course of ten years the number of season tickets issued by the East Indian Railway alone has risen to 54,000, or by 60 per cent. The birthplace statistics show that the number of persons born in Calcutta but enumerated elsewhere has risen during the same period from 36 to 88 thousand.

In 1901 a house in Calcutta was defined as the dwelling place of one or more families having a separate entrance. On the present occasion it was taken, as in 1891, to be a place bearing a separate municipal assessment number. The result is that the average number of persons per house is of no statistical value. The enquiries made in 1901* regarding the character of the houses, the number of rooms in each and their size have not been repeated.

77. Bombay, which has now a population of 979,445, was a petty town with about ten thousand inhabitants when it passed into the possession of the British in 1661. The population was estimated to be 100,000 in 1780,

* See para. 87 of the India Census Report for 1901.

180,000 in 1814 and 236,000 in 1836. At the first regular census in 1872 it had risen to 644,405, and nineteen years later, in 1891, it was 821,764. In the next decade plague, which first appeared in September 1896, caused a serious set-back; and it is estimated that by 1901 this disease had already been responsible for 114,000 deaths. The census of that year showed a decrease of about 6 per cent., but this was not wholly due to deaths. At the time when the census was taken, a virulent epidemic was in progress, and large numbers of the permanent residents had sought safety in flight. A fresh enumeration taken in 1906 by the Health Department of the Municipality gave a population of 959,537. The number now returned exceeds that of 1901 by 26 per cent., but it is only 2 per cent. more than it was at the time of the local enumeration of 1906. It is said that the census of 1911 was taken at a time when many of the immigrants from neighbouring districts had gone to their permanent homes for the *Holi* holidays, and that many of the cotton mills had closed down temporarily owing to the prohibitive price of the raw material. But apart from this, some slackening in the rate of growth is perhaps only natural. Many parts of the city are already very congested, and the operations of the Improvement Trust must inevitably tend to reduce the population of some of the most crowded sections. The city is built on an island, and the only directions in which room can be provided for the displaced population and further growth are towards the north or by reclamation from the sea. There is still ample room in the north of the island but improved traffic facilities are needed, and in parts the land will have to be raised and drained. More than three hundred acres were recovered from the sea during the decade, and a much larger scheme is in contemplation. Even so it would seem clear that it is impossible for the city to continue growing as rapidly as it did prior to 1891.

The average population per acre is now 67. It varies from 638 in the second Nagpada section to only 7 in Sion. As in Calcutta, there is a movement in progress from the congested sections in the heart of the city towards the less crowded ones on its outskirts. This tendency has been accentuated by plague. Two of the outlying sections, Worli and Sewri, have doubled their population since 1901. Worli has now about nine times the population which it had in 1872. Its rapid expansion is due to the growing number and size of its mills and workshops.

78. Like other large trading and industrial centres, Bombay is peopled mainly by immigrants; and more than 80 per cent. of its inhabitants were born elsewhere. Most of them come from the neighbouring districts; more than one-fourth of the total number are from Ratnagiri, while four other districts together supply more than a third. There are 30,000 Goanese, most of whom are in domestic service. Of the immigrants from outside the province, some 50,000, chiefly mill hands, are from the United Provinces, and 12,000 mainly shopkeepers, from Rajputana. Of the immigrants from outside India the largest number (6,000) come from the United Kingdom.

As in the other large cities of India females are in a great minority, there being only 530 of this sex to every thousand males. This proportion is the smallest yet recorded. In 1881 it was 664; it fell to 586 at the next census owing to the immigration of males to meet the rapidly growing demand for labour, and again rose to 617 in 1901, when plague had driven out more of the temporary settlers than of the permanent residents.

About two-thirds of the inhabitants are Hindus and one-fifth Muhammadans. The proportion of the latter is slightly smaller than it was ten years ago. It is said that in the plague epidemics, the Muhammadans do not leave the city so readily as the Hindus and consequently that the mortality amongst them is greater. But it would be unsafe to build any theory on fluctuations of this kind in a city with such a large immigrant population. A slight change in the sources from which the immigrants are recruited would by itself suffice materially to alter the proportions.

79. Unlike Calcutta and Bombay, Madras, which is handicapped by its distance from the coal-fields, has but few large industries. The indigenous handicrafts are decaying, and their place is not being taken by factories of the modern type. Apart from its being the head-quarters of the Local Government, Madras owes whatever importance it possesses to its position

as a distributing centre. Of its total population (518,660), only one-third are immigrants, and of these only 12 per cent. have come from places beyond the limits of the Madras Presidency. The great majority are natives of the four districts in the immediate vicinity of the city. The large proportion of females (49 per cent. of the population) constitutes another marked difference between it and the other Presidency towns; and the number of persons per square mile is only 19,210 against 28,002 and 42,585 respectively in Calcutta proper and Bombay.

The population grew fairly rapidly during the twenty years prior to 1901, but since then it has been almost stationary. There has been an increase of about

Decade.	INCREASE IN POPULATION.	
	Actual.	Per cent.
1871-81	8,296	2.1
1881-91	46,670	11.5
1891-01	56,828	12.6
1901-11	9,314	1.8

one per cent. in the number of persons born in the city, but fewer of them have been enumerated within the city limits. As compared with 1901 the net gain due to migration is less than 9,000. Mr. Molony accounts for the very small natural increase by a heavy infantile mortality. The number of children under 10

years of age is less by 5,000 than it was in 1901. The vital statistics also show that the decade has been relatively unhealthy. The recorded excess of deaths over births is 27,709, as compared with 5,083 in the previous decade. The smallness of the net gain from migration is due to the conditions already mentioned. Since 1901 several private factories have been closed, and also the Government Gun Carriage Factory, which formerly employed several thousand hands. It is possible that the great demand for labour in Burma, where wages are very high, has attracted many of the labouring classes who would otherwise have sought their living in Madras.

The population of the city apparently is not yet dense enough to drive people to the suburbs. The chief residential quarters outside the Municipal limits have increased by only 6,000, or 9 per cent., since 1901.

80. Next to the three Presidency towns, the largest city in India is Hyderabad, the capital of the Nizam's Dominions. Its

Division.	Population.
City Division	207,562
Chadarghat	161,600
Residency bazars	17,971
Secunderabad, including Bolarum.	113,490
TOTAL	500,623

population is shown in the local Census Report as 500,623. This includes not only the City division which lies on the right bank of the river Musi, but also Chadarghat and the Residency bazars on its left bank and the cantonments of Secunderabad and Bolarum. Chadarghat forms part of the City Municipality. The Residency bazars are under a separate Municipal administration, but they also may fairly be regarded as an integral part of the City. The

propriety of including the cantonments is more doubtful, but even if they be left out of account, Hyderabad still holds the fourth place amongst the cities of India.

In September 1908 the Musi river rose in flood and washed away some 18,000 houses, but in spite of this the population has grown since 1901 by 11.6 per cent. The two wards which suffered most from the flood have declined by 23 and 15 per cent. respectively, but some of the other wards show large increases, amounting in one case to 56 per cent. After the floods many people moved their houses to higher ground, with the result that there has been a wide range of variation in the different wards.

Hyderabad has hitherto made very little industrial progress, and less than a quarter of its population is drawn from outside. Owing partly to the relative paucity of immigrants, the proportion of females, 937 per 1,000 males, is much larger than in Bombay and Calcutta. In the whole area included in the return there are on the average only 16 persons to the acre, but in the city proper the density is much higher, reaching 149 to the acre in one ward and 86 in another. The average number of persons per house is 4.4. Hindus preponderate in the city as a whole, but in the city proper the Muhammadans outnumber them.

Houses and Families.

Definition of house.

81. The European conception of a house as a single structure, including not only the living and sleeping apartments of the family but also the kitchen and servants' rooms, is quite inapplicable to India. Even in the residences of Europeans, the kitchen and servants' quarters are detached from the main structure; while in those of Indians the difference in the character of the buildings is still more marked. The precise arrangement varies, but generally or at most two, single-room huts, the home of a well-to-do peasant consists of a public sitting room and of a cook-room and several apartments (frequently detached huts) which are arranged round, and open on to, a courtyard. Sometimes the courtyard is the property of a single commensal family, and sometimes it is shared by two or three families who, though separate in mess, are as a rule related to each other. Owing to the varying local conditions in different parts of the country it has always been considered inadvisable to prescribe a general definition of house for the whole of India, and the Census Superintendents of the individual Provinces and States have been left free to adopt the definition best suited to their requirements. The question can be regarded from two different points of view—the structural and the social. Where the structural criterion is taken, a house is ordinarily defined, with minor local qualifications, as the residence of one or more families having a separate independent entrance from the common way. Where the social aspect is looked to, it is defined as the home of a commensal family with its resident dependants and servants. At the earlier censuses the former type of definition was most in favour, but it is gradually being supplanted by the latter which, at the present census, has been adopted for the first time in Bombay, the North-West Frontier Province and the Punjab. Where it is otherwise suitable, the social criterion has several advantages over the structural. It is easier to apply; it enables a simpler form of house list to be used; and it furnishes a clue to the number of commensal families. The alternative definition is useless from a statistical point of view.

Number of inhabitants per house.

82. The variation in the average number of persons per house resulting from differences in the definition prescribed is often much smaller than would be supposed. The average in Bengal and the United Provinces, where a house is defined as the residence of a commensal family, is 5.3 and 4.6 respectively, as against 5.3 and 4.9 in Madras and the Central Provinces and Berar, where the structural standard is taken. In the Punjab, however, the change from the structural to the social criterion has been accompanied by a fall from 6.2 to 4.5 in the average number of persons per house. Here, as in the west of the United Provinces, the practice of erecting a number of houses inside a single enclosure is far more common than it is further south, and the decrease is no doubt due partly to the change in the definition. But the high mortality of recent years must also have had much to do with it. The influence of these adverse conditions on the average size of a family is seen in the United Provinces, where there is a drop from 5.5 to 4.6, although there the definition was the same at the present census as in 1901. It is possible that the change from the structural to the social standard, which was introduced in 1901, was not then fully observed by enumerators who had held the same office in 1891, but the fall must have been due mainly to the unhealthiness of the decade.

Comparison between houses and families.

83. In spite of the joint family system, the number of houses corresponds very closely to the number of families in the European sense, i.e., married couples with their children and dependants. The total number of houses is 63.7 million and there are 64.6 million married females aged 15 and over. Except amongst the higher castes, who form but a small fraction of the total population, the joint family is not nearly so common as is frequently supposed. It scarcely exists amongst Muhammadans, the aboriginal tribes and the lower castes of Hindus. With all these classes it is the general custom for sons to set up separate establishments as soon as they marry, or at least when their wives begin to bear children; and even when they still remain joint, the family almost invariably breaks up on the death of the father. Moreover, where the joint family system is in vogue, there is often a strong disruptive tendency, owing to

quarrels among the women, the dislike of a man's wife to see a large part of his earnings taken for the support of others, and her natural desire to be free from the control of her mother-in-law. Separation in mess often takes place while the family property is still held in common. This is especially the case amongst the land-holding and trading classes.* At the same time it must also be admitted that the comparison has to some extent been vitiated by accidental causes. Even where a family remains joint it often happens that the sons earn their living away from home, and the members of a single commensal family may thus occupy two or three separate "houses." Moreover, a number of shops and other non-residential buildings were classed as houses at the census because a caretaker occupied them at night, and it was therefore necessary to include them in the Enumerator's list. If these disturbing factors could be eliminated, the average number of persons to a house would no doubt be larger than that shown in the returns; but as they affect only a small proportion of the total number of houses, the difference would probably not be very appreciable. In the returns as they stand, the average population per house is 4.9 or much the same as in European countries. In the British Islands it ranges from 4.8 in Scotland to 5.2 in England and Wales.

In several of the Provincial Reports the opinion has been expressed that the joint family shows a growing tendency towards disintegration, owing to various new factors, such as the growth of individualism, the rise in the standard of living, which makes it increasingly difficult for a large number of people to

live together, and increased migration, due to the better means of communication afforded by the railways. The figures lend some support to this view, but it would be unsafe to rely too much on them in view of the changes which have been made in the definition. In Madras and Bengal, where the definition has remained

the same, there are just as many persons per house now as there were twenty years ago.

84. The character of the buildings varies with the climate. Where it is very damp the walls are made of wattle; this is plastered with mud in the north-east of India, where there is a well marked cold season. Where the climate is dry, the walls are usually built of mud. In tracts with a very slight rainfall, the roof is often flat, but ordinarily it has a double slope. If thatching grass is plentiful, the roof is usually constructed of that material; elsewhere tiles are commonly used, but corrugated iron is becoming increasingly common, wherever people can afford to use it. As exceptional types of houses, mention may be made of the round beehive-like huts of the Todas on the Nilgiris, the blanket tents of the nomad tribes of Baluchistan, the leaf huts of the Juangs, and the houses built on piles to which access is obtained by means of a ladder which are common amongst various hill tribes in Assam and Burma.

* An interesting note on the joint family system as now existing in the Punjab will be found on page 29 of the Report for that Province.

Average population per house.				
1881	.	.	.	5.8
1891	.	.	.	5.4
1901	.	.	.	5.2
1911	.	.	.	4.9

Type of buildings.

SUBSIDIARY TABLE I.

Density, water-supply and crops.

Density, water-supply and crops.

Province, State or Agency.	MEAN DENSITY PER SQUARE MILE.		PERCENTAGE OF TOTAL AREA.		PERCENTAGE OF CULTIVABLE AREA.		Percentage of gross cultivated area which is irrigated.	Normal rainfall in inches.	PERCENTAGE OF GROSS CULTIVATED AREA UNDER			
	Of total area.	Of cultivated area.	Cultivable.	Net cultivated.	Net cultivated.	Double cropped.			Rice.	Other Crops.		
1	2	3	4	5	6	7	8	9	10	11		
India.	175	693	64	38	59	8	17	...	31			
Ajmer-Merwara	185	*	*	*	*	*	*	*	*			
Assam	115	768	76	18	24	2	1	116	74	Tea 6, Jute 1, Oil seeds 5, Other crops 14.		
Baluchistan	6	*	*	*	*	*	*	*	*			
Bengal	551	1,162	70	50	71	17	4	70	60	Jute 8, Other food crops 13, Other crops 10.		
Bihar and Orissa	344	802	73	52	71	18	12	53	54	Maize 5, Other cereals and pulses 27, Other crops 14.		
Bombay	145	444	63	38	61	2	14	46	9	Other cereals 55, Cotton 15, Pulses 12, Other crops 9.		
Burma	53	515	42	13	32	1	7	95	72	Other cereals and pulses 11, Oil seeds 8, Other crops 9.		
Central Provinces and Berar	122	360	65	39	60	4	3	48	20	Wheat 12, Pulses 23, Other crops 45.		
Coorg	111	792	30	14	45	4	3	127	58	Coffee 31, Other food crops 2, Ragi 4, Other crops 5.		
Madras	291	785	58	38	65	9	30	43	28	Other food crops 20, Cholam, etc., 31, Other crops 21.		
North-West Frontier Province	164	528	55	31	56	8	23	21	..	Wheat 35, Maize 13, Barley 9, Jawar, etc., 14, Other crops 29.		
Punjab	177	453	57	33	58	10	32	31	4	Wheat 27, Pulses 23, Other crops 46.		
United Provinces	427	829	72	53	74	15	28	42	14	Wheat and Barley 27, Gram 12, Millet 17, Other crops 30.		
Baroda State	248	342	83	73	87	4	5	*	6	Bajra 15, Cotton 17, Jawar 14, Other crops 48.		
Central India Agency	121	432	47	25	53	3	5	32	5	Wheat 11, Jawar 17, Gram 11, Other food crops 56.		
Cochin State	675	1,224	57	56	97	17	4	103	42	Other crops 58.		
Hyderabad State	162	301	60	54	80	*	6	30	4	Wheat 4, Pulses 7, Other crops 85.		
Kashmir State	37	1,022	5	4	84	17	24	24	17	Wheat 12, Pulses 6, Maize 29, Other crops 30.		
Mysore State	197	600	45	33	72	3	15	38	12	Ragi 36, Cholam 10, Pulses 12, Other crops 30.		
Rajputana Agency	82	*	*	*	*	*	*	*	*			
Travancore State	452	1,111	61	45	74	7	18	65	29	Palm 7, Other trees 2, Other crops 62.		
I.—Lower Burma	80	470	45	16	36		1	146	92	Other food crops 1, Other crops 7.		
II.—Upper Burma	39	596	39	10	27	3	18	48	41	Other food crops 12, Other crops 47.		
III.—Assam	115	766	76	18	24	2	1	92	74	Tea 6, Oil seeds 5, Other crops 15.		
IV.—Bengal	534	1,162	70	50	71	17	4	76	69	Jute 8, Other food crops 13, Other crops 10.		
V.—Orissa and Madras Coast, North	225	774	57	35	61	9	33	50	50	Maize and Jawar 8, Other food crops 14, Other crops 23.		
VI.—Bihar and United Provinces, East	526	882	81	60	74	20	17	47	29	Other food crops 33, Other crops 38.		
VII.—United Provinces, West and Punjab, East and North.	274	557	57	42	74	14	20	34	4	Wheat 23, Other food crops 20, Other crops 53.		
VIII.—Kashmir	37	1,022	5	4	84	17	24	24	17	Wheat 18, Maize 29, Other crops 36.		
IX.—North-West Dry Area	72	508	55	19	34	4	62	10	9	Wheat 30, Other crops 61.		
X.—Baluchistan	6	*	*	*	*	*	*	*	*			
XI.—Rajputana, East, and Central India, West.	131	*	*	*	*	*	*	*	*			
XII.—Gujarat	153	363	77	30	65	4	4	24	9	Wheat 46, Other food crops 12, Other crops 33.		
XIII.—Central India, East, Central Provinces and Berar and Chota Nagpur.	136	398	64	38	60	4	4	47	30	Wheat and Pulse 27, Other food crops 4, Other crops 39.		
XIV.—Deccan	169	333	62	51	63	1	7	30	5	Other food crops 36, Other crops 59.		
XV.—Malabar and Konkan	382	1,486	51	30	59	8	1	101	40	Other food crops 9, Other crops 42.		
XVI.—Madras South-East	386	951	61	43	70	9	37	39	26	Jawar 11, Other food crops 13, Other crops 45.		

NOTE.—The figures in column 2 have been calculated on the areas shown in column 1, but the figures for Madras exclude the areas shown in column 1 for the purpose of column 2.

* Not available.

NOTE.—The figures in column 2 have been calculated on the areas shown in Imperial Table I. Those for Provinces are inclusive of the States attached to them, but the figures for Madras exclude those for Cochin and Travancore which are given separately. For the purpose of columns 3 to 11 the areas shown in the Revenue returns have usually been taken. In calculating the percentages, those areas for which figures are not available have been left out of account. The figures against India, except those in column 2, relate only to the main British Provinces.

In the case of Natural Divisions the figures for normal rainfall are those supplied by the Meteorological Department, which have been calculated on an average of about thirty years. In the case of Provinces they have been taken from the Provincial Reports where the average usually relates to the decade 1901-10.

SUBSIDIARY TABLE II.

Comparison of area and population of districts in the main provinces.

Province.	Population of British Districts.	Area of British Districts.	Number of Districts.	AREA AND POPULATION OF DISTRICTS.				Number of Districts with a population exceeding one million.
				Average Area.	Average Population.	Maximum Area in square miles.	Maximum Population.	
Assam	6,713,635	53,015	12	4,418	559,470	Lushai Hills 7,227 Khasi and J. Hills 6,027 Sylhet 5,388 Sibsagar 4,996	Sylhet 2,472,671 Sibsagar 690,299 Kamrup 667,828 Goalpara 600,643	1
Bengal	45,483,077	78,699	28	2,810	1,624,395	Mymensingh 6,249 Midnapore 5,186 Chittagong Hill Tracts 5,138 24 Parganas 4,844	Mymensingh 4,526,422 Dacca 2,960,402 Midnapore 2,821,201 24 Parganas 2,434,104	21
Bihar and Orissa	34,490,084	83,181	21	3,961	1,642,385	Ranchi 7,104 Hazratnagar 7,021 Sonthal Parganas 5,463 Purnea 4,998	Darbhanga 2,929,682 Muzaffarpur 2,845,514 Saran 2,289,778 Gaya 2,159,498	17
Bombay (Excluding Aden.)	19,626,477	122,979	26	4,730	754,864	Thar and Parkar 13,888 Karachi 11,782 Hyderabad 8,034 Ahmednagar 6,613	Ratnagiri 1,203,638 Satara 1,081,278 Poona 1,071,512 Hyderabad 1,037,144	6
Burma	12,115,217	230,839	41	5,630	295,493	S. Shan States 40,434 Upper Chindwin 15,163 N. Shan States 14,294 Myitkyina 10,977	S. Shan States 900,202 Hanthawaddy 539,109 Henzada 532,357 Akyab 529,943	None
C. P. and Berar	13,916,308	99,823	22	4,537	632,559	Raipur 9,776 Chanda 9,312 Bilaspur 7,618 Yeshwantpur 5,205	Raipur 1,324,856 Bilaspur 1,146,223 Amraoti 875,904 Nagpur 809,901	2
Madras	41,405,404	142,330	26	5,474	1,592,516	Vizagapatnam 17,221 Ganjam 8,380 Nellore 7,973 Kurnool 7,580	Vizagapatnam 3,189,821 Malabar † 3,015,119 Tanjore 2,362,689 South Arcot 2,362,566	19
N.W. F. Province.	2,196,938	18,418	5*	2,684	439,387	Dera Ismail Khan 3,460 Hazara 2,984 Kohat 2,695 Peshawar 2,605	Peshawar 865,009 Hazara 608,028 Dera Ismail Khan 256,120 Bannu 250,086	None
Panjab	19,974,956	99,779	29	3,441	688,792	Kangra 9,978 Multan 6,107 Muzaffargarh 6,052 Mianwali 5,395	Lahore 1,036,158 Sialkot 979,553 Ferozepore 959,657 Gujranwala 923,419	1
United Provinces	47,182,044	107,267	48	2,235	982,959	Garhwal 5,629 Almora 5,372 Mirzapur 5,233 Gorakhpur 4,528	Gorakhpur 3,201,180 Basti 1,830,421 Meerut 1,519,364 Azamgarh 1,492,818	22

* Excludes Malakand, Khyber, Kurram, Tochi and Wana, the areas for which are not available.

† Includes Lacadives.

SUBSIDIARY

Distribution of the population

TAHSILS WITH A POPULATION

Serial No.	Province, State or Agency.	Tahsils with a population					
		Under 150.		150—300.		300—450.	
		Area.	Population (000's omitted.)	Area.	Population (000's omitted.)	Area.	Population (000's omitted.)
1		2	3	4	5	6	7
INDIA.							
		1,088,902	65,072	365,029	75,197	128,618	47,272
		61.8	20.8	20.7	24.0	7.3	15.1
1	Ajmer-Merwara	...	...	2,711	501	...	...
		...	...	100.0	100.0	...	...
2	Assam	46,861	2,361	5,624	1,187	5,007	1,791
		77.2	33.4	9.3	16.8	8.3	25.4
3	Baluchistan	134,638	835	...	...	...	...
		100.0	100.0	...	...	...	...
4	Bengal	12,892	734	4,110	976	13,683	5,167
		15.9	1.6	5.1	2.1	16.8	11.1
5	Bihar and Orissa	27,623	2,814	36,029	7,632	19,188	6,912
		24.7	7.3	32.2	19.9	17.2	18.0
6	Bombay	113,738	9,115	63,378	12,807	7,977	2,873
		60.8	33.7	33.9	47.3	4.3	10.6
7	Burma	214,101	7,614	18,110	3,647	674	232
		91.9	62.9	7.8	30.1	3	1.9
8	Central Provinces and Berar	90,245	7,915	39,473	7,725	1,279	393
		68.9	49.4	30.1	48.2	1.0	2.4
9	Coorg	1,364	134	218	41	...	...
		86.2	76.6	13.8	23.4	...	...
10	Madras	41,689	4,047	41,459	8,608	34,325	12,659
		29.0	9.7	28.8	20.6	23.8	30.2
11	North-West Frontier Province	6,226	811	1,975	448	1,997	676
		67.0	36.9	14.7	20.4	14.9	30.8
12	Punjab	59,665	4,105	45,519	9,753	16,175	5,831
		46.2	17.0	35.2	40.3	12.5	24.1
13	United Provinces of Agra and Oudh	21,667	1,988	13,171	2,823	21,261	8,368
		19.3	4.1	11.7	5.9	18.9	17.4
14	Baroda State	1,808	138	4,496	1,038	1,554	549
		22.1	6.7	54.9	51.3	19.0	27.0
15	Central India Agency	77,367	9,337	...	...	...	...
		100.0	100.0	...	...	...	...
16	Cochin State	...	...	...	...	...	...
		...	...	...	...	...	...
17	Hyderabad State	39,813	4,192	41,913	8,378	899	291
		48.1	31.3	50.7	62.6	1.1	2.2
18	Kashmir State	75,224	1,092	7,494	1,522	1,714	544
		89.1	34.6	8.9	48.2	2.0	17.2
19	Mysore State	10,914	1,250	16,524	3,596	1,989	651
		37.0	21.5	56.1	62.0	6.7	11.2
20	Rajputana Agency	107,130	6,280	21,857	4,250	...	...
		83.1	59.6	16.9	40.4	...	...
21	Travancore State	3,167	290	968	265	611	244
		41.7	8.5	12.7	7.7	8.1	7.1

NOTE.—In Ajmer-Merwara and Rajputana details for Tahsils are not available. In the former area the District, and in the latter the State, has been taken as the unit. The discrepancy between the areas here shown and those given in Imperial Table I is due to the fact that in certain cases (e.g., the Punjab and Burma), the Revenue areas have been taken. In the case of Bengal, the area of the Sundarbans has been excluded from this Table.

TABLE III.

classified according to density.

PER SQUARE MILE OF

PER SQUARE MILE OF											Serial No.
450—600.		600—750.		750—900.		900—1,050.		1,050 and over.			
Area.	Population (000's omitted).	Area.	Population (000's omitted).	Area.	Population (000's omitted).	Area.	Population (000's omitted).	Area.	Population (000's omitted).		
8	9	10	11	12	13	14	15	16	17		
83,598 4.7	43,364 13.8	49,002 2.8	32,776 10.4	25,276 1.4	20,523 6.5	11,848 7	11,480 3.7	10,499 6	17,736 5.7		
...	...	...	...	...	...	...	...	...	...	1	
2,389 3.9	1,200 17.0	778 1.3	521 7.4	...	...	...	...	...	...	2	
...	...	...	...	...	...	...	...	...	...	3	
17,017 20.9	8,833 19.1	13,781 16.9	9,308 20.1	8,817 10.8	7,228 15.6	5,201 6.4	4,996 10.8	5,862 7.2	9,064 19.6	4	
8,845 7.9	4,630 12.0	7,482 6.7	4,935 12.8	7,477 6.7	6,059 15.8	4,226 3.8	4,123 10.7	959 8	1,330 3.5	5	
828 4	453 1.7	520 3	340 1.2	...	...	345 2	347 1.3	137 1	1,150 4.2	6	
85	44 4	72	50 4	5	4	...	...	92	524 4.3	7	
...	...	...	...	...	...	...	...	...	...	8	
...	...	...	...	...	...	...	...	...	...	9	
16,155 11.2	8,097 19.3	6,449 4.5	4,423 10.6	2,385 1.7	1,908 4.5	790 5	759 1.8	672 5	1,369 3.3	10	
450 3.4	262 11.9	...	...	...	...	...	...	...	...	11	
5,223 4.1	2,650 11.0	1,559 1.2	1,027 4.2	1,006 8	822 3.4	...	...	...	...	12	
31,601 28.1	16,698 34.8	17,418 15.5	11,547 24.1	4,755 4.2	3,834 8.0	851 8	832 1.7	1,622 1.5	1,924 4.0	13	
84 1.0	44 2.1	228 2.8	161 7.9	...	...	...	...	12 2	103 5.0	14	
...	...	...	...	...	...	...	...	...	...	15	
418 30.7	194 21.1	271 19.9	165 18.0	225 16.5	170 18.5	...	...	162 11.9	298 32.5	16	
23	13 1	...	...	...	...	...	...	50 1	501 3.8	17	
...	...	...	...	...	...	...	...	...	...	18	
...	...	...	...	...	...	...	...	48 2	309 5.3	19	
...	...	...	...	...	...	...	...	...	...	20	
480 6.3	246 7.2	444 5.9	299 8.7	606 8.0	498 14.5	435 5.7	423 12.3	883 11.6	1,164 34.0	21	

NOTE.—The figures in italics represent the proportion per cent. which the area and population of each density group bear to the total area and population of the Province, State or Agency concerned. The figures for Provinces are inclusive of the States attached to them except in the case of the North-West Frontier Province, where they are for British territory only, and Madras, where they exclude Cochin and Travancore.

SUBSIDIARY TABLE IV.

Distribution of the population between towns and villages.

Province, State or Agency.	AVERAGE POPULATION PER		NUMBER PER MILLI-RESIDING IN		NUMBER PER MILLI OF URBAN POPULATION RESIDING IN TOWNS WITH A POPULATION OF				NUMBER PER MILLI OF RURAL POPULATION RESIDING IN VILLAGES WITH A POPULATION OF			
	Town.	Village.	Towns.	Villages.	20,000 and over.	10,000 to 20,000.	5,000 to 10,000.	Under 5,000.	5,000 and over.	2,000 to 5,000.	500 to 2,000.	Under 500.
1	2	3	4	5	6	7	8	9	10	11	12	13
INDIA	13,817	394	95	905	525	207	200	68	18	139	483	360
Provinces	15,715	412	93	907	563	211	175	51	20	146	491	343
Ajmer-Merwara	28,079	486	280	720	921	...	79	...	...	213	474	313
Andamans and Nicobars	...	118	...	1,000	...	...	...	...	...	...	...	...
Assam	6,833	236	20	980	...	482	403	115	2	55	385	558
Baluchistan	8,268	233	120	880	684	...	133	183	...	60	452	488
Bengal	24,753	355	65	935	708	193	83	16	22	114	452	412
Bihar and Orissa	18,368	379	37	963	620	214	142	24	17	141	453	389
Bombay	18,693	612	190	810	635	168	153	44	21	174	568	237
Burma	17,904	292	93	907	586	190	204	20	10	67	534	389
C. P. and Berar	10,502	327	85	915	330	256	350	64	...	76	422	502
Coorg	4,991	335	57	943	...	...	628	372	...	38	551	411
Madras	17,536	678	118	882	511	303	176	10	53	291	504	152
N.-W. Frontier Province	15,353	628	133	867	621	170	160	49	45	278	466	211
Punjab	15,913	531	111	889	606	146	185	63	22	151	550	277
United Provinces	11,509	400	102	898	491	190	196	123	3	96	522	379
States and Agencies.	9,887	341	100	900	401	195	283	121	10	114	454	422
Assam State	74,650	184	216	784	1,000	...	...	...	...	34	346	620
Baluchistan States	3,317	146	24	976	...	...	503	497	...	58	359	583
Baroda State	9,878	533	199	801	315	279	276	130	...	167	567	266
Bengal States	4,525	228	28	972	...	479	302	219	26	66	468	440
Bihar and Orissa States	6,200	193	9	991	...	...	889	111	...	21	251	738
Bombay States	8,831	427	157	843	308	248	278	166	9	133	503	355
Central India Agency	10,209	260	84	916	345	198	356	101	1	65	376	558
Central Provinces States	7,365	240	17	983	...	...	325	675	...	14	306	680
Hyderabad State	15,239	599	97	903	485	185	318	12	5	164	587	244
Kashmir State	4,932	322	95	905	525	...	172	303	2	51	455	492
Madras States	16,614	942	73	927	614	216	130	40	92	318	490	100
Cochin	12,217	2,951	130	880	621	...	289	90	328	500	169	3
Travancore	19,281	813	62	938	562	355	65	18	39	282	556	123
Mysore State	7,234	308	113	887	470	35	204	291	2	40	423	535
Punjab States	10,152	351	84	916	259	306	369	66	8	145	499	348
Rajputana Agency	10,098	285	128	872	350	238	296	116	3	102	414	481
Sikkim State	...	279	...	1,000	...	...	...	...	...	...	265	735
United Provinces States	17,931	340	108	892	829	...	63	108	13	37	323	627

NOTE.—In this Table the Agencies and Tribal areas of the N.-W. P. Province have been excluded.

SUBSIDIARY TABLE V.

Number per mille of each main Religion who live in Towns.

Province, State or Agency.	NUMBER PER MILLE WHO LIVE IN TOWNS.					
	All Religions.	Hindu.	Jain.	Parsi.	Musalman.	Christian.
1	2	3	4	5	6	7
INDIA	95	88	296	865	123	213
Provinces	93	90	354	883	110	267
Ajmer-Merwara	280	219	283	996	523	872
Assam	20	24	233	...	20	51
Baluchistan	120	669	900	976	61	958
Bengal	65	97	592	926	37	478
Bihar and Orissa	37	34	378	657	80	84
Bombay	190	173	369	880	211	542
Burma	93	533	861	897	352	224
Central Provinces and Berar	85	79	255	896	379	605
Coorg	57	45	670	765	206	270
Madras	118	108	106	926	246	203
North-West Frontier Province	133	540	750	980	100	980
Punjab	111	135	533	952	104	248
United Provinces	102	72	397	924	269	441
States and Agencies	100	84	262	754	208	117
Assam State	216	353	973	...	135	485
Baluchistan States	24	79	...	...	22	164
Baroda State	199	181	388	799	423	216
Bengal States	28	32	351	...	18	864
Bihar and Orissa States	9	10	132	...	71	2
Bombay States	157	131	283	517	324	271
Central India Agency	84	66	240	859	402	822
Central Provinces States	17	24	399	759	187	10
Hyderabad State	97	71	182	778	318	383
Kashmir State	95	128	977	1,000	86	551
Madras States	73	70	927	833	114	70
Cochin	120	103	992	1,000	162	150
Travancore	62	63	1,000	...	106	50
Mysore State	113	94	201	990	347	702
Punjab States	84	72	508	889	121	491
Rajputana Agency	128	107	235	898	323	626
United Provinces States	108	35	578	...	280	172

NOTE.—The Agencies and Tribal areas of the N.-W. P. Province have been omitted from this Table.

SUBSIDIARY TABLE VI.

Towns classified by Population.

Class of Town.	Proportion to total Urban Population.	Number of Females per 1,000 Males.	INCREASE PER CENT. IN TOWNS AS CLASSIFIED AT PREVIOUS CENSUS.			INCREASE PER CENT. IN URBAN POPULATION OF EACH CLASS FROM 1881.	
			1901 to 1911.	1891 to 1901.	1881 to 1891.	(a) In towns as classified in 1881.	(b) In the total of each class in 1911 as compared with the corresponding total in 1881.
Total	100.0	847	+ 1.0	+ 5.9	+ 10.9	+ 17.5	+ 24.3
I—100,000 and over	23.8	711	+ 6.1	+ 6.5	+ 16.2	+ 30.8	+ 33.6
II—50,000—100,000	10.1	842	— 1.5	+ 4.5	+ 11.3	+ 12.0	+ 24.8
III—20,000—50,000	18.7	863	+ 2.1	+ 4.5	+ 9.0	+ 12.9	+ 24.0
IV—10,000—20,000	20.7	913	— 1.2	+ 4.1	+ 6.6	+ 11.9	+ 27.3
V—5,000—10,000	20.0	932	— 2.1	+ 6.6	+ 9.2	+ 14.1	+ 19.2
VI—Under 5,000	6.7	888	+ 2.9	+ 14.1	+ 17.3	+ 28.8	+ 3.4

SUBSIDIARY TABLE VII.

Main Statistics for Cities.

City.	Population 1911.	Number of persons per square mile.	Number of females per 1,000 males.	Proportion of foreign born per mille.	PERCENTAGE OF VARIATION, INCREASE (+), DECREASE (-).				
					1901-1911.	1891-1901.	1881-1891.	1872-1881.	1872-1911.
1	2	3	4	5	6	7	8	9	10
Calcutta with Suburbs	1,043,307	24,841	495	702	+ 9.9	+23.3	+10.1	- 3.1	+ 44.6
Bombay	979,445	42,585	530	804	+26.2	- 5.6	+ 6.3	+20.0	+ 52.0
Madras and Cantonment	518,660	19,210	946	334	+ 1.8	+12.6	+11.5	+ 2.1	+ 30.5
Hyderabad and Cant.	500,623	10,012	937	227	+11.6	+ 8.1	+13.0	...	+ 36.3*
Rangoon and Cantonment	293,316	10,476	409	583	+19.5	+34.8	+35.7	+35.9	+197.0
Lucknow and Cantonment	259,798	11,484	794	425	- 1.6	- 3.3	+ 4.5	- 8.2	- 8.8
Delhi and Cantonment	232,837	15,248	739	361	+11.6	+ 8.3	+11.1	+12.3	+ 50.8
Lahore and Cantonment	228,687	7,816	596	436	+12.7	+14.8	+12.4	+25.4	+ 82.3
Ahmedabad and Cant.	216,777	21,678	848	360	+16.6	+25.3	+16.3	+ 6.6	+ 81.1
Benares and Cantonment	203,804	20,394	926	218	- 4.4	- 4.6	+ 2.2	+22.6	+ 14.3
Agra and Cantonment	185,449	11,002	830	162	- 1.4	+11.5	+ 5.3	+ 7.5	+ 24.5
Howrah	179,006	20,985	562	756	+13.6	+35.2	+28.4	+ 8.0	+112.9
Cawnpore and Cantonment	178,557	18,360	728	420	-12.0	+ 4.5	+24.9	+23.4	+ 41.9
Allahabad and Cantonment	171,697	11,246	785	146	- 2	- 1.8	+ 9.4	+11.4	+ 19.5
Poona and Cantonment	158,856	12,220	862	338	+ 3.6	- 5.0	+24.4	+ 9.1	+ 33.6
Amritsar and Cantonment	152,756	15,276	719	202	- 6.0	+18.8	-10.0	+11.8	+ 12.5
Karachi and Cantonment	151,903	2,139	683	592	+30.2	+10.9	+43.0	+29.6	+167.7
Mandalay and Cantonment	138,299	5,532	984	93	-24.8	- 2.6	...	...	-26.8*
Jaipur	137,098	45,699	935	(a)	-14.4	+ 9	+11.4	...	- 3.8*
Patna	136,153	15,128	922	98	+ 1.0	-18.4	- 3.2	+ 7.4	- 14.3
Madura	134,130	19,161	999	150	+26.6	+21.2	+18.5	+42.0	+158.0
Trichinopoly and Cant.	123,512	15,439	1,006	189	+17.9	+15.6	+ 7.3	+10.3	+ 61.4
Srinagar and Cantonment	126,344	15,735	848	19	+ 3.0	+ 3.1	...	...	+ 6.2†
Bareilly and Cantonment	129,462	16,552	834	110	- 2.8	+ 8.4	+ 6.7	+10.1	+ 23.8
Meerut and Cantonment	116,227	26,327	753	183	- 1.6	- 1.1	+19.0	+22.3	+ 42.8
Surat and Cantonment	114,868	38,289	926	155	- 3.7	+ 9.2	- 6	+ 1.8	+ 6.5
Dacca	108,551	15,917	721	198	+21.0	+10.0	+ 4.1	+14.2	+ 58.2
Nagpur	101,415	5,071	889	281	-20.6	+ 9.2	+19.0	+16.4	+ 20.1
Bangalore C. and M. Station	100,834	7,447	948	343	+12.5	-10.5	+ 7.0	+14.3	+ 23.3
Jubbulpore and Cant.	100,651	6,710	796	428	+11.2	+ 6.9	+11.4	+37.1	+ 81.5

(a) Not available.

* Relates to the period 1881-1911. † Relates to the period 1891-1911.

SUBSIDIARY TABLE VIII.

Persons per house and houses per square mile.

Province, State or Agency.	AVERAGE NUMBER OF PERSONS PER HOUSE.				AVERAGE NUMBER OF HOUSES PER SQUARE MILE.			
	1911.	1901.	1891.	1881.	1911.	1901.	1891.	1881.
1	2	3	4	5	6	7	8	9
INDIA	4.9	5.2	5.4	5.8	35.8	31.6	33.9	31.7
Ajmer-Merwara	4.1	4.4	5.3	7.2	45.3	39.6	37.5	23.7
Andamans and Nicobars	7.2	4.6	...	...	1.2	...	...	...
Assam	4.6	4.6	4.8	5.5	25.0	23.1	22.8	18.5
Baluchistan	4.9	4.5	...	...	1.3	2.3	...	...
Bengal	5.3	5.2	5.2	6.3	104.5	100.2	96.0	74.6
Bihar and Orissa	4.9	5.1	5.7	6.4	66.5	62.2	71.4	60.9
Bombay	4.9	5.0	5.3	5.5	20.5	26.5	25.6	21.1
Burma	4.9	5.0	5.3	5.5	10.7	8.8	8.3	7.8
Central Provinces and Berar	4.9	4.8	5.0	4.5	24.8	21.3	22.5	22.7
Coorg	5.3	5.9	6.4	7.9	21.3	19.3	16.9	14.1
Madras	5.0	5.4	5.3	5.5	55.0	60.3	47.6	40.5
North-West Frontier Province	4.5	6.1	6.1	6.0	32.4	21.3	17.9	15.0
Punjab	4.5	6.2	6.6	6.8	39.6	29.7	27.2	25.1
United Provinces	4.6	5.5	5.7	6.4	92.3	77.7	74.2	62.8
Baroda State	4.6	4.0	4.5	4.6	61.9	63.5	65.5	56.0
Central India Agency	4.0	5.1	5.2	5.5	26.4	21.3	25.2	22.3
Hyderabad State	4.6	4.9	5.0	5.3	32.8	27.6	27.6	25.9
Kashmir State	4.9	6.3	5.7	...	6.6	5.7	5.5	...
Cochin State	5.7	...	...	...	...	...	...	...
Mysore State	5.3	5.6	5.4	4.8	120.0	107.1	92.1	92.0
Rajputana Agency	5.0	5.1	5.5	5.7	36.3	37.7	32.0	29.6
Sikkim State	4.3	5.1	5.5	4.9	18.9	15.0	16.7	16.2
Travancore State	5.3	5.1	...	4.9	5.9	3.9	...	...
	5.2	5.1	5.0	...	87.3	81.9	76.8	73.3

NOTE.—The figures for Provinces are inclusive of the States attached to them except in the case of the N.-W. F. Provinces, where they are for British territory only, and Madras, where they exclude Cochin and Travancore.

CHAPTER II.

Movement of Population.

Introductory Remarks.

85. In the last Chapter the distribution of the population as it stood on the 10th March 1911 has been examined, and an endeavour made to explain its varying density in different parts of the country and the manner in which it is apportioned between towns and villages. In the present Chapter the statistics will be regarded in their dynamical aspect; the results of the recent census will be compared with those of previous enumerations and the causes of the variations which are thus disclosed will be investigated. The raw material for this discussion will be found in Imperial Table II. In the Subsidiary Tables at the end of this Chapter it is worked up in various ways in order to bring out more clearly the most important features of the changes which have taken place.

As stated in the Introduction, the first general census was taken in the year 1872 and the second in 1881; and since then enumerations have been effected every ten years. The variations disclosed at the successive enumerations up to 1901 have been fully examined in the previous Census Reports. It is unnecessary to repeat at length what has already been said, and the discussion will here be directed mainly to an examination of the changes which have taken place since 1901.

86. According to the census returns the total population of India has increased by 7.1 per cent., during the last decade and by 52.9 per cent., since 1872, but the real gain since the latter date is very much less than this. Large tracts of country including the Central India and Rajputana Agencies, Hyderabad and the Punjab States, which had been omitted from the returns for 1872, were included in those for 1881. In 1891 the greater part of Upper Burma and Kashmir and several smaller units were enumerated for the first time. In 1901 the most important additions were a portion of Upper Burma and the greater part of Baluchistan. In 1911 the Agencies and Tribal Areas in the North-West Frontier Province together with a few smaller areas were included within the scope of the operations.

Census of	Population.	Variation per cent. since previous census.
1872	206,162,360	...
1881	253,896,330	+23.2
1891	287,314,671	+13.2
1901	294,361,056	+ 2.5
1911	315,156,896	+ 7.1

Apart from the additions due to the enumeration of new areas, which can be definitely ascertained, there has been a further, but less easily recognizable, gain resulting from the relatively greater accuracy of the later enumerations. It is known that in many places the census of 1872 was very imperfect, while even in 1881, though a very great improvement was effected, there were still numerous omissions. Since then a high standard of accuracy has been obtained and although improvements have still been effected at each succeeding census, they have had comparatively little effect when considered from the point of view of the total population. There is no doubt that the arrangements now made for the enumeration of travellers both by land and water are far more efficient than they were even in 1891. There has also been a great improvement since then in the accuracy of the census in backward tracts, such as the States of the Central Provinces. This accounts in part for the extraordinarily large proportional increases in these and similar areas. Their total population,

however, is so small that the gain from this cause becomes negligible when the population of India as a whole is considered. Sometimes, moreover, as in Baluchistan, greater accuracy has resulted, not in a gain, but in a loss. It is unnecessary to go more fully into this question, as it was discussed in the last Census Report. The general result is exhibited in the marginal statement, from which it will be seen that the real increase in the population in the last 39 years is estimated at about 50 millions, or 19 per cent. This is less than

Period.	Increase due to	Real increase	Total.	Rate per cent. of real increase.
	Inclusion of new areas.	Improvement of mortality.	Population.	
	Mil- lions.	Mil- lions.	Mil- lions.	
1872-81	33.0	12.0	3.0	48.0
1881-91	5.7	3.5	24.3	33.5
1891-01	2.7	2	4.1	7.0
1901-11	1.8	—	18.7	20.5
Total	43.2	15.7	50.1	109
				19.0

NOTE.—Part of the real increase has of course occurred in the new areas shown in column 2 of the statement.

will be convenient to consider them for the individual Provinces and States of which it is composed.

Effect of migration on the growth of population.

87. We may first, however, enumerate the various factors which determine the growth of population and pass briefly in review the conditions in respect of these factors which have prevailed during the decade. One of the most obvious of these factors is migration. If the number of immigrants exceeds that of the emigrants the natural growth of population will of course be artificially augmented, while the reverse is the case when emigrants are in excess. It is in the smaller units, such as districts, that the effect of migration is most marked; and we shall see further on that, even in the case of provinces, this factor is often of considerable importance. In India as a whole, however, it counts for very little. Table XI shows that the number of immigrants into India from other countries was about 627,000 in 1901 and 650,000 in 1911. It is less easy to ascertain the number of emigrants. We know from the census returns for Great Britain and the Colonies that the total number of persons there enumerated who were born in India was about 915,000 in 1901 and 1,023,000 in 1911, but we have no information regarding the emigration to adjoining countries in Asia, including Afghanistan, Nepal, Bhutan and China. There is, however, no reason to suppose that its volume has varied much during the last ten years. In the Report for 1901 the total number of emigrants to these adjoining countries was estimated roughly at 208,000. If we assume that the number is still the same, we get 581,000 as the net excess of emigration over immigration in India at the present census, as compared with 496,000 ten years ago. The adverse balance thus shows an increase of 85,000 during the decade. This is too small to be worth consideration when dealing with a variation of more than twenty millions.

The other aspects of the movements to and from India will be considered in the next Chapter.

Other factors which determine the growth of population.

88. Apart from migration the growth of the population is determined by the relation which exists between the birth and death rates; and this again depends partly on the racial characteristics and social practices of the people and partly on external conditions, such as their material well-being and the state of the public health. It is difficult to distinguish between the influence of race and that of social customs. Some races undoubtedly have a greater fecundity and longevity than others, but it is impossible to say how far these characteristics are inherent and how far they are the outcome of their customs and environment. In India the birth-rate is everywhere much higher than in Europe, but this is due largely to the universality of marriage. It is higher amongst Muhammadans and Animists than amongst Hindus, but this is

because the Hindus have a much larger proportion of widows at the child-bearing ages. The high birth-rate again is largely discounted by a heavy mortality, especially amongst infants and women at child-birth. This aspect of the subject will be considered more fully in the chapters on Age and Sex. It will suffice to say here that social practices change but slowly, and that the periodic fluctuations in the rate at which the population is growing depend almost entirely on the second set of factors, namely, those affecting the material condition of the people and the state of the public health, which we shall now proceed to discuss.

89. In a country like India, where more than two-thirds of the inhabitants are dependent on agriculture, the state of the harvests is of primary importance. When the crops are good the people are prosperous, but when they fail famine supervenes. All agricultural countries are liable to this scourge, and India is peculiarly so, owing partly to the variability of its rainfall and partly to the way in which the soil is parcelled out amongst petty farmers, who have no capital and no organized system of credit, and whose millions of field labourers are at once thrown out of work when the crops fail. In former times the effects of famine were far more serious than they are at the present day. There was no organized system of State relief; and in the absence of railways, even local crop failure meant starvation to many. All this has now been changed. A watchful eye is kept on the state of the crops, the course of prices and the returns of births and deaths. Programmes of relief works have been prepared and are carefully kept up to date, and all necessary arrangements have been made for commencing relief operations the moment they are needed. But even so, there are many obstacles in the way of complete success, especially in the Native States, where the preliminary organization is less complete than in British territory; and whenever a severe famine occurs its effect is immediately seen in a diminished birth-rate and a high mortality. In British territory, at least, the mortality is rarely due to actual starvation, but rather to diseases brought on by improper food and epidemics of cholera, which frequently attack the crowded relief camps. The influence of famine will be repeatedly referred to in the discussion of the growth of the population in individual Provinces and States. We shall see how the famine of 1877 reduced the population of Mysore and Madras and how those of 1897 and 1900 caused heavy losses in the Central Provinces and Berar, Rajputana, Central India and Bombay. We shall also see that the immediate effect of these visitations soon disappears. The persons who die are those at the extremes of life, the very old and the very young many of whom would in any case have died during the next few years. The number of persons in the prime of life is but little affected. Also, after a period of suspended activity, the reproductive powers of the people reassert themselves. For some years after a famine births are thus more numerous than usual and there is an abnormally low death-rate. The result is an unusually rapid growth of population. Thus in the decade 1881-91 which followed on the great South India famine of 1877, Madras had an increase of 15.7 and Mysore of 18.1 per cent., and after the famines of 1897 and 1900 the Central Provinces and Berar gained 17.9 per cent. in the decade 1901-11. That the rebound was not equally great in Bombay and Rajputana is due to a continuance of adverse conditions as will be explained below.

90. The decade preceding the census of 1911 was free from wide-spread famines such as those of the preceding ten years. In 1907 there was a partial failure of the monsoon which was felt over a wide area, extending from Bihar to the Punjab and Bombay, and caused actual famine in the United Provinces and in a few districts elsewhere. In several other years the crops suffered locally to a varying extent from want of rain or, occasionally, from an excess of it. Prices ruled high in most years, but this, though it pressed hard on the poorer sections of the non-agricultural population, was beneficial to the cultivators and did no great harm to the landless labourers, whose wages, when not paid in kind, rose in much the same proportion. There has been an extension of the area under special crops, such as jute and cotton, which are more profitable to the cultivators than food-grains. The period was certainly

State of crops in decade 1901-10.

not so favourable as that ending in 1891, but in India as a whole, it may be regarded as one of moderate agricultural prosperity.

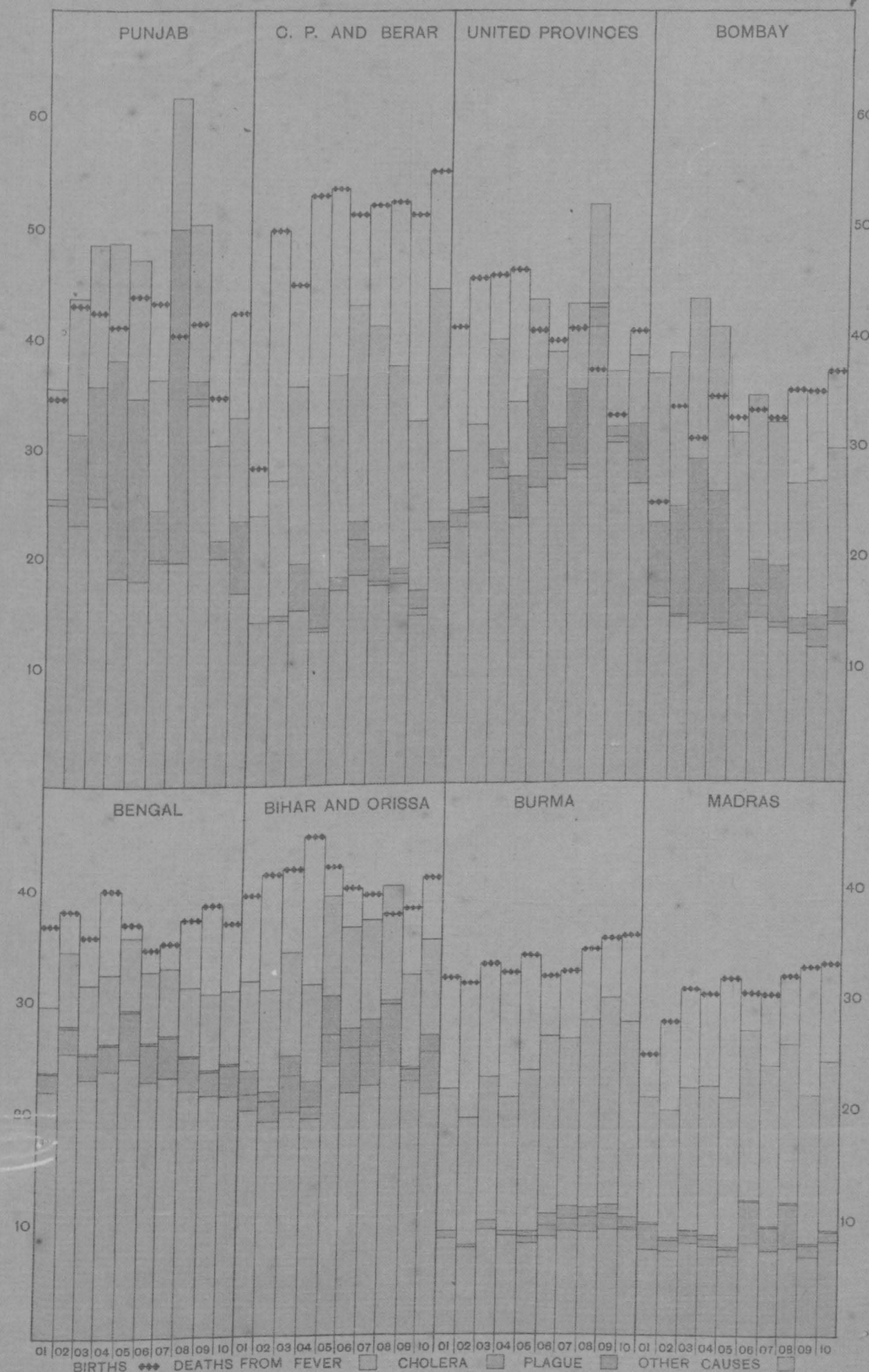
91. India is peculiarly liable to fatal epidemics. From time to time cholera breaks out with great virulence and small-pox also at times causes a very heavy mortality. Until recently, however, the greatest harm has been done by epidemic fevers, such as the Burdwan fever epidemic which devastated West and Central Bengal a third of a century ago and *Kalā Ajār* which more recently wrought such havoc in the Brahmaputra valley. In the decade which has just ended epidemics of malarial fever decimated the irrigated tracts of the Eastern and Central Punjab and the Ganges-Jumna Doab in the United Provinces, where in 1908 alone the reported mortality from "fevers" was nearly two millions. On the whole, however, the decade might perhaps have been regarded as an average one from the point of view of the public health, had it not been for the ravages of plague, from which India had been practically free in recent times, until it broke out in Bombay in 1896. Spreading from that city it had already by March 1901 caused a recorded mortality of about half a million. Since then it has continued its ravages, especially in Bombay and Upper India. The mortality from it rose from about a quarter of a million in 1901 to 1·3 millions in 1907. It fell below a quarter of a million in each of the next two years, but in 1910 it exceeded half a million. The total number of deaths from plague during the decade was nearly 6·5 millions, of which over one-third occurred in the Punjab and two-fifths in the United Provinces and Bombay taken together. The disease fortunately has failed to establish itself in Bengal, Assam and on the East Coast and in the extreme south of the peninsula. This moreover is only the recorded mortality. As is well known, when epidemics are raging, the reporting agency breaks down and a large number of deaths escape registration. The omissions are most numerous in the Native States, where registration is usually far less accurate than in British territory. A peculiarity of plague which has been noticed and explained elsewhere is that, in northern India at least, it attacks women more than men, and people in the prime of life more than the young and old. Consequently its after effects must shortly become apparent in a diminished birth-rate in the tracts most seriously affected.

If it be accepted that the mortality of the decade apart from plague was normal, it follows that, but for this disease, the population at the census of 1911 would have been greater than it was by at least 6·5 millions. In other words the population would have increased by 9·3 instead of 7·1 per cent.

92. Great progress continues to be made with the extension of irrigation facilities. The total area actually irrigated in 1910-11 was 22·5 million acres (this was about half the area "commanded") against 18·9 million acres at the commencement of the decade. The total capital expenditure on Government irrigation works classed as productive, which in 1910-11 yielded a return of more than 8 per cent, now exceeds 42 crores of rupees as compared with 34·5 crores in 1900-01, and that on protective works has risen during the same period from 2 to 4 crores. Even more rapid progress may be expected in the near future. The great Triple Canal Project in the Punjab, which is nearing completion at a cost of more than ten crores of rupees, is designed to irrigate two million acres in the Chej, Rechna and Bari Doabs. A still more ambitious scheme is the proposed Kistna reservoir in Madras which is expected to cost 8·5 crores, and to have a capacity double that of the enlarged Assuan dam. Various other large schemes are in contemplation, and some of them have already been sanctioned.

93. Although Indian trades and industries are still in their infancy, as compared with those of Western countries, rapid progress has been made in recent years, and especially so during the last decade. The estimated value of the imports of merchandise from foreign countries rose from 53 crores of rupees in 1880-81 to 81 crores in 1900-01 and to 134 crores in 1910-11. The exports of merchandise were valued at 75 crores in 1880-81, at 108 crores in 1900-01 and at 210 crores in 1910-11. During the first mentioned period of twenty years the growth in the value of imports was 52 per cent., and it was 65 per cent. during the ensuing period of ten years. The corresponding in-

Diagram showing the birth and death rates per mille in certain provinces.



creases in exports were 44 and 95 per cent. respectively. Since 1900-01 the value of the imports of metals, machinery and railway materials has risen by 100 and that of cotton, including piece goods, by 50 per cent. In 1880-81 there were in the whole of India only 58 cotton mills employing 48 thousand operatives. By 1910-11 the number of mills had risen to 250 and that of their employes to 231 thousand. During the same period the number of jute mills from 21 to 58, and the number of persons employed in them from 35 to 216 thousand. The Burma oil industry has made great strides. There has been a remarkable expansion of railway and engineering work-shops, arms and ammunition factories and the like. The most notable and promising of recent developments is the establishment of Tata's Iron and Steel works at Sakchi which, with its imitators when they come, may be expected to make India self-supporting in the matter of rails and girders. In 1880-81 the total production of coal was barely one million tons; but in 1910-11 it exceeded 12 millions. The expansion of these and other industries is not only a benefit to the country as a whole, but is also of great use in opening out fresh avenues of employment for the swarm of landless labourers who formerly were dependent solely on agricultural labour for their subsistence. Another way in which the growth of the material prosperity in recent years can be gauged is by the rate at which the precious metals are being absorbed. The value of the net imports of gold and silver in 1880-81 was respectively 3.7 and 5.3 crores. In 1900-01 it was 11.9 and 12.7 crores, and in 1910-11, 27.9 and 11.8 crores. The net imports of gold showed a further rise of 50 per cent. in 1911-12.

94. The improvement in railway communications since 1880 has been very great. In that year the number of miles open to traffic was less than 9,000; since then there has been an addition of roughly 8,000 miles in each successive decade; and by the end of 1910 the total mileage exceeded 32,000. The traffic has increased even more rapidly. In 1910 over 371 million passengers and 66 million tons of goods were carried, as compared with 49 and 10 millions respectively in 1881. The net earnings of the State and guaranteed railways in 1910 represented 5½ per cent. on the capital outlay.

Improvement in communications by rail.

Variation by Provinces and States.

95. The small British province of Ajmer-Merwara is surrounded by the States of the Rajputana Agency. The first reliable census was that of 1881 when the population was returned as 460,722. During the next ten years it grew by 17.7 per cent. The province was badly affected by the great famine of 1899-1900 which brought about a decrease of 12 per cent. at the ensuing census. This loss, though considerable, was far smaller than in the adjoining States. Since 1901 plague has been prevalent throughout the province. There was famine in 1905-06, and also in parts in 1901-02. There has, besides, been a considerable loss by migration: the number of immigrants is much the same as it was ten years ago, but the emigrants number 84,110 against 25,293 in 1901. It is this which mainly explains the low rate of increase during the last decade, which is only 5.1. There is a gain of nearly 20 per cent. in the natural population, i.e., amongst persons born in the province irrespective of the place where they were enumerated. The variation is very unequally distributed between the two districts into which the province is divided; for while in Ajmer the increase is only 3.5, in Merwara it is 10.6, per cent.

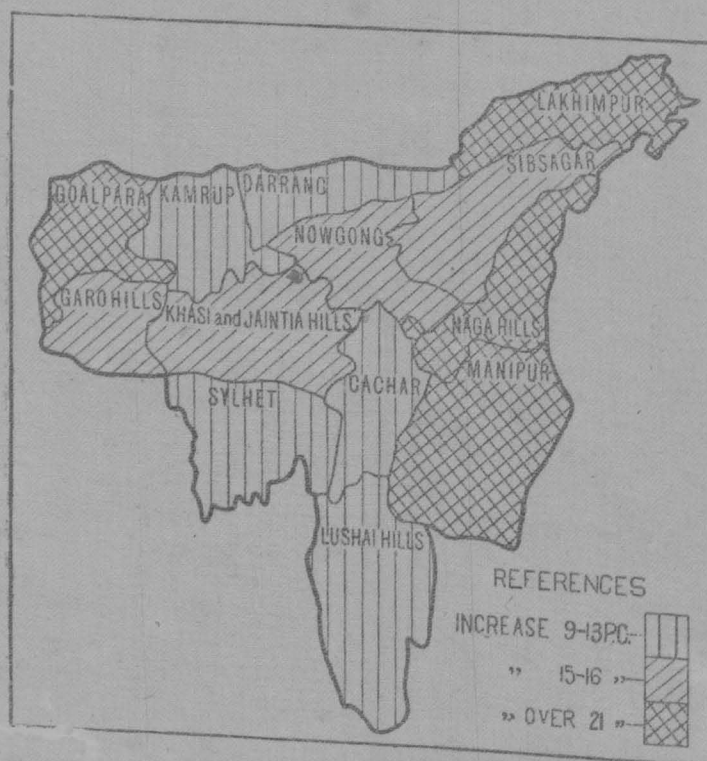
Ajmer-Merwara.

96. The conditions of Assam are peculiar owing to the extensive immigration to its tea gardens. During each of the periods 1872-81 and 1881-91, the rate of increase, after allowing for improved enumeration, was roughly 9 per cent. In the course of the next ten years the growth of the population received a severe check owing to the ravages of *Kalā Ajār*, an acute form of malaria which was first observed in the Garo Hills in 1869, whence it spread gradually up the Brahmaputra valley as far as Golaghat. Its ravages were greatest in Nowgong, where the population was reduced by it below the figure at which it had stood nearly thirty years previously. The net result in the Brahmaputra valley of the deaths from this disease on

Assam.

the one hand and of continued immigration on the other, coupled with a normal natural growth in the other parts of the Province, was an increase in 1901, excluding additions due to the inclusion of new areas, of 5.9 per cent. The bulk of this was due to immigration; and only 1.4 per cent. was the result of natural growth. Since 1901 the conditions have been favourable. The crops have been good; and the high prices of food-grains have benefited the cultivators, while they have done no harm to the tea garden coolies, who are

Map of Assam showing variations in the population since 1901.



supplied by their employers with rice at a fixed rate per maund. About the middle of the decade, the tea industry, which had been suffering for some years from the effects of over-production, began to show signs of reviving prosperity. The improvement has since been continuous, with the result that in 1910 the labour force exceeded by 114,000 the number employed ten years previously. During the same period the land revenue of the province rose from 58 to 68 lakhs of rupees. The opening of the

Assam-Bengal Railway and the extension of the Eastern Bengal State Railway to Gaubhati have greatly improved communications, and have facilitated an influx of settlers to the Brahmaputra valley from North and East Bengal. In several years there were bad cholera epidemics, but, on the whole, the public health was satisfactory. *Kalā Ajār* has disappeared,* and there has been no plague.

97. The result of these favourable conditions is an increase, in the area enumerated at the previous census, of 893,928, or 14.6 per cent. For the first time the rate of increase in the natural, is greater than that in the actual, population. The greatest proportional growth has occurred in the Brahmaputra valley and the Hill districts, where the rate is nearly double that recorded in the Surma valley. The large increase (30 per cent.) in Goalpara is due mainly to an extensive immigration of Muhammadans along the course of the Brahmaputra from Mymensingh, Rangpur and Pabna. In the Bengal Census Report for 1901 it was noted that these hardy and prolific cultivators were gradually working their way northwards, and the movement has now spread beyond the limits of that province. These people are accustomed to the risks arising from diluvion and devastating floods, which other cultivators are unwilling to face; and as the *chars* already occupied fill up, the surplus population finds no difficulty in securing land in the higher reaches of the river. Lakhimpur which registered an increase of more than 40 per cent. at each of the three previous censuses, has now gained 26 per cent. This slackening of the rate is the natural result of the development which had already taken place. All the available land near the existing lines of communication has been taken up, and further rapid expansion is possible only in the more remote portions of the district. The gain of 16 per cent. in Nowgong represents to a great extent a recovery from the losses caused by *Kalā Ajār*; and the railway has brought settlers into the south of the district from the Surma valley and Eastern

* There has been a small local recrudescence in Golaghat which so far shows no signs of spreading.

Bengal. The population has grown rapidly, throughout the hills except in North Cachar, where the figures for 1901 were inflated by the presence of a large number of coolies engaged on railway construction. The large increase in the Naga Hills is due in part to the inclusion of new areas; and that in Manipur to greater prosperity, the result of better administration during the period when the State was under British management. It is interesting to note that the Khasi and the Jaintia Hills, where in 1901 the population seemed to have received a check, again shows a rapid rate of increase. It would be useless to compare the results of the census with the recorded births and deaths, as the return of these occurrences are still very imperfect.

In the Census Report for 1901 it was concluded, from the statistics of 49 castes and tribes peculiar to Assam, that the indigenous population of the Brahmaputra valley was declining in the western districts; and the net loss in the course of ten years was estimated at 6.4 per cent. Mr. McSwiney shows that the same castes have now an increase of more than 11 per cent. Although this is less than the general rate of increase in the valley, it is sufficient to disprove the idea that the Assamese are a dying race. The decline in the previous decade was due to temporary causes which have now happily been removed.

98. The first attempt at a general census of Baluchistan was carried out in 1901. But even then the operations were so incomplete that it is impossible to regard the results as sufficiently accurate to furnish a basis for comparison. Nearly two-fifths of the total area was left untouched; and of half the remainder only a rough estimate was made, which has now been proved to have been too sanguine. It seems probable that in the distant past Baluchistan enjoyed a much heavier rainfall than it does at the present day. In the western portion of the country there are numerous traces of ancient irrigation works and, in some parts, of terraced fields. "Whether Baluchistan under present conditions could support a much larger population than it actually does is," says Mr. Bray, "open to question. Geologists indulge in gloomy prophecies of its gradual dessication and ultimate depopulation. But large schemes for damming up its mighty floods are now being evolved, and should they come into being, the census reports of the future may have a very different tale to tell." In recent years the alien population has greatly increased; so also probably has the semi-indigenous. "As for the tribesmen, and other indigenous peoples, the very general impression is that they are barely holding their own: if one year finds more in the country than another, this is simply because large numbers of them are nomadic, or to use their more expressive term *khāna-badōsh*—people ready to shift in or out of the country at a moment's notice, as conditions change for the better or the worse." At the time when the census was taken, owing to drought, large numbers of Brāhūis and Baloch had wandered from Baluchistan into Afghanistan and Persia.

Births and deaths are registered only in Quetta town. In the absence of any of the data from which to gauge the growth of the indigenous population, the Provincial Superintendent has made an interesting enquiry regarding the number of children born to 6,641 fathers, and the number still surviving. It appears that on the average every ten fathers had 59 children of whom 36 were surviving on the date of enquiry. In considering these figures it must be remembered that the fathers were of all ages, and that in many cases the family was far from complete; that they include the not very common cases where a man had two or more wives; and that the enquirers omitted to include sterile unions. The last consideration is of less importance than would appear at first sight. The number of such unions is small; and when a man's first wife fails to bear children he almost invariably marries again.

99. When the direct administration of Bengal and Bihar was taken over by the East India Company, the country had just emerged from the throes of a terrible famine in which it is estimated that one-third of the population was swept away. The eastern littoral had suffered repeatedly from the devastations of the Maghs, and the country north of Orissa, which was still in the hands of the Marāthās, was constantly being overrun and pillaged by their marauding bands. Though various attempts were made from time to time during the first half of the 19th century to ascertain the popu-

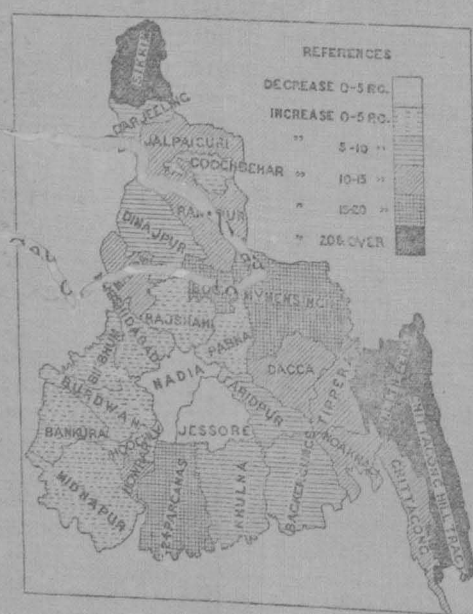
lation of individual districts, we have no reliable information prior to the census of 1872. The population of the area which now forms the Presidency of Bengal was then found to be 34,687,292. It has now risen to 46,305,642, a gain of 33 per cent. During these 39 years, though there have been local instances of crop failure, famine has been a negligible factor in the determination of the rate of increase. This has been very uniform in the successive inter-censal periods. In the first of these periods a severe epidemic of malaria, the well-known "Burdwan fever," reduced the population of West

Period.	Rate of increase per cent.
1872-1881	6.7
1881-1891	7.5
1891-1901	7.7
1901-1911	8.0

Bengal; and in 1876 a terrible tidal wave on the coast of Noakhali and Backergunge caused widespread destruction. In the rest of the province there was everywhere a large increase; but the pioneer census of 1872 was admittedly imperfect, and part of the apparent gain was no doubt attributable to better enumeration. During the next ten years, the fever epidemic crossed the Hooghly and invaded the districts of Nadia and Jessore. Parts of North Bengal also were affected, but East Bengal and the metropolitan districts continued to grow rapidly. The conditions were very similar during the decade ending in 1901. Plague then appeared for the first time, but the resulting mortality was small. There was a cyclone on the Chittagong coast in 1897, the loss of life from which was estimated at 50,000.

100. Since 1901 the crops have, on the whole, been satisfactory. The rice

Map of Bengal showing variations in the population since 1901.



harvest was poor in 1905 and the three succeeding years, and prices ruled high, partly on this account and partly because of the ever-growing area devoted to the cultivation of jute, which in ordinary years is more profitable than rice. There was a general rise in wages on account of the great demand for labour in factories and mines. Industrial development was fostered to some extent by the *swadeshi* movement, which helped to revive the cottage weaving industry and led to the opening of numerous small factories for the manufacture of soap, combs, etc., and a limited number of larger concerns; but the greatest expansion was in undertakings financed and controlled by Europeans. The number of jute mills rose during the decade from 34 to 58, and the average number of operatives from 110 to 200 thousand. The number of cotton mills has risen from ten to fifteen, and that of their

operatives from 8,000 to nearly 12,000. The number of employes in railway and engineering workshops, dockyards, arms and ammunition factories and the like has also largely increased. There has, at the same time, been a considerable development of railway communication; and several important extensions have been made in connection with the Eastern Bengal, East Indian and Bengal-Nagpur Railways. In fine, all the material conditions were favourable to a continued rapid growth of the population. The only obstacle was the state of the metropolitan area; and cholera, though there were epidemics in several years, has failed materially to affect the growth of the population. But malaria has long been the special scourge of this province. It is not only responsible for a heavy mortality, but it saps the vitality of the survivors and reduces the birth-rate. Except in the neighbourhood of Calcutta, where industrial developments are the most important factor, it may be said that the growth of the population is determined mainly by the varying prevalence of malarial affections.

101. Of the four natural divisions the largest increase has occurred in East

Natural Division.	Rate of increase per cent.
West Bengal	2.8
Central Bengal	4.5
North Bengal	8.0
East Bengal	12.1

Bengal, where it is due entirely to natural growth. This tract is, perhaps, the healthiest in the province. It lies mainly in the joint delta of the Ganges and Brahmaputra rivers, where the fertility of the soil is replenished yearly by fresh deposits of silt. Two-thirds of the inhabitants are Muhammadans who, as is now well known, are more prolific than the Hindus. The growth of this favoured tract has been continuous for the last forty years, and the population now exceeds by 57 per cent. that recorded in 1872. Dacca, which in 1901 already had 952 persons to the square mile, has added 12 per cent. to its population, and Tippera, which had 848, has added nearly 15 per cent. Such rapid growth in a densely peopled and purely agricultural tract might almost be described as phenomenal.

North Bengal, which has increased at the same rate as the Presidency as a whole, contains three districts which have added 14 per cent. and upwards to their population and two which are practically stationary. In the others the rate of increase is moderate. Bogra, which has grown by 15 per cent., has been opened out by the railway; and half of it lies in the sparsely peopled Barind which is now rapidly being brought under the plough. The conditions are very similar in Malda which has an increase of 14 per cent. Jalpaiguri, which has grown at about the same rate, is extremely malarious, but the tea cultivation is extending rapidly in the head-quarters sub-division, while the jungles of the Alipur sub-division are being cleared by settlers from other districts, who are attracted by the fertile soil and the low rates of rent.

Excluding the metropolitan area, the districts of West and Central Bengal are all nearly stationary. The largest increase is less than 4 per cent., while two districts—Nadia and Jessore—show a decrease. The population of both these districts is less now than it was thirty years ago, though they still show a considerable increase as compared with 1872.

The statistics of variations according to density are of much interest. During the last ten years the actual addition to the population has been as great in thanas which at the commencement of the decade had a population exceeding 1,050 to the square mile as in those where it was less than 150. The greatest increase of all occurred in thanas with a population of from 300 to 450. The largest proportional growth, however, has occurred in the most sparsely inhabited tracts.

The recorded excess of births over deaths during the decade was about 2 millions, while the increase of population according to the census was nearly 3½ millions. It is said that births are not so fully recorded as deaths, but the difference between the above figures is explained by the fact that the number of immigrants to the province exceeds that of its emigrants by a million and a half.

102. According to the census of 1872 the population of the tracts which now form the province of Bihar and Orissa was 28,210,382. It has now risen to 38,435,293, or by 36.2 per cent. The census of 1872, however, was by no means as accurate as the subsequent enumerations, and a great part of the gain recorded in 1881 was fictitious. As compared with the latter year, the increase is only 15.1 per cent. The ten years ending in 1891 were prosperous and there was a fair general growth. During the ensuing decade plague made its first appearance in Bihar and caused a very heavy mortality. The seasons were often unfavourable to agriculture, and there was famine in North Bihar and the 1900. The earlier of these calamities was most severe in North Bihar and the later one in Chota Nagpur. In consequence of these adverse conditions the general rate of increase was the lowest on record.

The first four years of the decade ending in 1911 were a period of fair agricultural prosperity, but they were succeeded by four years of depression. In 1907 high floods followed by drought caused a local famine in Patna. The early cessation of the rains in the same year resulted in slight famine in

Ranchi and acute scarcity in Orissa, Bhagalpur, Muzaffarpur and the Sonthal Parganas. Darbhanga suffered again from famine in 1909, but in most parts the crops were good in the last two years of the decade. The area irrigated by the Sone and Orissa canals rose from 900 square miles in 1901 to over 1,200 in 1910. The decade has seen a considerable development of railway communication. The Bengal and North Western Railway system has been linked up with that of the Eastern Bengal State Railway, and the opening of the Grand Chord of the East Indian Railway has greatly reduced the lead from the coal mines of Manbhum to Upper India. The output of coal is between two and three times as great as it was ten years ago, and the coal mines of the province now produce two-thirds of the total output of India. The number of mica mines has largely increased. The Iron and Steel works recently established by Messrs. Tata at Sakchi in Singhbhum are the largest undertaking of the kind which has yet been seen in India. Though they were not then in full working order, they already at the time of the census gave employment to nearly five thousand workmen. The rapid development of the above industries coupled with the growing demand for labour in Calcutta has

Note.—In this map Orissa Tributary States have been divided into nine divisions according to the rates of increase, and Saraikeia and Kharswan treated as part of Singhbhum.

brought about a general rise in wages, including those of agricultural labourers. On the other hand, plague has continued to cause a very heavy mortality in Bihar, and the number of deaths recorded from it during the decade was about half a million. Malaria was prevalent in Shahabad and in the northern part of Bihar. The volume of emigration, already large in 1901, is now greater than ever, the excess of emigrants over immigrants being 1·5 millions, or 50 per cent. more than in 1901. It is this which mainly accounts for the fact that while, according to the vital statistics, there was an excess of 1·9 million births over deaths, the census shows an increase of only 1·2 millions in the area from which the returns are received.

103. The general rate of increase is the resultant of very different proportions in the four natural divisions. The Chota Nagpur plateau has a gain of 14 per cent. while the other three divisions are practically stationary. North Bihar has gained 1.9, Orissa 0.9 and South Bihar 0.7 per cent. The Chota Nagpur plateau is peopled mainly by aboriginal tribes who multiply rapidly when the conditions are favourable. The largest increase (20 per cent.) has occurred in the Orissa States. This may be due in part to the excellent arrangements made on the present occasion by the Political Agent for the enumeration of this difficult and sparsely peopled country; but most of it is no doubt genuine. There has been extensive immigration from the adjoining British districts. Three States which showed a decline in 1901 owing to the famine of the preceding year have more than made good the losses then sustained. Manbhum, which has the largest increase (18.9 per cent.) of any British district, owes its development entirely to the coal mines, whose growing demand for labour has turned the former net loss from migration into a large gain. During the past twenty years the Jheria thana, which with Topechanchi contains the bulk of the collieries, has trebled its population, and Topechanchi has nearly doubled it. In spite of a growing loss from migration, Ranchi with its healthy climate and prolific aboriginal population has gained 16.8 per cent. Its density of 195 persons to the square mile, though small in comparison with that of the alluvial districts of the Gangetic plain, is dense for an upland tract where the area available for permanent rice cultivation is limited. Many of the ryots' holdings are already so small that the income from them has to be eked out by earnings from other sources. The gain of 16.5 per cent. in Sambalpur is noteworthy in view of the abnormal amount of emigration which has taken place. The smallest increases were recorded in the little

district of Angul and in the Sonthal Parganas. The latter district, though it contains a large area unfit for cultivation, already has 345 inhabitants to the square mile, and it would seem as if there is room for very few more. The natural growth of its population is largely discounted by emigration; the number of persons born in this district who were enumerated beyond its limits is now 321,283 compared with 226,008 ten years ago.

In North Bihar, Purnea and Champaran alone show a fair rate of growth. These are the only districts in this natural division which have gained by migration; and they are, with Bhagalpur, the most sparsely peopled. Muzaffarpur, which now has 937 persons to the square mile, has added 3 per cent. to its population. Darbhanga, with 875, is stationary. The decrease of 4·9 per cent. in Saran follows on a decrease about half as great at the previous census. These losses are due to plague, which was responsible for 166,000 deaths during the decade. There is, moreover, extensive emigration from this district to the industrial centres further east.

104. Although South Bihar has only 515 persons to the square mile, compared with 646 in North Bihar, it is more densely inhabited in proportion to the area fit for permanent rice cultivation. Its rainfall, as we have already seen, is smaller and less certain. In the southern part the surface is broken and undulating, and the soil is not very fertile. Plague is no doubt mainly responsible for the decreases which have occurred in Patna and Shahabad, but even before that disease appeared, their rate of growth was very slow. In 1891, when there was no plague and agricultural conditions were favourable, the increase in South Bihar was only 2·7 per cent. The population is now slightly less than it was in 1881.

Orissa, after increases of about 7 per cent. in two successive decades, has now gained less than 1 per cent. Throughout the decade the seasons were less favourable to agriculture in this division than in any other part of the province. In 1907 and 1908 there was scarcity in all three districts; it was acute in Balasore, and in Puri it culminated in famine. The opening of the Bengal-Nagpur Railway has greatly encouraged emigration. The net loss from this cause is now 231,502 compared with 151,654 in 1901.

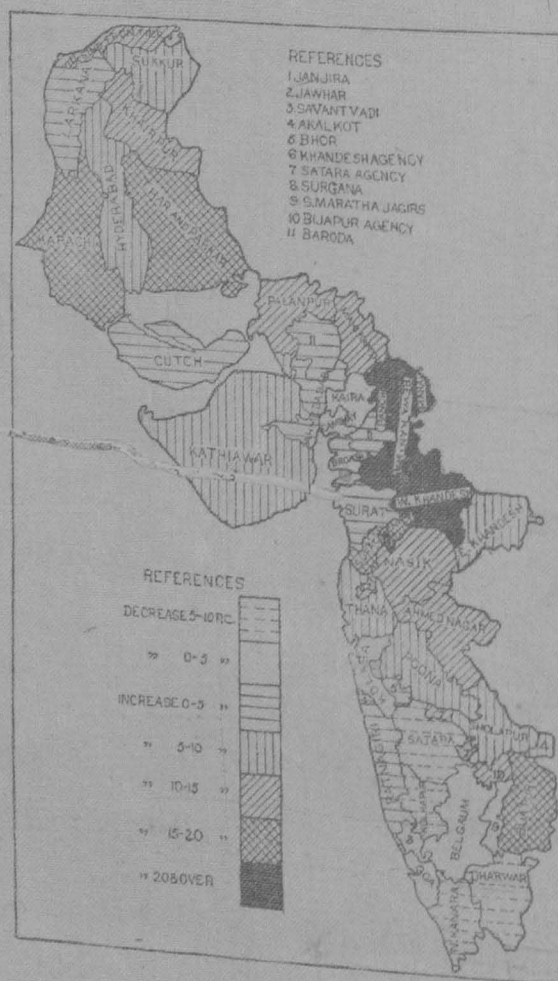
In this province the bulk of the population is found in the old settled districts of Bihar. These districts were already highly cultivated many centuries before the British occupation, and they escaped the losses from internecine wars which many other parts of India sustained during the decline of the Moghal empire. They have hitherto taken no part in modern industrial development; and in many parts the population is already pressing hard upon the soil. In these circumstances a rapid growth of population is not to be expected. Unlike Bengal the increase of population is confined to the sparsely populated thanas, while those with the highest density are decadent. The decrease in their case is due mainly to the extended emigration of the labouring classes to Calcutta and other industrial centres.

105. A rough estimate of the population of the Bombay Presidency was made in 1854, but the first census with any pretensions to accuracy was that taken in 1872, when the population was found to be 23,099,332. Even this count cannot have been very complete; for in spite of the famine which devastated the Deccan and Karnatak in 1878, the census of 1881 disclosed, not a loss, but a small gain of 1·4 per cent. The famine losses were rapidly recouped—thanks to a succession of good harvests—and the census of 1891 showed an increase of 15·1 per cent. For the first half of the next decade the progress was probably normal; but then followed five most disastrous years. Plague broke out and spread gradually all over the province. Nor did trouble come singly. In 1897 the Deccan was badly affected by famine, and there was another even more severe famine in 1900. The brunt of this latter famine fell on Gujarat, which until then had been regarded as outside the famine zone. The combined effect of these visitations was seen in a decrease of 5·5 per cent. at the census taken in 1901.

During the ensuing decade the crops were very poor in Gujarat in 1901 and 1904, in the Deccan and Karnatak in 1905, and in most parts of the province in 1907. But, on the whole, the agricultural conditions were not unfavourable; and in Sind they were above the average. The cultivation of cotton

which is more profitable than cereals has become more extensive; but in Gujarat

Map of Bombay showing variations in the population since 1901.



Note.—Savanur has been omitted from this map as the area is small. The variation there is 2.9 per cent.

only 6.3 per cent. *viz.*, 6.0 per cent. in the British districts and 7.3 in the State; otherwise it would have been nearly twice as great. The vital statistics are unreliable. Instead of a gain of 1,110,801 they show a net loss of 217,469; and even after allowing for migration the difference is still very considerable.

106. Excluding Bombay City, which has already been dealt with (paragraph 77), the greatest increase (9 per cent.) has occurred in Sind. This division, except the Karachi City, enjoys practical immunity from plague; and its cultivation depends on canal irrigation and not on the caprices of the rainfall. Gujarat, which suffered a loss of 13 per cent. during the previous decade, now has a gain of 4 per cent. The Bhil country, in this division and Khandesh, has grown by no less than 24 per cent. This represents in the main a recovery from losses during the famine of 1900 which was exceptionally severe in this tract; but to some extent it is due to a more complete enumeration of these timid aborigines. The net increase in the Konkan was only 2 per cent.; and in the Karnatak the population was stationary. Of individual districts, six show decreases varying from 8 to 2 per cent. Plague was the cause of this in Kaira, Satara, Dharwar and Belgaum, malaria in Kanara, and emigration to Bombay City in Kolaba.

The influence of the famines of 1897 and 1900 is well marked in the age distribution. The number of children under 5 years of age is greater by 30 per cent. than it was in 1901, while that of children aged '10-15,' *i.e.*, the survivors of those who were under 5 in 1901, shows a drop of 13 per cent.

107. The recorded population of Burma has risen from 2,747,148 in 1872 to 12,115,217 at the present census, but this is due very largely to the inclusion

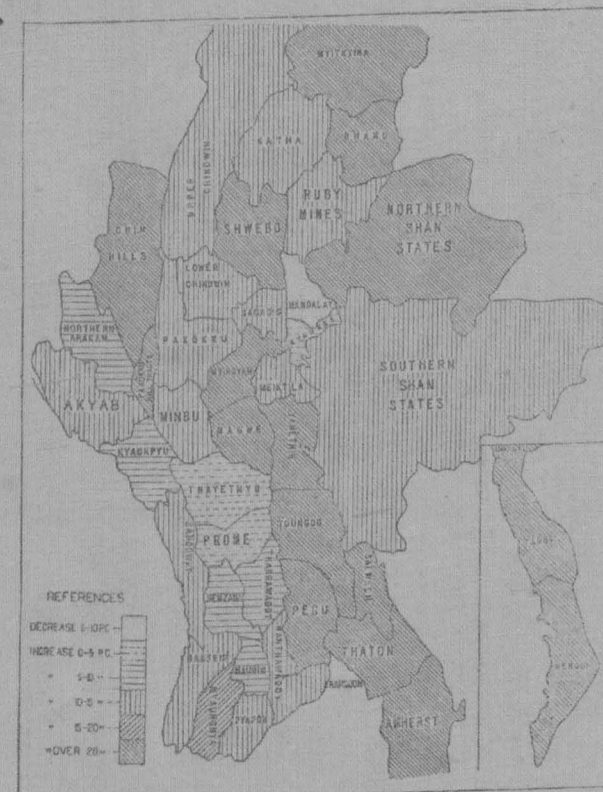
a series of irregular monsoons has resulted in a tendency to substitute dry crops for rice. There was a steady development of industry and trade up to the year 1908, when the high price of cotton caused a temporary set-back; but in 1909 there was a rapid recovery, and the trade at the port of Karachi was greater than it had ever been before. The growing demand for labour has caused a marked rise in wages. About 325 miles of newly constructed railway have been opened since 1901, and the existing lines have been greatly improved. There has been a steady extension of irrigation works; and in 1909-10 the irrigated area in the Deccan and Gujarat was the largest on record. So far as the material condition of the people is concerned, the conditions, except perhaps in Gujarat, were fairly favourable, and in ordinary circumstances there would have been a rapid recovery from the famine losses of 1897 and 1900. But during the greater part of the decade plague continued to be very prevalent, causing a registered mortality of 1.4 millions. Owing to this scourge the net increase in the population was

of new areas. At the censuses of 1872 and 1881 the operations were confined to the tract which then constituted British Burma, *viz.*, Lower Burma, as the term is now understood, and the district of Thayetmyo. In 1891 the greater part of Upper Burma, which had been annexed in 1886, was enumerated for the first time and was found to have a population of 3,063,426. The continued extension of census limits gave a further addition of 1,237,749 persons in 1901 and of 53,289 in 1911. Even now, the count is not quite complete. There has been no attempt to ascertain the population of East Mangun in the Northern Shan States, or of the unadministered areas in North Arakan and north of the Upper Chindwin and Myitkyina districts.

Mr. Webb says that when the first outposts of British rule were established in Burma the population was

at a lower level than it had been for many generations. The country had suffered for nearly a century from incessant warfare which was carried almost to the point of extermination. "Whole tracts of country were devastated, neither age nor sex being spared; and large populations were either compulsorily transferred to some remote region in the conqueror's territory, or driven to take refuge in other countries." The first territories to come under British rule (in 1826) were Arakan and Tenasserim. Both tracts were at that time very sparsely peopled; but the return of fugitives and immigration from tracts still Burmese led to a very rapid increase. By 1862 Arakan already had more than three times, and Tenasserim more than five times, the population ascertained shortly after the annexation. Pegu,

Map of Burma showing variations in the population since 1901.



which was occupied in 1853, doubled its population within the next seven years. During the decade ending in 1872, when the first regular census was taken, these three tracts taken together had a further increase of 36 per cent. Since then they have continued to grow rapidly, but at a steadily diminishing rate.

The fact that in Upper Burma the growth (18 per cent. in 1901 and 14 per cent. in 1911) has not been nearly so rapid is easily accounted for. This tract had suffered less than Lower Burma from the wars between native rulers, and though the soil is less productive, in proportion to its capacity, it already supported a comparatively dense population at the time of its annexation. This event was thus not only not followed by an extensive immigration, but on the other hand there was a continued exodus to the more favoured districts of the delta.

108. We may now consider in somewhat greater detail the growth of the population during the last decade. Since 1901 the agricultural conditions have, on the whole, been satisfactory. In two or three years the crops were short, markedly so in Upper Burma, but, on the other hand, there have been several years of bumper harvests. The staple crop is rice, and the people

Increase per cent in the population of Lower Burma.	
1872-1881	33
1881-1891	25
1891-1901	21
1901-1911	14
1872-1911	135

have gained by the marked rise which has taken place in its price. There has been a substantial extension of irrigation in the Central Basin. The development of the oil industry has also added to the general prosperity. The public health has been fairly good. Plague broke out in 1905, and bad epidemics were experienced in some of the larger towns, but in the province as a whole the mortality from it, as from cholera and small-pox, was not very material. The total gross increase of population since 1901 is 1,624,593 or 15·5 per cent. of which 1·1 per cent. is accounted for by the inclusion of new areas and about 1·3 per cent. by improved enumeration. The real growth may be taken to be about 13·1 per cent. Of this about 1·1 per cent. is the result of increased immigration, chiefly from Madras.

The natural growth would thus be about 12 per cent. Prior to 1901, as noticed above, there were great variations in the rate of increase. At the census taken in that year a gain of 28 per cent. was registered in the Deltaic Plains against only 9 in the Central Basin. The movements from one part of the province to another, which were the chief cause of the different rates of increase have now almost ceased. The best of the waste lands in the Deltaic Plains have already been taken up, while, on the other hand, irrigation has improved the capacity of various tracts in the Central Basin, where also the growth of the petroleum industry has resulted in a considerable demand for labour. An equilibrium has thus been approached in the two tracts in the relation between the means of subsistence and the density of population. There is still an ebb of population from the Central Basin to the Deltaic Plains, but it is now comparatively small. The consequence is that while the rate of increase in the Deltaic Plains has dropped from 28 to 16 per cent., that in the Central Basin has risen from 9 to 13 per cent. In the Coast Ranges and the Northern Hill Districts it is 16 and 17 per cent. respectively against 17 and 70 at the previous census. In the former tract the growth of the mining and rubber industries in the south has helped to keep up the rate. In the latter the high increase in 1901 was due in part to the inclusion of new areas and improved methods of enumeration. Turning to the figures for individual districts we find marked differences. While several are more or less stationary, thirteen have registered gains of 20 per cent. or upwards. Excluding Bhamburda where the increase is chiefly due to under-estimation of the population in 1901, the largest (28 per cent.) is in Magwe, where the oil industry has developed enormously.

The vital statistics in Burma are still so imperfect that it is not worth comparing their results with those of the census.

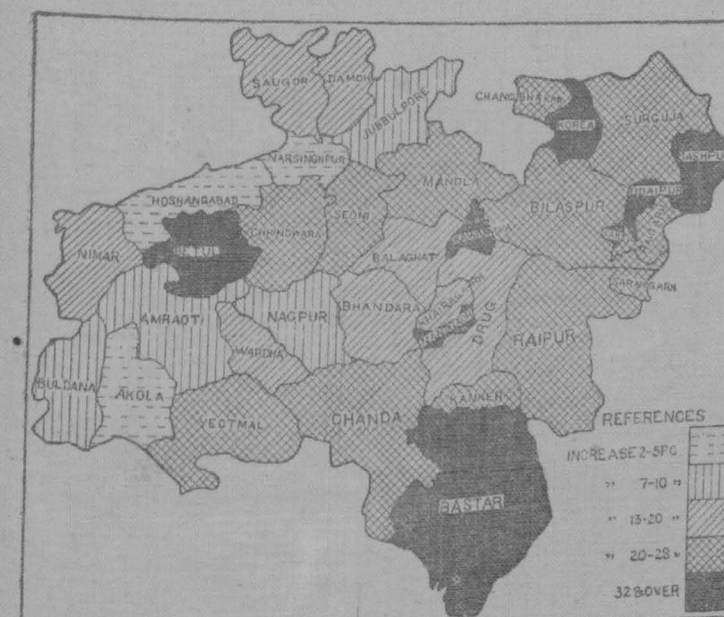
109. As regards the future, Mr. Webb thinks that "a density of 150 to the square mile is under the present conditions of the province a critical one. In the Central Basin, once this limit is reached, there is a tendency to emigrate and the increase of the population falls below the natural rate of increase. In the deltaic districts, on passing the limit of 150 persons per square mile, there is a cessation of immigration, and population thenceforward tends to approximate to the natural rate of increase." So long as there is plenty of waste land available elsewhere it may be true that the people will prefer to migrate rather than sub-divide their holdings or cultivate inferior land. But there can be no reasonable doubt that the province is capable of supporting at least three or four times its present population. In respect of their soil and rainfall the deltaic districts are perhaps unsurpassed by any part of India, but their population, though greater than that of any other part of Burma, is a mere fraction of that found in the lower Ganges valley.

110. The administrative changes affecting the Central Provinces and Berar which have taken place since 1901 have been described in the last Chapter. At the census of 1872 the population of the area which now forms the Central Provinces was 8,651,730. Berar was not enumerated in that year, but the census of 1867 showed that it then had 2,227,654 inhabitants. The census of 1881 showed a net increase over the above figures in the Central Provinces and Berar taken together of 23 per cent. *viz.*, 49 per cent. in the Feudatory States, 20 per cent. in the British districts of the Central Provinces and 20 per cent. in Berar. This large increase represented the recovery from losses in the famine of 1869, coupled, in the case of the Feudatory States, with more accurate enumeration. There was a further net gain of 11 per cent. in the

decade ending in 1891, but between that year and 1901 a serious set-back

occurred. In several years the crops were poor; and in 1896 and again in 1899 they failed almost entirely, with the result that on both occasions a severe famine ensued. There were also serious epidemics of cholera and malarial fever. It is unnecessary to expatiate on these visitations which were fully dealt with in the report on the last census. The resulting loss of population according to the census of 1901 was 7·9 per cent., *viz.*, 9·2 per cent. in the British districts of the Central Provinces, 4·8 in the Feudatory States and 5 per cent. in Berar.

Map of the Central Provinces and Berar showing variations in the population since 1901.



Note.—Makrai and Chhuikhadan have been omitted from this map as their area is small. The rate of increase is 15·2 and 18·1 per cent. respectively.

Since 1901 the conditions have been generally satisfactory. The first seven years were, on the whole, favourable to agriculture; though there were local crop failures, some districts enjoyed bumper harvests, and there was a steady recovery among the agricultural classes. In 1907 the monsoon came to an untimely end. The consequences were serious in the Jubbulpore and Nerbudda divisions, where a population of about 2½ millions was badly affected. Less harm was caused elsewhere, but throughout the province the people felt the pinch of the resulting high prices. In spite of this the birth-rate in 1908 (53 per mille) was exceptionally high, and the death-rate (38 per mille) low. With good crops in the ensuing two years, the agricultural depression soon passed away. There has been a steady extension of the cultivated area, and especially of that under cotton, which of late years has been a most profitable crop. Other crops also have generally fetched high prices, to the great advantage of the agricultural classes who form the bulk of the population. There has been a steadily growing demand for labour, and consequently a rise in wages, owing to the succession of good seasons, the construction of numerous public works and the development of industries, such as cotton ginning and the quarrying of manganese ore. This has led to immigration on a scale more than sufficient to neutralize the drain to the Assam tea gardens. The only black spot in the history of the decade is the appearance of plague, which affected chiefly the towns of the Mārātha plain and Nerbudda valley divisions. About a quarter of a million deaths were recorded from this cause, but even this unusual mortality made no visible impression on a decade when all other conditions were favourable. The population in 1901 contained an exceptionally large proportion of persons at the reproductive ages. The whole of the decrease recorded at that census had occurred amongst persons under 10 or over 40 years of age, and the number of persons at the intervening ages was slightly greater than in 1891. In view of these figures I wrote in the last Census Report: "It may therefore be concluded with confidence that the recuperation will be rapid and that, in the absence of any fresh check on the growth of population, the losses of the last decade will have been repaired before the time comes for taking the next census." This prediction has proved correct. In the whole province there has been an increase of 18 per cent., *viz.*, 30 per cent. in the Feudatory States, 18 in the British districts of the Central Provinces and 11 in Berar.

111. It will be seen from the figures in the margin that all parts of the province have gained largely. In the Nerbudda valley division the largest increase (19·5 per cent.) was in the Nimar district, where new land is being opened out for cultivation by colonists from the neighbouring districts and Central India. The districts of Narsinghpur and Hoshangabad in this division, which have failed to share in the general improvement, are fertile enough, but the climate is unhealthy; their combined population is now much the

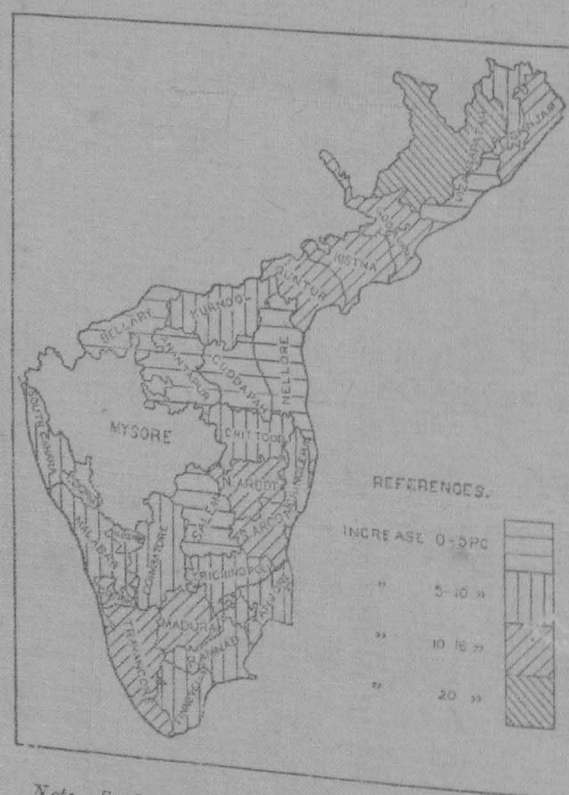
Natural Division.	Rate of increase per cent.
Nerbudda Valley Division	10·7
Maratha Plain Division	13·9
Plateau Division	27·3
Chattisgarh Plain Division	28·3
Chota Nagpur Division	29·4

same as it was in 1872. The Plateau division shows large increases in all districts, varying from 36 per cent. in Betul to 21 per cent. in Seoni. The aboriginal tribes and low Hindu castes who inhabit this part of the country are very prolific; and its resources have been developed by the construction of the Satpura Railway

and the exploitation of coal and other minerals. The division has also gained largely by migration, and especially by the return of persons who left it during the famines of the previous decade. The Maratha plain division has benefited largely by the boom in cotton, which is extensively grown on its fertile black soil, and by the industrial expansion which has taken place. On the other hand it suffered severely in the plague epidemics. In spite of this the Balaghat district has registered a gain of 19·5, Yeotmal of 25·6, and Chanda in the Wainganga valley of 27 per cent. The districts of the Chattisgarh plain division show increases varying from 15 per cent. in Drug to 25 per cent. in Bilaspur, and the States of Chota Nagpur, from 22 per cent. in Surguja to 77 per cent. in Korea. In the last mentioned tract there has been a good deal of immigration; but apart from this and the recovery from famine losses, there can be no doubt that the result is also due in part to better enumeration.

The excess of births over deaths according to the vital statistics is less than the enumerated increase in the area in which they are recorded by 317,000. The difference is due mainly to migration, and also perhaps in part to the reporting of births being less complete than that of deaths.

Madras. Map of Madras showing variations in the population since 1901.



Note.—Sandur and Banganapalle have been omitted from this map as their area is small. The rate of increase is 20·8 and 21·9 per cent. respectively.

112. Estimates of the population of the Madras Presidency were made through the agency of the revenue staff in 1821-22 and in some subsequent years, but they are not sufficiently reliable to be worth quoting. The first regular census was taken in 1871, but like all first essays in a work of such magnitude, it lacked completeness, and many persons escaped enumeration. This is why, in spite of the terrible famine of 1878, the census of 1881 disclosed only a nominal decrease in the population. During the thirty years that have since elapsed the Presidency has been comparatively free alike from destructive famines and widespread epidemics. The first of the three decades was a period of rapid recovery from the effects of the famine of 1878, and the population rose by 15·6 per cent. In the second the rate of increase fell to 7·2 per cent.; there were

three bad agricultural years, resulting locally in scarcity and distress, but there was no actual loss of life. Since 1901 the conditions have been fairly favourable. There was local scarcity in three districts in 1905 and in one in 1908, but it was not sufficient to affect materially the growth of the population. The area under irrigation rose during the decade from 9 to 15 thousand square miles. There was a steady increase in the number of emigrants to Burma, Ceylon and the Malay peninsula, but this movement is of a purely temporary character; most of the emigrants ultimately return home, bringing their savings with them. There were epidemics of cholera during the years 1906 to 1908, and there was a certain amount of sporadic plague, but, on the whole, the public health was good. The increase of 8·3 per cent. may therefore perhaps be regarded as representing the rate of growth to be expected in India when the past and present conditions are normal. The rate would of course be much higher (as it was in 1881-91) during a period of recovery from famine, and much lower in one of disease or serious crop failure. The increase in the thirty years 1881-1911 amounts to no less than 34·3 per cent. In this connection it may be of interest to note that at an even earlier period a high authority expressed the opinion that the limit of cultivation in the Madras Presidency had already been reached.*

113. The general progress is shared by all the natural divisions. The largest increase (16·7 per cent) has been recorded in the Agency tracts, and the smallest (3·8) in the Deccan. The high rate in the former is due, to a certain extent, to better enumeration in a wild and sparsely peopled country where the work is beset with special difficulties. In the Vizagapatam Agency, where a gain of 20 per cent. follows on a small decline, it appears that a number of villages with a population of about 30,000 were left out of account in 1901. The Deccan division is a land-locked area with no industries; its red soils are poor, and though the black cotton soil found in many parts is fertile, it is easily affected by drought as well as by excessive moisture. The Bellary district in this division suffered badly both from plague and malaria. As a contrast to the rest of the division, Banganapalle and Sandur show large increases, exceeding 20 per cent. Their present density is low; the soil in Banganapalle is fertile, and in that State the gain is in the nature of a recovery from losses in the previous decade, when the local conditions were much worse than in most other parts of the Presidency. Amongst the abnormal local variations in other divisions may be mentioned a drop of nearly 27 per cent. in the Koraput taluk of the Vizagapatam district, owing to the migration of Khonds, and an increase of 15·7 per cent. in Anjengo, due partly to the opening of tea gardens and of six rubber estates, and the extension of cocoanut cultivation.

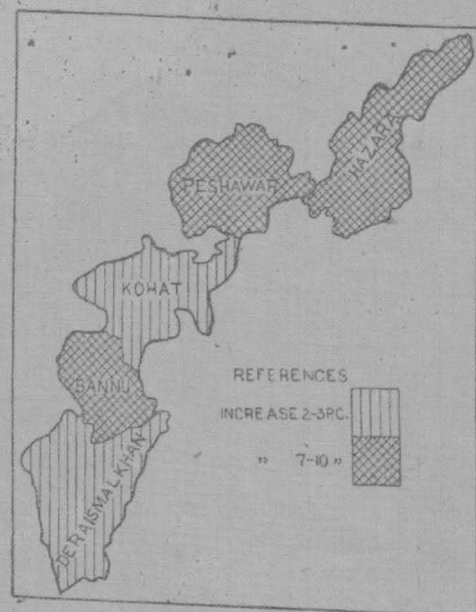
The rate of increase during the decade amongst Hindus is almost the same as that in the population as a whole; their gains from the ranks of the Animists are very nearly balanced by their losses to those of the Christians, who have increased at about twice the provincial rate. Animists, who have lost to both the above religions, show a slight decline. The Muhammadans owe their gain of 11·6 per cent. partly to their greater prolificness, but mainly to the proselytizing zeal of the Mappillas on the Malabar Coast. The births reported during the decade outnumbered the deaths by 2,797,197 which is less by nearly 400,000 than the increase disclosed by the census in the area in which vital statistics are collected. The excess of the census over the registration figures, which is found mainly amongst females, would have been still greater but for the large emigration that has taken place. The net loss from this cause is estimated at nearly two-thirds of a million, or 200,000 more than at the previous census. Most of the emigrants being men, it is easy to see how it is that the excess of the census over the registration figures is far less in their case than it is in that of the less migratory females.

114. At the time of its annexation in 1849, the tract which now forms the North-West Frontier Province was in a very parlous condition. Owing to repeated invasions by the Sikhs and constant internal feuds, property and cultivation were insecure, and the population had been greatly reduced.

* Madras Census Report for 1881, page 24.

Since the establishment of settled government, a good climate, fertile soil and immunity from famine have combined to produce a steady increase of the population, which has doubled itself in the British districts during

Map of North-West Frontier Province showing variations in the population since 1901.



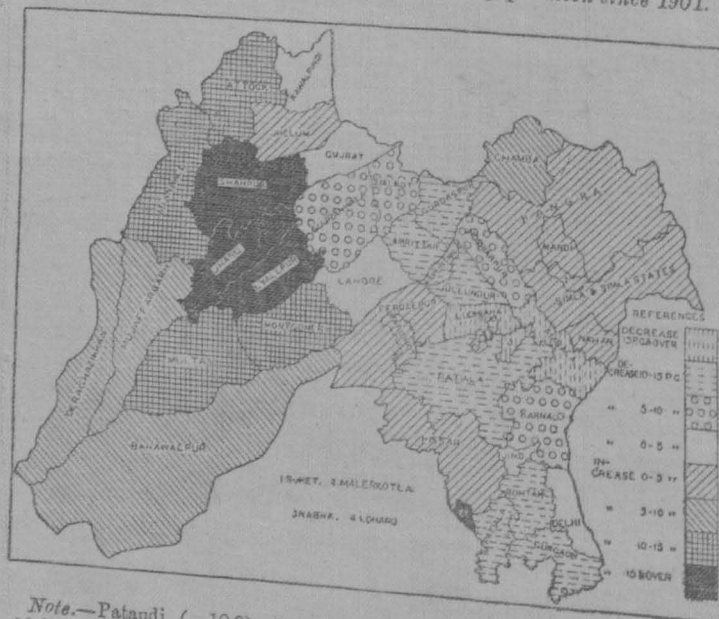
Note.—The Agencies and Tribal areas have been omitted from this map.

fewer, and emigrants more numerous, than they were at the time of the previous census. The number of persons born in the British districts has increased by 10.3 per cent.

The vital statistics are still so inaccurate that it is impossible to refer to them for an explanation of variations in the rate of growth. Of the five British districts which the province contains the increase has been above the average in Bannu and Peshawar, and below it in Kohat and Dera Ismail Khan, the two most sparsely inhabited districts in the province.

115. The two earlier censuses of 1855 and 1868 did not include the whole of the Punjab; nor were they very reliable. Between 1881 and 1901 the population grew steadily, the increase in the first of the two decades being

Map of the Punjab showing variations in the population since 1901.



Note.—Pataudi (-10.9), Kapurthala (-14.7), Dujana (+5.4), and Kalsia (-16.8), have been omitted from this map as their area is small. Biloch Trans-Frontier (+18.7) has been included in Dera Ghazi Khan.

10.1, and in the second 6.4 per cent. Since 1901 the crops have, on the whole, been satisfactory. There has been a large extension of irrigation, chiefly in the canal colonies; 520 miles have been added to the total length of canals and distributaries, and the gross area irrigated from them has risen by 32 per cent. Both here and in the dry western districts there has been a marked increase in the area under cultivation. The prices of food grains, oil-seeds and

cotton have risen. There has been a great improvement in railway communications, more than a thousand miles of new line having been constructed; and this has been accompanied by a remarkable development in the rail, and to a smaller extent in the river-borne, trade. In 1899-1900 the imports and exports aggregated 42 million maunds, valued at over 24 crores. Ten years later they had risen to 86 million maunds, valued at 50 crores. The number of factories with more than twenty operatives has risen from 132 to 443. There has been an extraordinary rise in the wages of agricultural and other labourers. The material conditions were thus all in favour of a rapid growth of the population. Unfortunately, except in the western districts, the state of the public health has been deplorable. Plague, which first appeared in the Punjab in 1896, prevailed throughout the decade, and in British territory alone was responsible in all for about two million deaths, of which nearly one-third occurred in 1907. Malaria also has been terribly prevalent, especially in the irrigated tracts in the eastern and central districts. It was worst in 1908 and the three first years of the decade. Altogether, in the British districts alone, four and-a-half million deaths from "fever" were recorded, or more than one-fifth of the total population of 1901. The result of these virulent epidemics is that, in spite of a marked advance in material prosperity, the population of the province (British territory) shows a decline of 1.7 per cent. The actual decrement disclosed by the census is 355,381, while the excess of deaths over births, according to the vital statistics, is 557,447. The difference is to a great extent accounted for by migration. The number of emigrants from British territory is greater by 49,000 than it was at the previous census, while there is a fall of 124,000 in the number of immigrants. The return of emigrants moreover is not quite complete, as it does not include those to certain colonies and foreign countries for which figures were not received or in whose statistics emigrants from the Punjab were not distinguished from those of other parts of the Indian Empire.

116. When we come to examine the figures for natural divisions some striking differences are disclosed. The somewhat congested tracts forming the Indo-Gangetic plain west and the Sub-Himalayan districts which bore the brunt of epidemics of plague and malaria have declined by 8.9 and 5.9 per cent. respectively. Apart from a high mortality, some of these districts have sustained considerable losses by emigration to the canal colonies. The Himalayan area, which comprises the districts of Simla and Kangra and the adjacent Native States, has a small gain of 2 per cent. The Simla district shows a slight loss, but this is due solely to the departure of the workmen of the Simla-Kalka Railway which was under construction when the previous census was taken. The purely nominal increase in Kangra is not unsatisfactory when it is remembered that the Dharamsala earthquake of April 4th, 1905 not only caused widespread damage, but also had an ascertained death roll of more than 20,000.

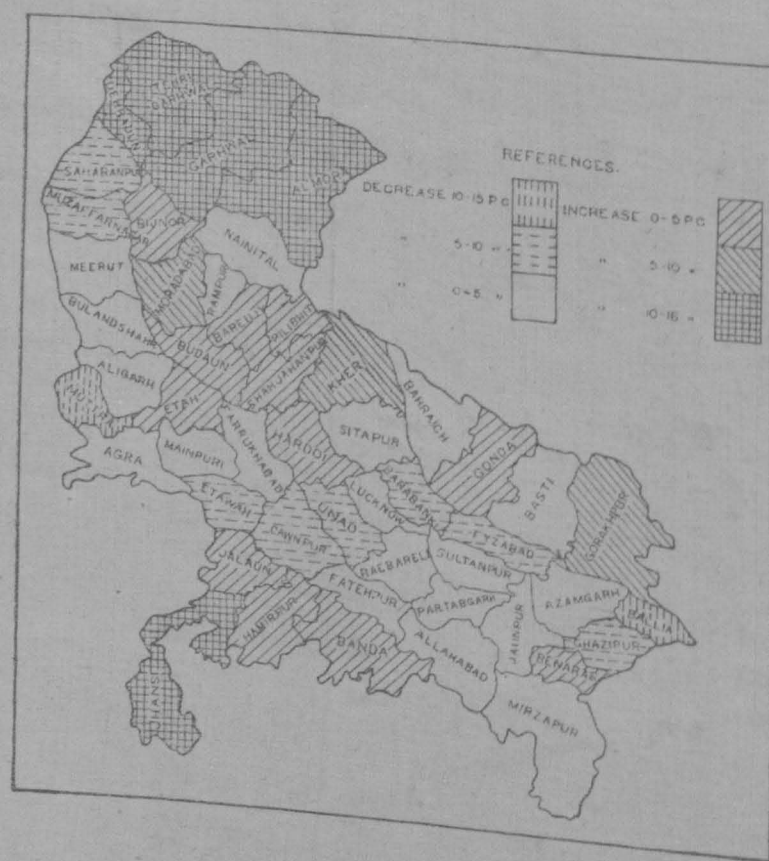
On the other hand, the North-West Dry Area which, like the Himalayan area, escaped to a great extent the ravages of plague and malaria and has benefited by the great extension of canal irrigation, has added 17.8 per cent. to its population. The growth of this tract has been extremely rapid ever since 1881, the total gain in the thirty years being 62.9 per cent. The rainfall here is so scanty that cultivation is in most parts impossible without the aid of an artificial supply of water; and before the era of canals, the whole area was very sparsely inhabited. In 1881 it supported on the average only 61 persons to the square mile, compared with 301 in the Sub-Himalayan districts and 270 in the Indo-Gangetic plain west. In 1892 the completion of the Khanki weir and the concomitant development of the Chenab canal system brought about a remarkable change. At that time the tract which now forms the district of Lyallpur was a barren desert, where a handful of nomads, numbering only seven to the square mile, found precarious grazing for their animals. With the advent of water everything was changed. Immigrants flocked in, chiefly from the congested districts of Jullundur, Amritsar, Hoshiarpur, Gurdaspur and Sialkot, and converted what was formerly a wilderness into one of the most fertile wheat-producing tracts in the whole of Northern India. By 1901 it already had a population of 187

to the square mile. This has now risen to 272, and it is not unlikely that it will eventually become one of the most densely inhabited districts in the Punjab. An even greater project—the “Triple Canal Scheme”—is now under construction and will be completed within the next two or three years. There will be three canals. The first, or Upper Jhelum, will convey the surplus waters of the Jhelum to the Chenab; the Upper Chenab canal will draw off at least an equivalent supply and carry it through the Gujranwala district to the Ravi, whence it will then be taken by the Lower Bari Doab canal for the irrigation of the Montgomery Bar (jungle). These canals will command four million acres, of which it is expected that half will be actually irrigated. When this great project was commenced, it was of course anticipated that the population would continue its normal course of expansion. It remains to be seen whether under present conditions the people will be able to take up and cultivate the extra land that will shortly become fit for the plough. It is now recognized that irrigation is largely responsible for the spread of malaria, and attention is being directed to the question of regulating the supply of water in such a way as to give all that is actually needed for cultivation without leaving pools of stagnant water as breeding grounds for mosquitoes.

117. In British territory the loss of population which has taken place has occurred entirely amongst females; the number of males is slightly greater than it was in 1901, but that of females is less by two-fifths of a million or 4·3 per cent. The reasons for this will be discussed in the chapter on Sex, but the fact is noted here as it has an important bearing on the potential growth of the population. From this point of view it is also important to note that the greatest decrease has taken place at the age-period ‘10-15,’ that is, in the group which is just entering on the reproductive stage. The number of persons at this age is less by 4·8 per cent. than it was ten years ago; males are fewer by 2·2 and females by 8·4 per cent. Married females between the ages of 15 and 30 show a drop of 3·7 per cent. On the other hand, there is practically no change in the number of children under ten years of age. The high birth-rate in the prosperous and healthy parts of the province has, it would seem, neutralized the excess mortality from plague and malaria elsewhere.

118. One of the earliest attempts at ascertaining the population of any part of

Map of the United Provinces of Agra and Oudh showing variations in the population since 1901.



India was carried through in 1826 in the province of Agra as then constituted. It was then calculated that the number of inhabitants was 32 millions. This estimate, which was based on a complete count of villages and a partial one of houses, was clearly too high, as it exceeded by 50 per cent. that made in the same area on better data twenty years later. The census of 1872 placed the population at 28·8 millions. Oudh was annexed in 1856 and a

census was taken there in 1869. Its population in that year combined with that of Agra in 1872, including Dehra Dun, Jhansi, Jalaun and Kumaun and the Native States of Rampur and Tehri-Garhwal, made a total of 42·6 millions. The census of 1881 showed a gain of 5·3 per cent. This must have been due largely to better enumeration; for there can be no doubt that the famine of 1878 and the fever epidemic of the following year must have prevented any real increase. In the next decade the total rose to 47·7 millions, an increase of 6·3 per cent. These were years of good rainfall, but part of the gain was still attributable to better enumeration; the real increase was estimated to be 5·5 per cent. The decade ending in 1901 began with wet years; and in the abnormal season of 1894 the rainfall exceeded the average by more than fifty per cent. This caused serious damage to the crops and led to a severe outbreak of malarial fever. Then followed a period of deficient rainfall, culminating in the severe famine of 1897. After these adversities it is not surprising that the census of 1901 disclosed an increase of only 1·7 per cent.

119. The first four years of the decade which has just come to a close were a period of returning prosperity. Then bad crops in 1905 followed by a poor harvest in the spring of 1906 led to famine in Bundelkhand and the south of the Agra division. Prosperity was restored by good crops in the following autumn and spring, but in 1907 the monsoon failed entirely in August, causing a severe famine, which continued until a good autumn crop was harvested in 1908. From that time up to the end of the decade the agricultural conditions were everywhere favourable. Prices of food-grains rose in 1905 and ruled unusually high till 1910. There was a good demand for labour, even in famine years; and wages were high. There was considerable emigration to Calcutta and other industrial centres. Though the area under cultivation was almost stationary, a larger tract was irrigated, and the aggregate length of canals increased by about eighteen per cent. There has been general industrial development, the outstanding feature being the rapid growth of the cotton industry. Considerable additions were made to the railways and metalled roads. The state of the public health, however, was extremely unsatisfactory. There were virulent outbreaks of plague which were responsible for 1·3 million deaths. The mortality from malaria was even more serious; and in 1908 alone nearly two million deaths from “fever” were recorded, of which more than half occurred during the last four months of the year when the epidemic was at its height. An indirect consequence of this epidemic was an abnormally low birth-rate in 1909. The prevalence of plague and malaria resulted in a decrease of one per cent. during the decade. The whole of this loss occurred amongst females, the number of males being slightly greater than it was at the commencement of the decade. Women at the reproductive period of life suffered from plague out of all proportion to their numbers. According to Mr. Blunt, the mortality from malaria in 1908 was also far greater amongst females than amongst males.

120. There is a notable difference between the population ascertained at the census and that calculated on the basis of the returns of births and deaths. According to latter the births exceeded the deaths by about a million, while the census disclosed a decrease of half a million in the population. This difference is due very largely to emigration to Calcutta and other parts of Bengal, Bihar, Assam and Nepal, and also to foreign countries. Mr. Blunt says that the losses from this cause must have exceeded 1½ millions. He also thinks that the record of deaths was incomplete during the epidemics of plague and malaria.

The net variation in the population is the resultant of increases of 10·4 per cent. in the Himalayan area, of 1 and 3·5 per cent. respectively in the western and eastern Sub-Himalayan districts and of 4·8 per cent. in Bundelkhand and of decreases of 1·1 per cent. in Mirzapur and 2, 3·7, and 5·5 per cent. respectively in the western, central and eastern portions of the Indo-Gangetic plain. The rapid growth in the Himalayan districts is due to their generally healthy climate, their practical immunity from plague and their low density. The population of these districts has increased by 47 per cent. since 1872; but even now the number of persons to the square mile is only 103, or less than a quarter of the general provincial average. There is still a good deal of temporary immigration to this tract. The increase of 3·5 per cent. in the eastern Sub-Himalayan districts is the result of the continued

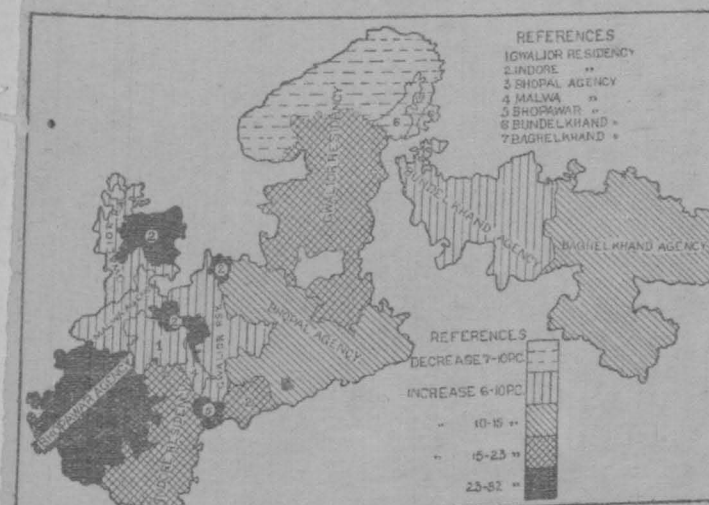
development of Gorakhpur, which, though it is one of the most densely populated districts in the province, has grown by 9 per cent. during the decade and by 60 per cent. since 1872. There has been practically no variation in the population of other districts in this division. The increase in Bundelkhand represents a partial recovery from the losses of the previous decade. The population of this highly precarious tract is almost stationary; it has grown by only 2.1 per cent. in the last 39 years. Of the western Sub-Himalayan districts, one (Saharanpur) suffered severely both from plague and malaria, and has lost 5.6 per cent. The other four districts have all added to their population, especially Kheri (6 per cent.) which suffered very slightly from plague and escaped the malaria epidemic of 1908. The western, central and eastern divisions of the Indo-Gangetic plain, which all show a decrease, are amongst the most prosperous in the province, but their death-rate was abnormally high. The malaria epidemic of 1908 fell with special severity on the western, while plague was worst in the eastern, division. From the latter tract moreover there was extensive emigration. The biggest decreases in individual districts are those sustained by Muttra in the western, and Ballia in the eastern, division of the Indo-Gangetic plain, both of which lost about 14 per cent. The former district had an average plague death-rate of 10 per mille, whilst the mortality from malaria in 1908 was the greatest in the province. The district is extremely well supplied with canals, and it is not unlikely that these, in combination with a naturally defective system of drainage, which has now, however, to some extent been improved, had much to do with the spread of malaria. Another effect of the extensive irrigation is the saline effervescence known as *reh*, owing to which much good land has become unculturable. In Ballia, though malaria was less fatal, the plague mortality was the heaviest in the province, being on the average no less than 13.4 per mille. There has also been extensive emigration from this district. Mr. Blunt points out that the districts which now show a loss of population are not only prosperous, but also, in normal years, healthy. The malaria epidemic appears to have made most headway in those districts where the disease is not, as a rule, specially prevalent, and least in those in which it is in a high degree endemic. It was the climatic and not the material conditions which determined the movement of the population during the decade.

121. The first reliable census of Baroda was taken in 1872, when the State was found to have 1,997,598 inhabitants. During the next nineteen years, in spite of a partial famine in 1877, the agricultural conditions were generally satisfactory, and the population grew by 21 per cent. The people continued to prosper up to 1899, when the almost total failure of all crops caused the most severe famine known in recent times in Gujarat. The measures taken to relieve the distress were less successful in Baroda than in the neighbouring British districts, and the census of 1901 showed that the whole of the increase which had taken place since 1872 had been wiped out. In ordinary circumstances a heavy loss like this is succeeded by an equally rapid recovery. The Central Provinces and Berar, where a loss of 8 per cent. was recorded in the year 1901, now shows a gain of 18 per cent. In Baroda there has been no such rebound, and the increase as compared with 1901 is only 4.1 per cent. The seasons have been almost uniformly unfavourable. In most years the rainfall was scanty; and even when the total amount was sufficient, it was often badly distributed. The State has in addition suffered from repeated ravages of plague. The registration of vital statistics is very defective, and the real number of deaths from this disease was far in excess of the 78,000 actually recorded during the decade. There has been a considerable industrial development in recent years, and a marked improvement is said to have taken place in consequence in the material condition of the labouring classes. This, however, has not sufficed to counteract the effect of bad crops and plague. The present population of the State as a whole is only 1.8 per cent. greater than it was in 1872. The one division which is really progressive is Navsari, which has grown by 39 per cent. in the same number of years.

122. The first census of the Central India Agency taken in 1881 left much to be desired in point of accuracy and completeness. The growth of 9.4 per cent. recorded ten years later was thus due largely to improved enumeration.

During the ensuing decade there were two severe famines. That of 1897 affected mainly the States of Bundelkhand and Baghelkhand in the eastern part of the Agency. The famine of 1900, which was far more severe, caused a terrible mortality throughout Malwa, and especially in the hilly tracts along the Vindhya and Satpura ranges. In consequence of these visitations the population of the Agency in 1901 showed a decrease of 16.2 per cent. The subsequent period has, on the whole, been one of recuperation; but the process has been retarded by several virulent plague epidemics. These were specially severe in urban areas.

Map of the Central India Agency showing variations in the population since 1901.



Vital statistics for the whole Agency are not available, but those maintained in some of the towns show how appalling the mortality must have been. In Indore city the epidemic of 1904 killed off 6 per cent. of the inhabitants. The fact that in spite of this the population of the Agency in 1911 shows a net gain of 10 per cent. is a striking illustration of the rebound which so often occurs after a set-back caused

by famine. The growth, however, is by no means equally distributed. Of the three natural divisions into which the Agency is divided, the Hilly tract has a gain of 23.8 per cent. and the Plateau of 10.7, while in the Low-lying tract it is only 1.5 per cent. The first two divisions bore the brunt of the destructive famine of 1900, and the reaction has been of corresponding strength. The Low-lying tract suffered from famine in 1897 but not nearly to the same extent. The public health in this tract was bad for some time prior to 1901, and this must have resulted in a fall in the birth-rate during the next few years, and while elsewhere in the Agency the crops have, on the whole, been good during the decade, they were deficient in several years over a large part of the Low-lying tract. Lastly there has been considerable emigration from this tract to the other, and more sparsely populated, parts of the Agency, and also further afield. About 8,000 persons from Rewa and Gwalior emigrated to the tea gardens of Eastern India.

123. The first census of Cochin taken in 1875 disclosed a population of 601,114. This has now grown to 918,110, a gain of 52.7 per cent. The last decade has been one of great agricultural prosperity and industrial development; the rubber has been planted on a large scale, a railway has been built through the State, and its forests have been opened up by the construction of a steam tramway. The result of these favourable conditions is an increase of 13.1 per cent. The rate varies from 20 per cent. in the Makundapuram taluk, which has benefited by the exploitation of its extensive forests, to a little less than 2 per cent. in Chittur. The last mentioned taluk is unhealthy and the seasonal exodus of coolies from the coffee plantations had made more progress when the recent census was taken than on the occasion of the previous one.

124. According to the first regular census which was taken in 1881, the Hyderabad State had a population of 9,845,594. The increase of 17.2 per cent. disclosed in 1891 was due partly to more accurate enumeration, but chiefly to the rebound after the famine of 1877. The famines of 1897 and 1900 caused a loss in 1901 of 3.4 per cent., and this has now been followed by an increase of 20 per cent. The present population of 13.4 millions exceeds that of 1881 by 35.8 per cent.

Except for a certain amount of cholera and plague, which was worst in the north-western part of the Marāthwara division, the public health has been

fairly good since 1901. There were local scarcities in several years, and destructive floods swept over an extensive area in 1908, but, on the whole, the decade has been one of fair agricultural prosperity. Several large irrigation projects were carried out, and the area under irrigation has already increased considerably. The Hyderabad-Godavari Valley Railway, which taps a fertile tract, was opened for traffic at the beginning of the decade. A large number of cotton ginning and pressing factories and a few rice-husking and oil mills have come into existence. These favourable conditions in a period of recovery from famine losses have resulted in an unusually rapid growth of the population since 1901. The gain of 20 per cent. is due entirely to natural increase. Migration has had nothing to do with it.

Of the two natural divisions Telangana has registered a gain of 23·8 per cent., or excluding the Hyderabad city, 25·3 per cent., while Mārāthwara has gained only 16·4 per cent. The increase in the former division varies from 35·5 per cent. in the Karimnagar district, where the previous enumeration was perhaps not very accurate, to 14·2 per cent. in Nizamabad. The smaller increase in the Mārāthwara division is due to its deficient and irregular rainfall and to the absence of irrigation facilities. The rate varies from 26·5 per cent. in Bhir to only 6·8 per cent. in Raichur. Bhir has a rich black soil and a healthy climate, but suffered greatly from the famine of 1900, and the present increase is in the nature of a recovery of the ground which it then lost. The vital statistics, which show a slight excess of deaths over births, are too inaccurate to be worth consideration.

125. The first attempt to ascertain the population of the Kashmir State was made in 1873, but it was not a success, and the experiment was not repeated until 1891, when a fairly accurate enumeration was effected. According to this census the population was 2,543,952. It increased by 12·1 per cent. between that year and 1901, leaving out of account the Frontier ilaqas which were then enumerated for the first time.

Throughout the last decade the fertile Kashmir valley was favoured with bumper harvests, except in 1903 when a disastrous flood entirely destroyed the paddy on the lower levels. Elsewhere the agricultural conditions were generally fair. There has been a steady extension of cultivation, especially in the Kashmir valley and Gilgit, as well as a marked increase in the irrigated area. Prices of all kinds of agricultural produce have risen and the wages of the labouring classes have followed suit. The silk industry has grown rapidly, the number of cocoon rearers having increased since 1901 from 6,000 to 35,000 and the daily attendance at the Srinagar Silk Factory from 900 to 3,700. Steady progress has been made in all branches of the administration. Improved communications have helped to develop the resources of the State, and great activity has been shown by the Forest Department in exploiting the extensive forests, especially those in the Jhelum valley. On the other hand, there were several bad epidemics of cholera, chiefly in Kashmir, and of plague in Jammu; there has also been a small loss from migration. On the whole, the period under review may be regarded as a normal one, and the increase of 8·8 per cent. disclosed by the census of 1911 as representing very fairly the rate of growth which is to be expected when no disturbing influences are at work. The rate varies considerably in different parts, from 14 per cent. in the Indus valley (Frontier districts) to 5 per cent. in Jammu. The relatively large increase in the former remote area is due partly to better enumeration and partly to improved communications. Plague has helped to keep down the increase in Jammu, but it is to be noted that in the tahsil of Basohli there has been a steady decline since 1891. The hill tribes of this and other parts of Jammu demand so high a bride price that it is almost impossible for a man to get a wife unless he has a sister or other female relative whom he can give in exchange. This has resulted, especially amongst the Thakkars, in a great laxity of morals and the spread of venereal diseases. In Ladakh, the practice of polyandry prevents a rapid growth, but the town of Leh is flourishing.

The statistics of variation by tahsils show that the rates of increase are in inverse proportion to the density; the sparsely inhabited tracts have added largely to their population, while those with a density of 300 and upwards have declined.

Kashmir.

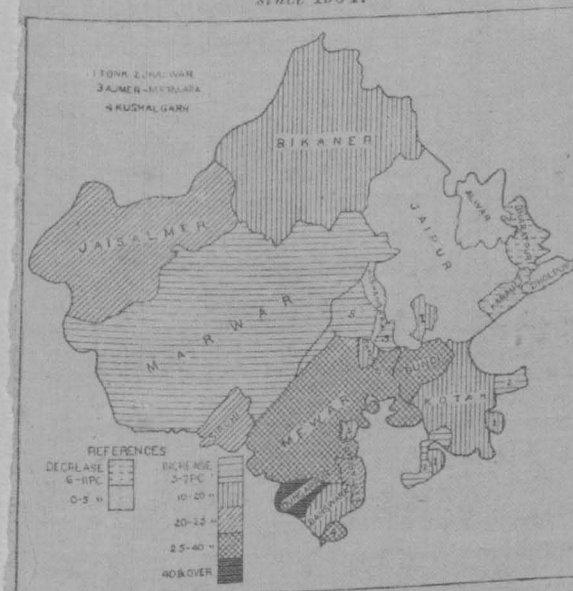
126. From 1804 onwards various estimates were made of the population of Mysore, but they cannot be relied on as a basis for comparison. The first regular census, taken in 1871, disclosed a population of 5,055,402. The State was hit very hard by the great Southern India famine of 1876-78 which caused a terrible mortality, with the result that in 1881 the population was found to have fallen by 17·2 per cent. The ensuing years were healthy and prosperous; and the process of recovery was so rapid that in 1891 there was an increase of 18·1 per cent. This was followed in the next decade by a further gain of 12·1 per cent.

Since 1901 the agricultural conditions have, on the whole, been normal. There were four lean years, and in one of them there was considerable distress; but in the other six years the crops were good and the agricultural classes profited by the high prices of food grains which prevailed. Several big irrigation works have been completed, but they have not yet had time to produce their full effect. The coffee plantations have been languishing, but there has been marked progress in various industrial undertakings. The gold-fields have continued to develop, and more than 25,000 persons are now employed in them. On the other hand, there have been heavy losses from plague, especially in the towns; and malarial fevers have been prevalent in the Malnad or Western division. The birth-rate was probably below normal in the earlier years of the decade, when the number of persons of child-bearing age was smaller than usual owing to the heavy infantile mortality which occurred in 1876-78. The net result of these opposing factors is seen in the comparatively small increase of 4·8 per cent. recorded at the recent census. This increase is the resultant of a gain of 7 per cent. in the Eastern division and a loss of 1·7 per cent. in the Western division where, though there is more room for expansion, the climate is in parts very bad, and the coffee industry is declining. The vital statistics show a considerable excess of deaths over births, but they are still too inaccurate to be worth detailed examination.

Ever since 1881, the Hindus have been increasing at a slower rate than the Muhammadans and Christians. The number of Christians has risen by 105 per cent. in thirty years and by 19·5 per cent. in the course of the last decade. The figures show a slight gain amongst Animists since 1881, but this seems to be due to changes in the enumeration procedure; there is reason to believe that in reality they are losing ground.

127. Between the first general census of the Rajputana States which was taken in 1881 and the ensuing census of 1891 the recorded population grew by 20·6 per cent.* Part of this was due to the imperfections of the earlier enumeration, but the decade was a prosperous one and the real growth was no doubt very considerable. The Agency suffered thereafter from a succession of seasons of deficient or ill-distributed rainfall, culminating in the terrible famine of 1900. This unparalleled disaster found the Durbars unprepared; and although at the eleventh hour everything possible was done to cope with it, there was a terrible loss of life. There were in addition several epidemics of fever, the most virulent of all being that which broke out in the autumn of 1900 immediately after the famine. In consequence of these calamities the census of 1901 revealed a decrease of 20·5 per cent.* Several of the southern States lost more than two-fifths of their population and the western States about a quarter.

Map of Rajputana showing variations in the population since 1901.



Note.—Lawa (-4·0) has been omitted from this map as the area is small.

* These proportions have been calculated on the adjusted populations for 1881, 1891 and 1901. The manner in which they have been adjusted has been explained in paragraph 5 of Chapter II of the Provincial Report.

Rajputana.

Since 1901 there have been no widespread famines and no terrible epidemics of fever like those which raged in the previous decade, but at the same time the conditions have been far from satisfactory. The thickly populated States in the north-east of the Agency bordering on the United Provinces suffered from famine in 1905-06. Other States were more or less affected in that year and again in 1907-08. Most of the States in the eastern part of the Agency suffered from outbreaks of plague, and several of them from severe fever epidemics. There has been very little industrial development and no marked extension of railways or irrigation. In these circumstances it is not surprising to find, instead of the usual rebound after famine, a moderate increase of only 6.9 per cent. Even this is due in part to migration. The number of immigrants has risen by 65, and that of emigrants has fallen by 59, thousand. The natural increase is only 5.2 per cent. and the population is still less by 15 per cent. than it was in 1891. It may be noted that in the only eight States of the Agency in which vital statistics are collected, the gain recorded at the census is far in excess of that indicated by a comparison of the reported births and deaths. The difference is due to the inaccuracy of the vital returns.

Of the three natural divisions into which Mr. Kealy divides the Agency, the largest growth—26 per cent.—has occurred in the Southern division. It is this tract which suffered most in the famine of 1900, and the increase now recorded is due partly to natural growth and partly to the return to their homes of persons who emigrated in the famine years; Dungarpur which in 1901 showed a loss of 39.5 per cent. now has a gain of 59 per cent. The Western division which lost 25.4 per cent. in the previous decade has now a gain of 9.8 per cent. The increase here is greatest in the sparsely peopled State of Jaisalmer, to which there has been extensive immigration, chiefly from Marwar and the Punjab, and in Bikaner. The population has remained practically stationary in the Eastern division, which escaped almost unscathed from the calamities of the previous decade. It is this tract which in recent years has suffered most from plague, fever and crop failure. Bharatpur, which borders on the Jumna, has registered a loss of 10.8 per cent. and the adjoining States of Alwar, Karauli and Dholpur have also lost population. The conditions in these States are very similar to those prevailing in the adjacent part of the United Provinces, where also there has been a decrease of population.

128. The first census of this small Himalayan State was taken in 1891. A Political Officer had been appointed, and British methods of administration introduced, only two years previously; and the enumeration was necessarily somewhat rough. It disclosed a population of 30,458. This rose to 59,014 in 1901; and although some part of the apparent gain was due to the imperfections of the previous enumeration, there can be no doubt that the real increase was very large. In 1889 the interdiction on immigration from Nepal was removed and cultivators from that State flocked in. At the census of 1901 two-fifths of the inhabitants of Sikkim returned Nepal as their birthplace. Since that year the seasons have been favourable, and there have been no widespread epidemics. The population has continued to grow rapidly, both by natural increase and by fresh immigration from Nepal. The result is a further gain of 49 per cent., the population being now 87,920. Many of the earlier Nepalese settlers are now dead and most of their children are Sikkim-born, but in spite of this the number of persons who have returned Nepal as their birthplace is greater now than it was ten years ago.

129. The Travancore State in the south-western corner of India has grown very rapidly during the last twenty years. The increase of 15.4 per cent. recorded in 1901 was more than twice as great as that of the previous decade; and in the absence of any apparent reason it was thought that it must have been due in part to an incomplete enumeration in 1891. On the present occasion, however, the increase (16.2 per cent.) is even greater. There are no grounds for supposing that the present census was more accurate than its immediate predecessor; and the whole of the increase must, therefore, be regarded as genuine. The influx of people from outside has been greater than the corresponding exodus, but the net gain from migration amounts only to about 0.5 per cent. The increase in the population is the result almost entirely of its natural growth during a period free from destructive epidemics and

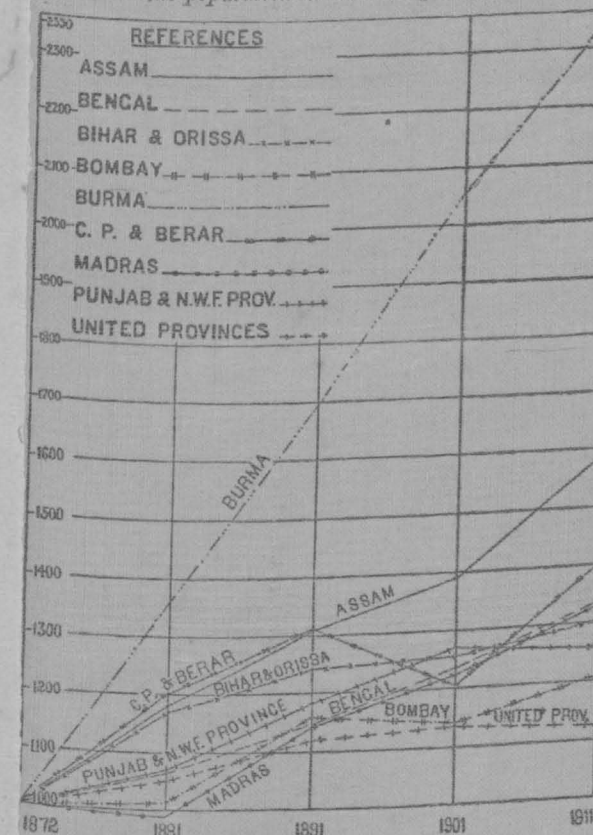
of considerable agricultural prosperity. In only three years of the decade were the crops below normal. There has been a great extension of special cultivation including that of cocoanuts, tea, rubber, pepper, ginger and areca nut. These crops are so profitable that they are displacing the cultivation of rice, of which large and increasing quantities are imported from Madras and Burma. The fisheries also are important.

The largest proportional increase is in the sparsely populated Devikulam division in the north, on the lower slopes of the Western Ghats, where it amounts to 64.8 per cent. There are now 55 persons per square mile in this division compared with only 14 in 1875. The northern half of it has more than doubled its population during the decade. This is due largely to the operations of the Kannan Devan Hills Produce Company, which holds a concession over an extensive area and is rapidly bringing a large part of it under tea and rubber cultivation. Although the greatest proportional gain has taken place in the more sparsely populated areas, the absolute addition to the population has been greatest in talukas with a density of 750 to 900 persons per square mile, and the next greatest in those with a density exceeding 1,050.

General Summary.

130. Having passed in review the changes which have occurred during the decade in the individual Provinces and States, we are now in a position to focus the main results for the Empire as a whole. We have already seen (paragraph 86) that, after allowing for additions due to the inclusion of new areas and more accurate enumeration, the net increase of population during the ten years ending in March 1911 was 6.4 per cent. as compared with 1.4, 9.6 and 1.5 per cent. respectively in the three preceding inter-censal periods. There are, moreover, great local, as well as periodic, variations in the rate of growth. The general average for India as a whole is the resultant of very different figures for various parts of the Empire. The changes which have taken place in the main provinces in each of the last four decades are shown in the accompanying diagram.

Diagram showing the variation since 1872 per 1,000 of the population in the main provinces.



Note.—The proportions relate to British territory only and in Burma to Lower Burma only.

The most noticeable feature is the continuous rapid growth in Burma. Lower Burma has grown by 135 per cent. since 1872 and the whole Province including Upper Burma, which was annexed in 1886, by 37 per cent.* since 1891. In Assam including Manipur the increase since 1872 amounts to 70 and in the Central Provinces and Berar to 47 per cent. In the other main provinces the rate of growth has been much slower. In some provinces, such as Burma, Assam and Bengal there has been continuous progress but others, at some time or another, have sustained a set-back. In the larger provinces at least, the internal variations are also frequently considerable. In Bengal one district has at the present time a smaller population than it had in 1872, while four others have more than doubled their population since that date.

In British territory there has been a gain of 9.1 per cent. over about nine-tenths of the area, with three-quarters of the total population, and a loss of 5.3 per cent. in

* Exclusive of the Specially Administered Territories which were not enumerated in 1891.

the remaining one-tenth of the area and one-fourth of the population. The contrast in different parts of the Native States is still more striking. The net increase of 10·3 per cent. is the outcome of a gain of 14·3 per cent. in four-fifths of the total area and population, coupled with a loss of 6·2 per cent. elsewhere. The relatively greater net increase in the Native States as compared with British territory is explained by the fact that many of the States suffered severely from famine in the previous decade when they sustained a net loss of 5 per cent., while British territory gained 4·7 per cent. As we have already seen the recovery from famine losses is usually very rapid. Apart from this, in ordinary circumstances, a comparatively high rate of increase is to be expected in the Native States, as they are, on the whole, more undeveloped than British territory, and contain a much larger proportion of cultivable waste land. It will be seen from Subsidiary Table VI that if the district be taken as the unit, the net increase in India as a whole during the last decade is the resultant of a gain of 10·3 per cent. in an area of 1,517,000 square miles with a population of 245 millions and a present density of 162 to the square mile, and a loss of 5·5 per cent. in an area of 218,000 square miles with a population of 68 millions and a density of 312 to the square mile.

131. In Subsidiary Table V the variations in the population which have taken place in the minor administrative units (tahsils, taluks or thanas) are co-ordinated with their density. Half the net increase in the population has occurred in tahsils which in 1901 had less than 150 inhabitants to the square mile and almost the whole of it in those with less than 450. Those with a greater density than this had a net increase of less than half a million, the gains in three of the higher density groups being largely counter-balanced by losses in the other two. The losses in these groups were exceptional and were due entirely to the epidemics of plague and malarial fevers which raged during the decade in some of the most prosperous districts of the United Provinces. But even so it is clear that in India as a whole the rate of increase tends to vary inversely with the existing density of the population. There are of course local exceptions to this rule, e.g. in Bengal, where some of the most thickly peopled districts are growing more rapidly than others with a relatively sparse population. Dacca with 952 persons to the square mile in 1901 has since added 12 per cent. to its population and Tippera with 848 nearly 15 per cent.

132. If the registration of births and deaths were accurate it would be easy at any time to ascertain the population of a given tract, except in so far as it is affected by migration, by adding to the population ascertained at the previous census the number of births since recorded and deducting from it the number of deaths. In order to elucidate this point I have shown in Subsidiary Table IV the number of births and deaths recorded during the decade 1901-10, the excess is collated with the variations disclosed by the census of 1911 in the actual, and also in the natural, population. The figures for the natural population are not in all cases quite accurate, as it has sometimes been difficult to make allowance for the areas in which vital statistics are not at present registered. In the main British provinces the vital statistics for the decade show an excess of 9·4 million births over deaths whereas the census shows that the actual increase in the population was 12·1 millions. The census figures show an excess over the vital statistics in all provinces except the United Provinces, where, if the vital statistics were correct, there should have been an increase of a million in the population instead of a decrease of more than half that amount, and Bihar and Orissa, where the vital statistics indicate an increase of 1·9 millions, against an increase according to the census of 1·8 millions in the natural population. The two figures in the latter case correspond very closely. Elsewhere the nearest approximation between the two sets of statistics is in the Central Provinces and Berar, where the excess of reported births over deaths was 1·6 millions against a census increase in the natural population of 1·9 millions, and Madras, where the figures are 2·8 and 3·2 millions respectively. It is unnecessary to examine the figures in greater detail. Enough has been said to show that we cannot at present rely on the vital statistics for accurate inter-censal estimates of the population. At the same time, except in the case of severe epidemics when the reporting agency breaks down, the degree of error

Variations in relation to density.

Comparison of Census results with vital statistics.

may be assumed to be fairly constant, and the periodic variations in the returns may be relied on as reflecting the real changes in the number of births and deaths.

The imperfection of the recorded vital statistics is not to be wondered at when we remember the weakness of the reporting agency. In this connection Mr. Blunt writes as follows:—

"In rural circles, the reporting agency is the *chaukidar*, a low paid, totally illiterate person, who brings his record of births and deaths (which is written up by the *patwari* or other literate person in the village) to the *thana* with him when he visits it. He is frequently away from his circle on duty, assisting the police, mounting guard at camps, or giving evidence in courts; and it is obvious that errors from omission in such cases must frequently occur. He is assisted occasionally by the village headman or chief landlord, if these happen to be persons with some small amount of public spirit; but it is clearly quite possible that births and deaths (especially deaths in the course of epidemics) may escape his notice altogether. His powers of judging of the causes of death are not particularly great: and unless it is a well known and easily distinguishable disease, his diagnosis of a death is not reliable. Apart from deaths due to injury or accident, his knowledge of diseases is limited to small-pox, cholera, plague and fever: everything which is not a case of one of the first three, and a good many cases that are, go down under fever. For our present purposes, however, this is less important than the completeness of this record.

In this decade there have been reasons why his records should be less complete than usual. When plague was raging (especially in the early years of plague when it was far more feared than it is now), the *chaukidar* may well have shirked his duties to some extent. Even if he did not, with death succeeding death in rapid succession, he may very well have failed to find out on his return all the cases that had occurred during one of his frequent absences from his circle. The same, though in less degree, applies to the malaria epidemic of 1908. During famine he was wanted for various other duties and was apt to neglect his duties in respect of vital statistics; for famine disorganizes most things. And lastly plague and malaria spared him no more than any one else, and registration was disorganized because of the illness or death of the reporting *chaukidar*. We might reasonably expect that though registration tends, normally, to improve with time, the calamities of the decade should have greatly retarded that improvement or even caused retrogression. Further, since plague and malaria were the chief ultimate causes which would prevent him in some way or another from properly discharging his duties, and since they caused far more loss among women than men, we might also expect that the omissions in the vital record would be rather of deaths than births, and rather of female than male deaths.

In towns matters are different, and it can be asserted with some confidence that registration there is more satisfactory. The head of the house, the policeman of the beat, the sweeper employed in the house, one or all have to report the birth or death. Moreover the agency is far better educated: in some places (Meerut for instance) the causes of death are all tested by a medical man: and generally speaking, it is probable that little fault can be found with urban vital statistics in any respect."

The wonder is not that the returns are still incomplete but that they are as good as they are. In some provinces the number of omissions is now extremely small. In the Central Provinces and Berar, for example, the births actually reported during the decade represent 49·6 per mille of the population of 1901. The actuary who examined the age statistics did not deal with the Central Provinces and Berar but his estimates of the actual birth-rates elsewhere ranged from 41·0 in Bombay to 46·7 in Bengal.

In this connection it may be mentioned that the statistics compiled by a special staff maintained for three years in a small area in Bengal showed a total of 4,670 births and 6,910 deaths against 4,690 and 6,917 respectively returned by the ordinary reporting agency. The excess of 20 births in the ordinary returns was the net result of the inclusion of two cases of abortion, 26 of still-births, and three of double registration, and the failure to report 11 births. The excess of seven deaths was due to the erroneous inclusion of three cases of abortion, 23 of still-births and one death occurring outside the period of enquiry on the one hand, and the omission of 20 deaths on the other. The actual excess of deaths over births differed only by 13 from that returned by the ordinary reporting agency. It has to be remembered, however, that the knowledge that a separate record was being prepared must have put the ordinary reporters on their mettle and made them more careful than usual.

SUBSIDIARY TABLE I.

Variation in relation to density since 1872.

PROVINCE, STATE OR AGENCY.	Percentage of variation : Increase (+), Decrease (—).				Net Variation per cent.	Mean density per square mile.				
	1901-1911.	1891-1901.	1881-1891.	1872-1881.		1911.	1901.	1891.	1881.	1872.
INDIA	+ 7.1	+ 2.5	+ 13.2	+ 23.2	+ 52.9	175	163	159	141	114
<i>Excluding new areas</i>	+ 6.5	+ 1.5	+ 10.9	+ 7.1	+ 31.9	...	...	...	...	...
Provinces	+ 5.5	+ 4.7	+ 11.2	+ 7.4	+ 31.9	223	212	202	182	169
<i>Excluding new areas</i>	+ 5.4	+ 3.9	+ 9.7	+ 7.4	+ 29.3	...	...	...	...	...
Ajmer-Merwara	+ 5.1	— 12.1	+ 17.7	+ 16.2	+ 26.5	185	176	200	170	146
Andamans and Nicobars	+ 7.3	+ 57.9	+ 6.7	...	...	8	8	5	5	...
Assam	+ 14.9	+ 6.7	+ 11.6	+ 18.2	+ 61.7	127	110	103	93	78
Baluchistan	+ 8.5	...	...	...	...	8	7	...	...	...
Bengal	+ 7.9	+ 7.8	+ 7.6	+ 6.4	+ 33.3	578	535	497	461	434
Bihar and Orissa	+ 3.8	+ 1.1	+ 6.1	+ 17.0	+ 30.2	415	400	395	373	318
Bombay	+ 6.0	— 1.7	+ 14.5	+ 1.2	+ 20.7	160	151	153	134	132
Burma	+ 15.5	+ 35.9	+ 106.6	+ 36.0	+ 341.0	52	45	33	16	12
Central Provinces and Berar	+ 16.2	— 8.3	+ 9.3	+ 20.0	+ 39.8	139	120	131	120	100
Coorg	— 3.1	+ 4.4	— 2.9	+ 5.9	+ 4.0	111	114	109	113	106
Madras	+ 8.3	+ 7.3	+ 15.6	— 1.2	+ 32.6	291	269	250	217	219
N.-W. Frontier Province	+ 7.6	+ 9.9	+ 17.9	...	...	164	152	138	117	...
Punjab	— 1.7	+ 6.9	+ 10.0	+ 7.0	+ 25.9	200	204	191	173	156
United Provinces	— 1.1	+ 1.7	+ 6.2	+ 5.1	+ 12.3	440	445	437	412	392
States and Agencies	+ 13.0	— 5.0	+ 20.1	+ 162.0	+ 237.6	100	88	93	78	30
<i>Excluding new areas</i>	+ 10.3	— 6.6	+ 15.4	+ 4.2	+ 54.5	...	...	...	...	...
Assam State (Manipur)	+ 21.7	...	...	...	...	41	34	...	26	...
Baluchistan States	— 1.9	...	...	...	...	5	5	...	...	...
Baroda State	+ 4.1	— 19.2	+ 10.7	+ 9.2	+ 1.8	248	239	295	267	244
Bengal States	+ 11.1	+ 3.3	+ 2.6	+ 23.0	+ 44.9	153	137	133	129	105
Bihar and Orissa States	+ 19.0	+ 9.5	+ 25.6	+ 39.8	+ 128.9	138	116	106	84	60
Bombay States	+ 7.3	— 14.5	+ 16.5	+ 2.1	+ 9.0	116	108	127	109	106
Central India Agency	+ 10.1	— 16.2	+ 9.4	...	...	121	110	131	120	...
Central Provinces States	+ 29.8	— 4.8	+ 23.4	+ 49.5	+ 128.1	68	52	55	45	30
Hyderabad State	+ 20.0	— 3.4	+ 17.2	...	...	162	135	140	119	...
Kashmir State	+ 8.7	+ 14.2	...	...	...	37	34	30	...	...
Madras States	+ 14.9	+ 13.2	+ 10.6	+ 1.7	+ 46.3	456	397	351	317	312
<i>Cochin</i>	+ 13.1	+ 12.3	+ 20.4	— 1	+ 52.7	675	597	531	441	442
<i>Travancore</i>	+ 16.2	+ 15.4	+ 6.5	+ 3.9	+ 48.4	452	389	337	316	304
Mysore State	+ 4.8	+ 12.1	+ 18.1	— 17.2	+ 14.9	197	188	168	142	172
Punjab States	— 4.8	+ 3.8	+ 10.4	...	...	115	121	117	106	...
Rajputana Agency	+ 6.9	— 19.0	+ 22.5	...	...	82	76	94	77	...
Sikkim State	+ 49.0	+ 93.8	...	...	...	31	21	11	...	...
United Provinces States	+ 3.7	+ 1.2	+ 6.8	+ 16.1	+ 30.3	164	158	156	146	126

NOTE.—The Agencies and Tribal area of the N.-W. F. Province have not been shown in this table. The figures against Burma in cols. 4 and 6 include the population of Upper Burma which was annexed in 1886. The figures in cols. 10 and 11 relate to Lower Burma only.

SUBSIDIARY TABLE II.

Variation in natural population—1901-1911.

PROVINCE, STATE OR AGENCY.	POPULATION IN 1911.				POPULATION IN 1901.				Variation per cent. (1901-1911) in natural population. Increase (+), Decrease (-).
	Actual population.	Immigrants.	Emigrants.	Natural population.	Actual population.	Immigrants.	Emigrants.	Natural population.	
1	2	3	4	5	6	7	8	9	10
INDIA.	315,156,396	650,502	1,023,505	315,529,399	294,361,056	627,438	915,000	294,618,618	+ 7.1
Ajmer-Merwara	501,395	96,578	84,110	488,927	476,912	93,876	25,293	408,329	+ 19.7
Andamans and Nicobars.	26,459	14,402	970	13,027	24,649	14,219	349	10,779	+ 20.9
Assam	7,059,857	882,068	74,294	6,252,083	6,126,343	775,842	51,431	5,401,982	+ 15.7
Baluchistan	834,703	58,500	76,273	852,476	810,746	41,232	70,986	840,500	+ 1.4
Bengal	46,305,642	1,970,778	584,757	44,919,621	42,881,776	894,371	872,580	79,417,242	+ 6.8
Bihar and Orissa	38,435,293	449,712	1,916,806	39,902,387	36,557,257				
Bombay	27,084,317	1,021,224	622,831	26,685,924	25,468,209	840,781	626,799	25,254,227	+ 5.7
Burma	12,115,217	590,965	14,166	11,538,418	10,490,624	475,328	9,460	10,024,756	+ 15.1
C. P. and Berar	16,033,310	749,985	315,233	15,598,558	13,602,592	630,901	302,257	13,273,948	+ 17.5
Coorg	174,976	45,535	3,862	133,308	180,607	55,098	3,192	128,701	+ 3.6
Madras	41,870,160	258,877	1,518,179	43,134,462	38,653,558	258,812	713,203	39,107,949	+ 10.3
N.-W. F. Province	3,819,027	135,345	67,378	3,751,030	2,125,496	792,259	435,749	26,523,721	+ 4.8
Punjab	24,187,750	660,219	517,485	24,045,016	24,754,735				
United Provinces	48,014,080	660,085	1,429,310	48,783,305	48,494,374	680,691	1,510,295	49,323,978	— 1.1
Baroda State	2,032,798	222,957	235,528	2,045,369	1,952,692	172,914	202,302	1,982,080	+ 3.2
Central India Agency.	9,356,980	474,255	536,133	9,418,858	8,497,805	672,263	462,310	8,287,852	+ 13.6
Cochin State	918,110	47,266	23,268	894,112	812,025	50,054	14,622	776,593	+ 15.1
Hyderabad State	13,374,676	260,713	306,388	13,420,351	11,141,142	325,197	317,790	11,133,735	+ 20.5
Kashmir State	3,158,126	76,773	81,968	3,163,321	2,905,578	85,597	86,157	2,906,138	+ 8.8
Mysore State	5,806,193	312,908	139,607	5,632,892	5,539,399	306,263	131,682	5,364,818	+ 5.0
Rajputana Agency	10,530,432	303,553	855,947	11,082,826	9,853,366	234,407	900,224	10,519,183	+ 5.4
Sikkim State	87,920	29,835	3,445	61,530	50,014	25,004	2,188	36,108	+ 70.0
Travancore State	3,428,975	61,165	33,143	3,400,953	2,952,157	54,903	24,486	2,921,710	+ 16.4

NOTE.—The figures for the Provinces are inclusive of the States attached to them, except in the case of Madras, where they exclude Cochin and Travancore. Cols. 2 and 6—Persons not enumerated by birthplace or whose birthplace was not returned have been included in these columns. Cols. 4 and 8—The figures against India in cols. 4 and 8 represent emigrants to foreign countries, details of which for 1911 will be found in Subsidiary Table IX of Chapter III. They have been distributed by Provinces in col. 4, but in the absence of definite information such distribution could not be made for 1901 (col. 8). Cols. 7 and 8—The figures against Bengal, C. P. and Berar, C. I. and Rajputana Agencies are based on the areas as they stood in 1901.

SUBSIDIARY TABLE III.

Variation in natural divisions.

	Natural division.	Area in square miles.	Population.	Variation per cent. 1901-11.	Density per square mile.	Mean annual rainfall in inches.
	1	2	3	4	5	6
I.	Lower Burma	77,359	6,212,412	+ 14.9	80	146
II.	Upper Burma	151,480	5,849,516	+ 15.0	39	48
III.	Assam	61,471	7,059,857	+ 15.2	115	92
IV.	Bengal	86,910	46,393,562	+ 8.0	534	76
V.	Orissa and Madras Coast, North	93,226	21,015,526	+ 10.2	225	50
VI.	Bihar and United Provinces, East	103,377	54,987,105	— 1	526	47
VII.	United Provinces, West and Punjab, East and North.	130,950	35,936,995	— 3.9	274	34
VIII.	Kashmir	84,432	3,158,126	+ 8.7	37	24
IX.	The North-West Dry Area	200,282	14,429,531	+ 11.8	72	10
X.	Baluchistan	134,638	834,703	+ 3.0	6	8
XI.	Rajputana East and Central India West	109,901	14,394,069	+ 7.6	131	25
XII.	Gujarat	63,634	9,718,673	+ 7.6	153	24
XIII.	Central India East, Central Provinces and Berar and Chota Nagpur.	183,500	24,935,209	+ 15.9	136	47
XIV.	The Deccan	203,167	34,336,013	+ 9.7	169	30
XV.	Malabar and Konkan	34,027	13,001,985	+ 9.7	382	101
XVI.	Madras, South-East	56,351	21,752,306	+ 8.1	386	39

NOTE.—In the case of II and IX the figures for area, variation and density relate to the tract enumerated in 1901. The Andamans and Laccadive Islands and Aden which do not fall within the scheme of natural divisions have been left out of account in this Table.

SUBSIDIARY TABLE IV.

Comparison with vital statistics.

PROVINCE OR STATE.	IN 1901-1910 TOTAL NUMBER OF		NUMBER PER MILE OF POPULATION OF 1901 OF		EXCESS (+) OR DEFICIENCY (—) OF BIRTHS OVER DEATHS.	INCREASE (+) OR DECREASE (—) OF POPULATION OF 1911 COMPARED WITH 1901.	
	Births.	Deaths.	Births.	Deaths.		Natural population.	Actual population.
1	2	3	4	5	6	7	8
Assam	1,883,545	1,564,022	35.7	29.7	+ 319,523	+ 687,950	+ 775,801
Bengal	15,797,344	13,728,296	37.6	32.7	+ 2,069,048	+ 3,098,714	+ 3,312,532
Bihar and Orissa	13,554,098	11,645,026	41.0	35.2	+ 1,909,072	+ 1,758,037	+ 1,239,761
Bombay	6,177,362	6,394,331	33.4	34.6	— 217,469	Not available.	+ 1,110,801
Burma	1,858,296	1,393,731	33.2	25.0	+ 459,565	+ 812,848	+ 804,691
C. P. and Berar	5,907,914	4,280,406	49.6	35.9	+ 1,627,508	+ 1,864,142	+ 1,944,866
Madras	11,314,152	8,516,955	30.8	23.2	+ 2,797,197	+ 3,310,729	+ 3,175,750
N.-W. Frontier Province	679,069	559,016	34.6	28.3	+ 120,053	+ 194,508	+ 155,399
Punjab	8,286,261	8,843,708	41.2	44.0	— 557,447	— 182,334	— 355,383
United Provinces	19,764,839	18,747,113	41.4	39.3	+ 1,017,726	— 608,451	— 609,788
Baroda State	404,377	594,374	20.7	30.4	— 189,997	+ 63,289	+ 80,106
Cochin State	88,935	39,906	11.0	11.1	— 971	+ 117,519	+ 106,085
Hyderabad State	823,984	928,040	7.3	8.3	— 104,056	+ 2,286,616	+ 2,233,524
Mysore State	944,667	1,089,186	17.1	19.7	— 144,519	+ 268,074	+ 266,794
Travancore State	517,217	436,476	17.8	15.1	+ 80,741	+ 479,213	+ 476,818

NOTE.—This Table refers only to the areas in which vital statistics were collected. In the case of Burma, the figures relate to twenty-one districts only. The figures for the variation in the natural population are in some cases only approximate. It has not always been easy to allow for variations due to the exclusion of areas in which vital statistics are not recorded.

SUBSIDIARY TABLE V.

Variation by tahsils classified according to density.

PROVINCE, STATE OR AGENCY.	Variation in tahsils with a population per square mile at commencement of the decade 1901-11.							
	Under 150.	150-300.	300-450.	450-600.	600-750.	750-900.	900-1,050.	1,050 and over.
1	2	3	4	5	6	7	8	9
INDIA.	+7,746,340 +12.5	+4,326,463 +7.4	+2,891,312 +6.5	+198,412 +5	—846,237 —2.4	+1,104,877 +6.6	—324,377 —2.3	+303,242 +2.7
Ajmer-Merwara	...	+24,483 +5.1	...	...	...	...	...	...
Assam	+465,192 +20.1	+187,935 +16.6	+182,469 +12.8	+88,004 +7.8	+9,864 +8.3	...	...	...
Baluchistan	+23,957 +3.0	...	...	...	...	...	...	...
Bengal	+323,713 +22.0	+184,005 +13.0	+543,455 +10.4	+260,379 +3.3	+260,814 +2.4	+215,916 +3.6	+152,469 +2.6	+317,589 +7.9
Bihar and Orissa	+641,168 +20.0	+324,219 +4.3	+283,837 +5.0	+14,036 +3	+82,904 +2.0	+64,876 +1.4	+140,174 +2.5	—82,379 —7.9
Bombay	—4,505	+1,657,029 +16.0	—271,908 —8.9	—9,426 —2.0	+8,186 +2.5	...	+32,202 +10.2	+204,530 +21.6
Burma	+1,216,958 +17	+363,612 +11	+15,367 +7	+137 +	+2,112 +4	...	...	+12,284 +2
C. P. and Berar	+2,009,571 +22.9	+446,556 +10.1	—25,409 —6.1	...	...	...	...	...
Coorg	—3,444 —2.5	—2,187 —5.0	...	...	...	...	...	...
Madras	+329,036 +7.1	+618,244 +7.0	+1,348,423 +10.0	+397,522 +8.7	+343,992 +7.3	+90,257 +9.0	+15,603 +7.2	+73,525 +5.7
N.-W. F. Province	+38,831 +5.2	+77,428 +10.2	+25,559 +8.9	+13,581 +5.5	...	...	...	...
Punjab	+734,907 +15.2	+186,212 +2.7	+244,411 +11.1	—616,591 —14.3	—163,883 —9.3	—83,219 —7.0	...	...
United Provinces	—20,571 —1.0	+77,255 +2.7	+1,432,749 +29.7	+16,720 +1	—1,447,877 —11.1	+695,910 +22.2	—697,060 —45.6	—382,910 —16.6
Baroda State	+42,800 +19.6	+71,124 +9.2	+11,672 +2.3	—12,332 —7.1	—4,412 —2.7	...	...	...
Central India Agency	+859,175 +10.1	...	...	...	...	...	...	+33,797 +12.8
Cochin State	...	...	+33,837 +13.5	+13,799 +9.1	+24,652 +17.0	...	...	...
Kashmir State	+145,484 +16.7	+116,384 +6.3	+8,535 +6.6	—10,795 —13.7	...	...	...	+44,065 +16.6
Mysore State	+45,713 +3.2	+177,088 +5.3	...	...	...	...	...	...
Rajputana Agency	+811,549 +14.8	—63,603 —1.8	+67,880 +10.8	...	...	...	...	...
Sikkim State	+28,906 +49.6	...	...	...	...	...	...	...
Travancore State	+57,900 +24.9	+33,140 +14.5	+35,503 +12.3	+71,449 +18.0	+37,411 +26.5	+121,137 +18.0	+32,235 +10.2	+88,043 +13.0

NOTE.—The figures in this Table are incomplete as several Superintendents have omitted those for tahsils where owing to changes of area or other causes it was impossible to ascertain the variation since 1901. The entries in Italics represent the proportional variation in each density group. The figures for the Provinces include those for the States attached to them, except in the case of the N.-W. F. Province where they are for British territory only and Madras where they exclude Cochin and Travancore.

SUBSIDIARY TABLE VI.

Variation distributed by areas of increase and decrease.

PROVINCE, STATE OR AGENCY.	AREAS SHOWING AN INCREASE.				AREAS SHOWING A DECREASE.			
	Area.	Population.		Increase per cent.	Area.	Population.		Decrease per cent.
		1911.	1901.			1911.	1901.	
1	2	3	4	5	6	7	8	9
INDIA.	1,517,500	245,347,152	222,415,737	+10.3	217,823	68,015,879	71,945,319	-5.5
Provinces.	969,525	187,501,327	171,817,209	+9.1	132,549	56,689,549	59,872,693	-5.3
Ajmer-Merwara . . .	2,711	501,395	476,912	+5.1	...	...	...	...
Andamans and Nicobars	3,143	26,459	24,649	+7.3	...	...	...	...
Assam	53,015	6,674,049	5,841,878	+14.2	...	...	...	...
Baluchistan . . .	54,228	412,792	382,106	+8.0	...	...	...	...
Bengal	72,984	42,106,967	38,670,041	+8.9	5,715	3,376,110	3,471,436	-2.7
Bihar and Orissa .	71,971	27,669,447	26,172,889	+5.7	11,210	6,820,637	7,069,894	-3.5
Bombay	101,313	14,905,081	13,531,862	+10.1	21,746	4,767,561	5,027,788	-5.2
Burma	228,722	11,721,158	10,124,117	+15.8	2,117	340,770	366,507	-7.0
C. P. and Berar . .	99,823	13,916,308	11,971,452	+16.2	...	...	...	...
Coorg	...	...	...	...	1,582	174,976	189,607	-3.1
Madras	142,330	41,405,404	38,229,654	+8.3	...	...	...	...
N.-W. Frontier Province	13,418	2,214,762	2,125,496	+4.2	...	...	...	...
Punjab	68,025	8,415,838	7,593,225	+11.7	31,754	11,559,118	12,797,112	-9.7
United Provinces .	48,842	17,581,667	16,732,928	+4.8	58,425	29,650,377	30,959,349	-4.2
States and Agencies.	556,975	57,845,825	50,598,528	+14.3	85,274	11,326,330	12,072,626	-6.2
Assam State (Manipur).	8,456	346,222	284,465	+21.7	...	...	...	...
Baluchistan States .	7,132	61,205	56,109	+9.1	31,444	264,481	372,531	-29.0
Baroda State . . .	8,182	2,032,798	1,952,692	+4.1	...	...	...	...
Bengal States . . .	5,393	822,565	740,299	+11.1	...	...	...	...
Bihar and Orissa States	27,185	3,675,034	3,040,812	+20.9	1,463	270,175	273,662	-1.3
Bombay States . . .	56,265	5,652,290	5,061,061	+11.7	7,599	1,769,385	1,847,498	-4.8
Central India Agency .	75,065	9,019,227	8,134,052	+10.9	2,302	337,753	363,753	-7.1
Central Provinces States	31,174	2,117,002	1,631,140	+29.8	...	...	...	...
Hyderabad State . .	52,698	13,374,676	11,141,142	+20.0	...	...	...	...
Kashmir State . . .	82,276	2,679,633	2,407,347	+11.3	2,156	478,493	496,231	-4.0
Madras States* . . .	10,549	4,811,841	4,188,086	+14.9	...	...	...	...
Mysore State	22,656	4,951,020	4,648,393	+6.5	6,819	855,173	891,006	-4.0
Punjab States . . .	27,935	1,869,791	1,766,783	+5.8	8,616	2,343,003	2,657,615	-11.6
Rajputana Agency . .	105,011	6,043,782	5,218,248	+15.8	23,976	4,486,650	4,635,118	-3.2
Sikkim State	2,818	87,920	59,014	+49.0	...	...	...	...
United Provinces States	4,180	300,819	268,885	+11.9	899	531,217	533,212	-.4

NOTE.—In this Table the district or corresponding area in Native States has ordinarily been taken as the unit. The areas (where available) and the population enumerated for the first time have been left out of account.

* Includes Cochin and Travancore.



CHAPTER III.

Birthplace.

133. The statistics of birthplace are contained in Imperial Table XI. The following Subsidiary Tables in which the principal results are displayed in a more compendious form will be found at the end of this Chapter :—

- I. General distribution by birthplace of persons enumerated in each Province, etc.
 - II. General distribution by place of enumeration of persons born in Province, etc.
 - III. The proportional migration to and from each Province and State.
 - IV. Proportion of persons born (a) in the district where enumerated and (b) elsewhere.
 - V. Variation as compared with 1901 in the volume of migration within India.
 - VI. Migration between Provinces and States in 1901 and 1911.
 - VII. Variation as compared with 1901 in the number of immigrants from certain foreign countries.
 - VIII. Total number of immigrants from outside India at each of the last three censuses.
- Two other tables have been added to show —
- IX. The number of Indians born in India but enumerated in other parts of the British Empire.
 - X. The number of emigrants to certain colonies who were registered at the ports of Calcutta and Madras during the decade 1901-10.

The statistics of birthplace are important from various points of view. By showing the extent to which people have moved from one part of the country to another, they help to explain the variations in the total population of each local area. They also make it possible to ascertain the proportions of the sexes in the natural population, *i.e.*, amongst persons born in a given tract irrespective of the place of enumeration, which is often very different from that in the actual population, or persons present in the district on the date of the census. In Calcutta proper, for example, there are only 475 females per 1,000 males in the actual, as against 869 in the natural, population. The same statistics enable allowance to be made for the effect of migration on the age distribution, though it must be admitted that, in the absence of a table combining the statistics of age and birthplace, the adjustment is necessarily a somewhat rough one. Lastly, by showing the direction and volume of the movements between different parts of the country, they throw light on the effect of modern industrial developments and on the general economic conditions. So far as they affect the growth of population, the statistics of birthplace have already been considered in the last Chapter; and their influence on the age and sex distribution will be dealt with in Chapters V and VI. In the present Chapter the discussion will be confined to an examination of the main streams of migration, the reasons that induce them and the changes which have occurred since the previous census.

134. In the first place it should be noted that migration is of various kinds :—

- (i) *Casual*, or the minor movements between neighbouring villages. These minor movements are called casual, not because they are temporary or accidental—for they are often, as will be seen further on, of a permanent character—but because a change of residence from one place to another within a very short distance does not amount to migration in the ordinary acceptance of that term.

Such movements are going on all over the country, but they find expression in our statistics only where they take place between villages which happen to lie on opposite sides of the district boundary.

- (ii) *Temporary*, due to the migration of coolies to meet the demand for labour on new canals and lines of railway, and to journeys on business or in connection with pilgrimages, marriage ceremonies and the like. Throughout India there are sacred places where large crowds assemble on special occasions. When fixing the date of the census, care was taken to avoid, as far as possible, the dates when these festivals were expected to occur and also those regarded by Hindus as auspicious for marriage ceremonies. The object in view was to facilitate the taking of the census, but the incidental result was that on the date selected the volume of temporary migration was considerably less than it usually is at that season of the year. On the other hand, the census having been taken at the season when public works are actively carried on, the number of labourers collected on such works, e.g., the Ganges bridge works at Sara Ghat in Bengal and the triple canal project in the Punjab, was larger than would have been the case a few months earlier or later. Famine, when it occurs, is a potent cause of temporary migration; but fortunately it was nowhere in operation at the time of the census of 1911.
- (iii) *Periodic*, due to the seasonal demand for labour. Of this character is the annual migration to the Sunderbans, Burma and the wheat districts of Upper India at harvest time, and the extensive movement from Bihar and the United Provinces to Bengal during the cold weather months for work on the roads. To this type also belongs the annual immigration of the Powindahs or itinerant traders from Afghanistan and other places beyond the North-West frontier.
- (iv) *Semi-permanent*, where the inhabitants of one place earn their livelihood in another, but maintain their connection with their old homes, where they leave their families and to which they ultimately return. This type of migration is exemplified in the case of most Europeans in India. It includes many of the labourers in mills and factories in Calcutta and other big cities; clerks in Government offices and domestic servants, and also the ubiquitous Marwari trader and money-lender, who plies his business in the remotest corners of the Empire, but who, in his old age, almost invariably returns to his home in Rajputana.
- (v) *Permanent*. This type of migration is in the nature of colonization. It usually takes place when, owing to irrigation or improved communications or changed political conditions, new lands become available for occupation. As illustrations of this type of migration may be mentioned the extensive colonization of Lower, from Upper, Burma which took place after the annexation of the latter tract, and the rush from the congested districts of the Punjab to the canal colonies, as soon as the irrigation works there were completed. A minor form of permanent migration is to be found in the practice common amongst old people, especially Hindu widows, of spending their latter days at some sacred spot, such as Benares or Brindaban. The statistics of birthplace throw light only on the movements of this character which are actually in progress, or which have taken place during the life-time of the present generation. When the original settlers have died out and been replaced by their children born in the new home, all traces of the movement disappear from the census tables. The bulk of the present inhabitants of Sikkim are of Nepalese origin, but this fact will soon cease to be apparent from the census return of birthplace.

135. The first thing which strikes one in connection with migration is its comparatively small volume. Of the total population of India all but 27·2 millions,* or 8·7 per cent., were born in the districts in which they were resident at the time of the census. There are two main causes—the one social and the other economic—which account for the reluctance of the native of India to leave his ancestral home. The social cause, which affects chiefly the Hindus, is the caste system. The restrictions which that system involves make a man's life very uncomfortable when he is separated from the members of his own social circle. Not only is he unable to marry beyond its limits; he may not even eat or drink with members of other groups, nor may he smoke from their *huqqa*. He often finds it difficult to get any one to cook his food; and if he dies, there will be no one to perform his obsequies, and his body may have to be removed by scavengers. Nor is it only a question of the inconveniences to which a Hindu is exposed during his absence. A man who is long away from home is often looked at askance on his return; he is suspected of having broken the rules of his caste, and he may find it hard to regain his old position. The penalties which a journey across the ocean involves are well known; and on the west coast of India the crossing of certain rivers is similarly interdicted in some cases, especially where women are concerned.

The economic hindrance to migration is to be found in the fact that the people of India are mainly dependent for their support on a single calling, i.e., on agriculture. When, owing to some change, such as the extension of irrigation facilities, land previously unculturable becomes fit for the plough, there is a general movement towards it, but ordinarily there is no sufficient incentive to lead a man to leave his home in order to take up land elsewhere. At the present time, however, great changes are in progress. In the old days the difficulties and dangers attendant on long journeys helped to keep people at home, but these have now been removed, and a journey of a thousand miles is easier than one of a hundred miles a century ago. With the growth of large industries, the cultivation of commercial products, the exploitation of minerals and the construction of railways and canals, a new demand for labour has arisen which is leading many of the landless classes to seek a livelihood in the big centres of industry, where the pay offered is far better than that for field work. This demand will no doubt continue to grow and the volume of migration will increase accordingly.

The great difference in the matter of migration between a pastoral and an agricultural community is clearly seen from the state of things in Baluchistan, where most of the inhabitants are supported by their flocks and herds. To quote Mr. Bray:—

"Probably no feature of Baluchistan life impresses a new-comer more forcibly than the apparent fact that the population, such as it is, is always on the move. If he travels through Zhob and Loralai at the fall of the year, he will come across swarms of Afghan Powindahs on their yearly journey into India, shedding some of their numbers here and there to seek pasturage during the winter within Baluchistan itself. If he travels up the Bolan, he will have to thread his way through a moving mass of Sarawan Brahuis, leaving their native highlands with their wives and their children, their flocks and their herds, for the warmth of the Kachhi. And if he travels up the Mula or any of the other passes to the south, he will be met by hosts of their Jhalawan brethren, wending their way into Sind. These are extreme cases, where whole masses of the population move down-country like a slowly advancing glacier. But wherever he travels, he will—if only he travel long enough—come across families camped in blanket-tents, or living in temporary huts made of bark or dwarf-palm leaves or similar material, or even sheltering in holes in the hillside. And if he chance to revisit the spot a short while later, he will find the tents gone, or their places taken by others, and the huts may be abandoned, and the holes tenantless. As for the permanent villages which jostle one another on the maps, he will look for most of them in vain. Even in the more settled parts of the country many of the permanent villages he describes from afar are permanent only in the sense that the same structures on the same sites serve as dwelling-places year after year: to-night there may be no room for the traveller to sleep in; to-morrow, before he awakes, half the inhabitants may have flitted, to summer abroad in the open. Now and then he may be drawn to a village of fairish size, only to regard it as a village of the dead, until he stumbles up against a few unfortunates who have been left behind to look after the crops."

136. Of the 26·5 million natives of India who were enumerated in a district Casual migration. other than that in which they were born, 16·5 millions, or 62 per cent., were born in a district adjoining that in which they were enumerated. The great majority of these were doubtless emigrants of the casual type, that is to say,

* Including 653,000 persons born outside India.

persons who had moved only a few miles from their original home, but in so doing happened to cross the district boundary. Such movements can scarcely be regarded as migration in the ordinary sense of the word. As has already been noted, only a very small proportion of their total number are noticed in the census statistics.

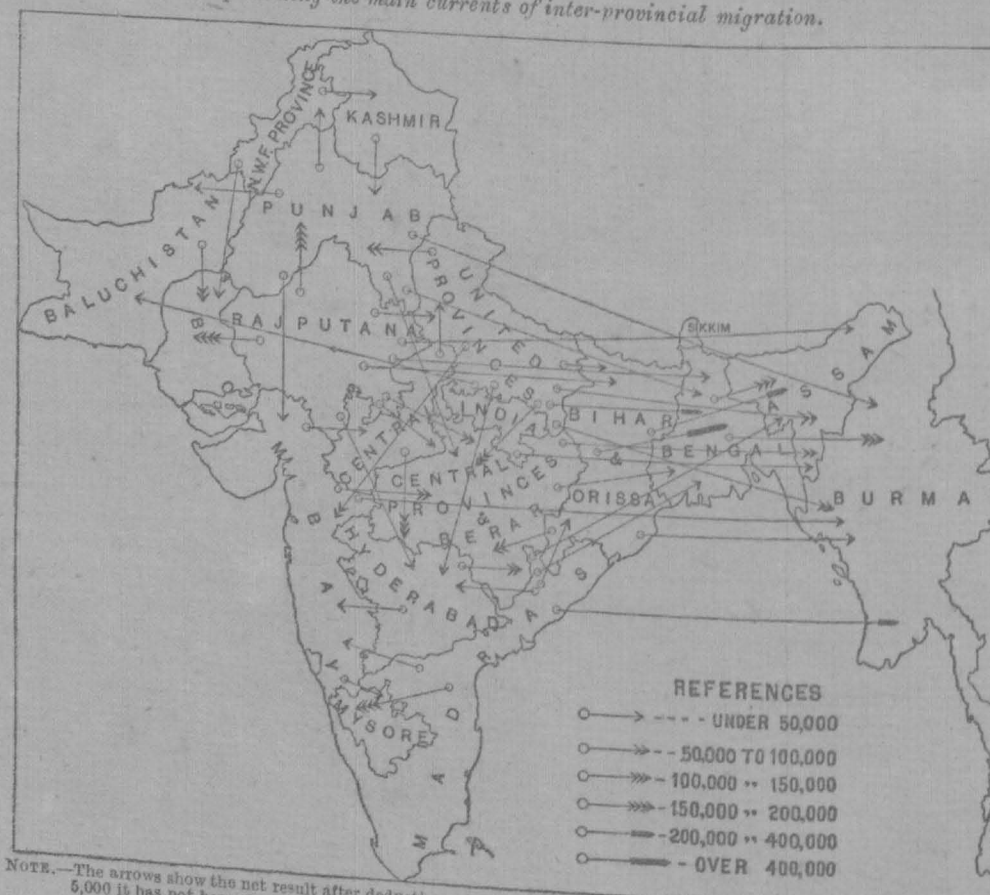
The chief cause of these minor movements is the custom, almost universal amongst Hindus, whereby parents seek wives for their sons in a different village from their own, and the fact that in some parts a young wife returns to her parents' home for her confinement, and especially for the first one. Where her parents' home is in a different district from that of her husband, her children thus appear in the returns as born in a district other than the one in which they afterwards reside. There are various reasons for this custom of village exogamy. Inter-marriage is forbidden between persons of the same clan or within certain degrees of relationship, and persons resident in the same village often have a feeling that there must be some kinship between them, even when it is not actually known to exist. And it is often thought undesirable to take a bride from a neighbour's family, as she might be tempted to divulge the family secrets and seek her parents' intervention whenever a difference of opinion takes place between her and her husband or his people.

The statistics of casual migration are swollen by the visits which members of connected families pay to one another at frequent intervals, especially on the occasion of marriages and other festivals, and by temporary evacuations when plague or other epidemic disease is prevalent.

Main currents of migration.

137. The movements between the different parts of each Province or State are dealt with in the Provincial Census Reports. These intra-provincial movements are for the most part too small to require examination in a general review for the whole of India, and attention will here be directed mainly to the external, or inter-provincial, currents of migration. These again are of two kinds, viz., migration between adjoining Provinces and States, and migration to a distance.

Map showing the main currents of inter-provincial migration.



NOTE.—The arrows show the net result after deducting migration in the opposite direction. When the difference is less than 5,000 it has not been shown.

The former kind of migration is to a great extent of the casual type, and will be dealt with in a subsequent paragraph.

138. The most noticeable movements are the large streams of emigration from Bihar and Orissa, Madras, the United Provinces and Rajputana and of immigration into Bengal, Assam and Burma. Thanks to its fertile soil, Bengal is able to support practically the whole of its teeming indigenous population by agriculture, and there are very few landless labourers. It is necessary therefore to satisfy from outside the great and growing demand for unskilled workmen in the jute mills on the banks of the Hooghly, the numerous other industrial undertakings in and around the metropolis, and the tea-gardens of Darjeeling and Jalpaiguri and for road and railway construction throughout the province. The police also are, for the most part, natives of other provinces; and so are the warders in the jails, the peons of the zamindars and a large number of the better class of domestic servants. In this province the net excess of immigrants over emigrants is close on 1,400,000. Of these about 236,000 are natives of a district in Bihar and Orissa or Assam contiguous to the Bengal district in which they were enumerated. These are for the most part immigrants of the casual type. Of the remainder comparatively few are permanent settlers; the great majority are immigrants of the temporary and periodic types. They either visit the province during the cold weather months, as is the case with the labourers on roads and railways, or, like the mill hands, stay for a period varying from a few months to several years; at the end of this time they return to their permanent homes, where they stay until they have spent their savings and necessity again drives them to seek employment elsewhere. They seldom bring their families with them.

139. Assam and Burma are both very sparsely peopled. The land available for cultivation being ample, very few of the indigenous inhabitants find it necessary to work for hire. Consequently the tea-gardens of Assam and the rice mills and oil wells of Burma have to obtain their coolies elsewhere. The result is that in the former province 12.5 per cent., and in the latter 5 per cent., of the population are immigrants. The influx to Goalpara and Sylhet takes place from the adjoining districts of Bengal, but otherwise the great bulk of the immigration to Assam is due to the demand for labourers for its tea-gardens, which is supplied by an elaborate and expensive system of recruitment. The emigration returns show that, during the last quinquennium, on the average nearly 51,000 labourers and dependants have gone each year to the tea-gardens of Assam. When these emigrants leave the tea-gardens, many of them stay on in the province and assist in the task of reclaiming from jungle the vast areas of fertile land which are still available for cultivation. In 1911 the area of land held by ex-tea-garden coolies direct from Government was close on 200,000 acres. In addition a large area was held by them as under-tenants, but of this no statistics are available. Many of them also find employment as carters, hucksters and general labourers. The tea-garden population, the bulk of which is of foreign origin, is about 700,000, and Mr. McSwiney estimates the number of ex-coolies at 350,000. The tea industry, therefore, has given to Assam at least one-sixth of its total population.

140. In Burma there are two main streams of immigration. Madras supplies labourers for the rice-milling, oil and other industries, while numerous coolies flock into the province from Chittagong, chiefly for the rice harvest in Akyab and for rice-milling, etc., in Rangoon. The total number of natives of Madras and Bengal who were enumerated in Burma at each of the last three censuses is noted in the margin. A great part of this immigration is of a seasonal or periodic character, but many of those who go originally for a few months, stay on for a few years, and ultimately settle down as cultivators, cartmen and labourers. More than two-thirds of the immigrants to this province were enumerated in towns, and less than one-third in rural areas.

141. The net loss to Bihar and Orissa on account of migration is about 1.5 millions. The western districts of Bihar are amongst the most densely peopled

Born in	ENUMERATED IN BURMA.		
	1911.	1901.	1891.
Bengal	135,756	157,034*	112,084*
Madras	248,064	189,828	129,345

* These figures relate to Bengal as it stood in 1901, i.e., they include immigrants from Bihar and Orissa. The number of such immigrants, however, was probably not larger than in 1911 when they numbered only 8,802.

Immigration from Bihar and Orissa.

tracts in India. The pressure of the population on the soil is severe, and many families either have no land at all, or their holdings are too small to support them. They are thus driven to supplement their local earnings by sending one or more of their adult male members to seek a livelihood elsewhere. These districts, with the adjoining part of the United Provinces, are the main sources from which the industrial undertakings of Bengal derive their labour supply. The Chota Nagpur plateau has a far less fertile soil than Bihar, and owing to its broken surface, the area fit for permanent cultivation is very limited. The result is that, although it is much less thickly populated, the pressure on the soil is equally severe. The inhabitants are mainly prolific aborigines, who are in great request on the Assam and Jalpaiguri tea-gardens, of which they furnish the bulk of the labour force. The number of persons born in Bihar and Orissa, most of whom come from the Chota Nagpur plateau, who were enumerated in Assam at the recent census was 399,000, or 42 per cent. more than in 1891. The Orissa division furnishes the metropolitan districts of Bengal with many domestic servants, door-keepers and palki-bearers.

United Provinces,
Madras and Raj-
putana.

142. The United Provinces sustains a net loss of about 800,000 from migration, chiefly in the direction of Bengal. The emigration to that province, which takes place chiefly from the eastern districts, is of the same type as that described above in the case of certain districts of Bihar. Excluding adjoining provinces, the only other important currents of migration are those to Assam (98,000) and Bombay (94,000). Of the movement between the United Provinces and contiguous parts of India it is worthy of note that the number of emigrants to Central India has fallen from 320 to 169 thousand, whereas the number of immigrants from the same tract remain practically unchanged.

Madras is still very backward from an industrial point of view, and there is no great local demand for labour. At the same time it has an exceptionally large proportion of persons belonging to the "untouchable" castes, comparatively few of whom have land of their own. Their local earnings are small, and they have no scruples about seeking a livelihood elsewhere, even across the sea. We have already seen that it is this province which chiefly supplies Burma with labourers for its various industries. It has also for a long time provided Ceylon with coolies for its tea and coffee plantations, and it is now assisting, in the same way, in the rapid development of rubber cultivation in the Federated Malay States. Although the number of its emigrants to other parts of the Indian Empire is only about one-half of the number who go from Bihar and Orissa or the United Provinces, the total number of its emigrants is greater than that from the latter of these provinces.

The number of emigrants from Rajputana is much smaller than that from the provinces already mentioned, but the proportional net loss from migration (more than 5 per cent.) is far greater than that sustained by any other part of India. Most of the emigrants have settled in the contiguous British territory, but the enterprising Marwari traders have penetrated to all parts of India, and their shops are to be found in every important bazar throughout Bengal and even in remote Assam.

Migration to and
from Bombay.

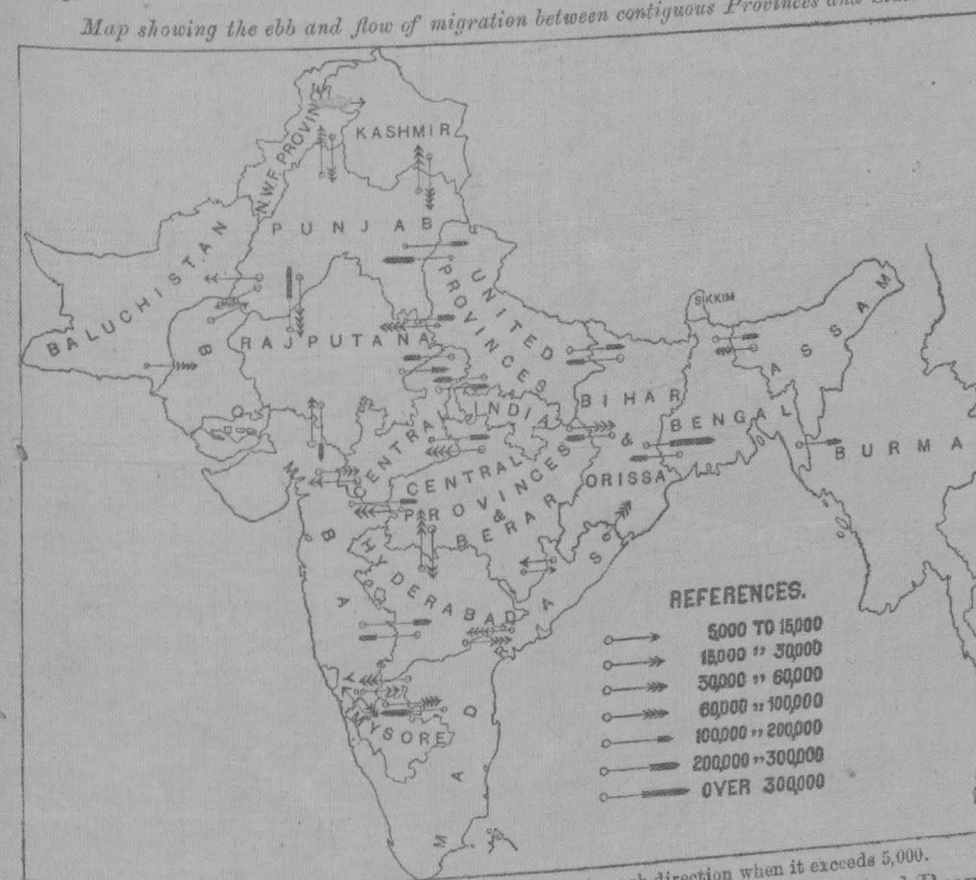
143. The figures relating to migration in the Bombay Presidency are in marked contrast to those for Bengal. In the matter of industrial development, Bombay is more advanced than Bengal; but although its population is not nearly so dense, the soil is so much less productive that there is a large local supply of labourers, and a comparatively small portion of the demand has to be met from outside the province. This is particularly noticeable in the case of Bombay City, which obtains more than half of its immigrants from the districts in the immediate neighbourhood. The United Provinces gives more than four times as many labourers to Bengal as to Bombay.

Migration between
adjoining Provin-
ces and States.

144. The ebb and flow of population between adjoining Provinces and States is shown in the map on the next page. The volume of these movements is determined very largely by the length of the common boundary line. Where it is long, as in the case of Madras and Mysore, the figures include a great deal of migration of the casual type; and in such cases the important question is, not the total amount of migration, but the net result. But it often happens that the migration between adjacent provinces is of a periodic, semi-permanent or perma-

nent type. Thus the bulk of the emigration from Bihar and Orissa to Bengal is periodic.

Map showing the ebb and flow of migration between contiguous Provinces and States.



NOTE.—The arrows show the total volume of migration in each direction when it exceeds 5,000.

On the other hand, of the 124,000 persons born in the United Provinces who were enumerated in Bihar and Orissa, two-thirds were found in the four border districts of that province, and these were, in the main, emigrants of the casual type. The United Provinces gives 131,000 emigrants, chiefly field labourers, to the Central Provinces and Berar and receives in return less than one-eighth of that number. The United Provinces loses also to the Punjab, giving 220,000 and receiving only 122,000; more than half the movement in both directions is of the casual type, but the Punjab sends to the United Provinces sepoys, police and a number of traders and pedlars and receives in exchange many domestic servants. The Central Provinces and Berar gains not only from the United Provinces, as noted above, but from all its neighbours. The wheat harvest was in full swing when the census was taken, and many of the immigrants were temporary field labourers. Some came for work on railway and canal construction and in the mines; and others again were timber workers and sawyers from Chota Nagpur or traders from Bombay. The Punjab gains largely not only from the United Provinces on its eastern, but also from Rajputana on its southern, border. Much of the movement is of the casual type, but a great deal, especially in Bahawalpur, is due to the enormous demand for labour for canal construction and for agricultural purposes in tracts which irrigation has recently rendered fit for cultivation. Rajputana loses largely not only to the United Provinces and Punjab but also to Bombay and Central India. As already noted, the movement between Madras and Mysore is largely of the casual type, but Madras also gives to this State many of the labourers employed in its gold fields, coffee plantations and other industries.

An interesting feature of these movements between provinces is the large diminution in the emigration from the United Provinces to Central India, which has already been referred to. The Jhalawān Brāhūis of Baluchistan who migrate to Sind every winter are gradually becoming permanent residents of that province; and the number of Brāhūis enumerated there is double what it was only twenty years ago. There is a permanent drift from the Sonthal Parganas district of Bihar and Orissa into the slightly elevated tract in North Bengal, known as the Barind, which the Santāls are rapidly reclaiming from

the jungle that has covered it for centuries. In the same way numerous Muhammadan cultivators from the riparian districts of North and East Bengal are moving up the course of the Brahmaputra into Assam in search of land which is becoming more and more scarce in the neighbourhood of their old homes.

Intra-provincial migration.

145. As has already been explained, the Provincial Census Reports should be referred to for details regarding the movements within provincial boundaries. It may be of interest, however, to mention a few of the more important of these movements. Most noteworthy of all is the inrush to the canal colonies of the Punjab from the surrounding districts. The local Superintendent has dealt very fully with this important movement. In the Chenab colony, although many of the earlier settlers have been replaced by their children born locally, the number of persons born elsewhere still exceeds 600,000. Of these the largest contingents have come from the congested districts of Sialkot, Amritsar and Jullundur, none of which are contiguous to the colony. The Jats contribute about one-fourth of the total number of immigrants and the Arains one-ninth; only 1 in 50 is a Rajput and 1 in 333 a Brahman. In Bihar and Orissa, the districts of North Bihar show a gradual drift eastwards; and the number of immigrants to Purnea, with its extensive areas of cheap cultivable land, from the four districts to the west of it has risen during the decade from 68 to 130 thousand. For many years after the annexation of Upper Burma in 1887 there was a strong ebb of population to Lower Burma, but this has nearly ceased, owing partly to the construction of canals which have made land in Upper Burma more valuable, and partly to all the best land in Lower Burma having now been taken up. In Bombay there is a considerable amount of periodic migration to the large towns, especially from the Deccan, Konkan and Gujarat, where the poor harvests in recent years have rendered labour more fluid.

Migration between British territory and Native States.

146. The details of migration between British and Native territory are noted in the margin. The net outcome of this interchange of population is a loss

Migration between Native States and British territory (000's omitted).

STATE OR AGENCY.	Gives to British territory.	Receives from British territory.	Net result gain (+), and loss (-)
Bengal States	37	135	+98
B. and O. States	77	309	+232
Bombay States	582	425	-157
G. I. Agency	408	313	-95
C. P. States	119	194	+75
Hyderabad State	288	229	-59
Madras States*	43	128	+85
Mysore State	126	300	+174
N.-W. F. Province (Agencies and Tribal areas)	55	6	-49
Punjab States	388	422	+34
Rajputana Agency	595	170	-425
Others	336	288	-48
TOTAL	3,054	2,919	-135

* Includes Cochin and Travancore.

of 135,000 on the part of the Native States. For this the Rajputana Agency is responsible. Of the total number of emigrants from the States of this Agency 182,000 go to the Punjab, 118,000 to Bombay and 103,000 to the United Provinces. Excluding those of the casual type, a large proportion of the emigrants are engaged in trade and look forward ultimately to returning to their homes in Rajputana. A heavy net loss has also been sustained by the States attached to the Bombay Presidency, especially those of Kathiawar and Cutch. On the other hand, there has been an extensive movement from British territory into the Bihar and Orissa States and Mysore. The former are still very sparsely peopled; and the improvement of communications, combined with the low rents charged for waste land, has encouraged cultivators from the adjacent British districts to settle there. The immigration into Mysore is of a different character. It consists largely of coolies from Madras, who go to work on the coffee and cardamom plantations, and in the Kolar gold-fields, where no less than 85 per cent. of the population is foreign-born; so also are about one-third of the inhabitants of the Bangalore city and civil and military station. The large amount of immigration into the Bengal States is the result of the overflow of population from the Sylhet and Tippera districts into Hill Tippera, where there are extensive areas of cultivable waste land.

147. Of the 504,000 persons born in other Asiatic countries who were resident in India at the time of the census, more than half were natives of Nepal. Of these more than three-quarters were enumerated in the contiguous

Immigrants to India from other Asiatic countries.

districts of Bengal, Bihar and Orissa and the United Provinces, and in the Sikkim State. The influx of Nepalese into Sikkim is worthy of special note. In 1901 nearly half the inhabitants were immigrants from across the Nepal frontier, and in 1911 the proportion still greatly exceeded a quarter. Of the Nepalese enumerated elsewhere, a considerable number are sepoys in the army and military police battalions and their dependants. In Assam numerous Nepalese are engaged in breeding buffaloes, making ghee or working as sawyers in the Government forests. Many of them are temporary or periodic visitors, but the majority are semi-permanent or permanent settlers. Their number is rapidly increasing, and has risen from 21 to 48 thousand during the last decade. Of the 92,000 immigrants from Afghanistan all but 11,000 were enumerated in the North-West Frontier Province, the Punjab, Baluchistan and Sind, and most of the remainder in the rest of Bombay, Bengal and other parts of Northern India. The latter are for the most part cold weather visitors who travel about the country peddling piece-goods and other articles of clothing. Owing to diminished immigration to the North-West Frontier Province and the Punjab, the total number of immigrants from Afghanistan is less by 22,000 than it was ten years ago.

The number of persons born in China has risen since 1901 from 47 to 80 thousand. Most of these are found in Burma, where the number has risen from 43 to 75 thousand. Part of this increase is due to the enumeration by birthplace for the first time of two tracts on the frontier in which Chinese are numerous; but even in Burma proper the number of Chinese has risen by 55 per cent. since 1901. The Chinaman settles freely in Burma, where he usually marries a Burmese wife. The sons of these mixed marriages call themselves Chinese, this being regarded as the superior race; the daughters, on the other hand, allege that they are Burmese, in order to secure the benefit of the higher position accorded to their women by the latter. Mr. Morgan Webb says that in order to support their claim to Chinese nationality, the sons, even if born in Burma, are apt to return China as their birthplace, so that the number really born in that country is somewhat smaller than would appear from the statistics. The number of persons born in China and enumerated in Bengal is still only 3,000, but it is steadily rising. The merits of the Chinaman as an artisan are becoming increasingly recognized. He has long since established himself as a shoe-maker, and he is now in growing demand as a carpenter.

Arabia is the only other Asiatic country from which there are many immigrants to India. The total number is 23,000, of whom the majority are found in Bombay.

148. The total number of immigrants from countries outside Asia is 146,265. Of these 131,968 come from Europe. The United Kingdom sends 122,919; Germany comes next with only 1,860 and then France with 1,478. As compared with 1901 there is an increase of about 26,000 in the number of immigrants from the United Kingdom. Of the British-born 77,626* were serving in the army as compared with 60,965 at the time of the previous census, when a strong contingent had been sent from India to reinforce the British garrison in South Africa. The rest of the increase is accounted for by the industrial development which has taken place, the extension of railways, and the growing extent to which Englishmen in India marry: the number of females born in the British Islands and enumerated in India has risen during the decade from 14,663 to 19,494. The figures for other European countries do not call for any special comment.

149. The Indian census statistics naturally tell us nothing of the emigration from India to other countries. This emigration is of two kinds—the movement across the border which separates India from contiguous countries, such as China, Nepal, Afghanistan and Persia, much of which is of the casual type, and emigration to distant countries. No statistics are available regarding the emigration from India to the countries on its borders. There is probably very little movement from Burma into China, but, on the other hand, it is believed that the emigration into the somewhat sparsely peopled Nepal terai from some of the adjacent British districts, where the population is much congested, exceeds the countervailing immigration. Very few people go from

Immigrants from outside Asia.

Emigration from India to other countries.

* The details are:—Officers 2,326; other ranks 73,350; unattached list ranks 1,950.

British territory to settle permanently in Afghanistan or Persia, but at the time when the last census was taken, owing to drought in Baluchistan, a considerable number of nomad Brāhuis from Chagai, and of Baloch from Makran had passed over temporarily into Afghanistan and Persia. At a rough guess the number of emigrants across the Indian frontier may be taken to be about a fifth of a million.

Of the emigrants to distant countries a certain number find their way to French or Dutch colonies, such as Surinam, Martinique, and Guadeloupe. But the majority go to other parts of the British Empire; and of the greater part of this movement we have accurate information, thanks to the courtesy of the local census authorities, who have favoured me with advance copies of their statistics. The information thus obtained is exhibited in Subsidiary Table IX. The total number of emigrants from India to other parts of the British Empire slightly exceeds a million, of whom about two-thirds are males; more than four-fifths of the aggregate are Hindus and only one-tenth are Muhammadans. Of the total number, about 474,000 were enumerated in Ceylon, 231,000 in the Straits Settlements and the Malay States, 88,000 in British Guiana, 73,000 in Natal, 51,000 in Trinidad, 35,000 in Mauritius, 29,000 in Fiji and 8,000 each in Jamaica and Zanzibar. About one-fifth of these emigrants failed to specify their province of birth; of the remainder no less than 693,000, or 85 per cent., were from Madras, 32,000 from Bengal, about 20,000 each from the United Provinces and Bombay, 16,000 from Bihar and Orissa, 13,000 from the Punjab and 8,000 from the Mysore State. The number who emigrated from other parts of India was inconsiderable. Most of these emigrants to the colonies went as ordinary labourers in sugar, tea, coffee, rubber and other plantations, but a large number of those from Bombay and Bengal are lascars on ships, while many of the natives of the Punjab are employed in the army or military police.

Some interesting information regarding the Indians in Great Britain which was compiled at my request by the Registrars General of England and Scotland will be found in the Appendix to this Chapter (page 111).

As already stated, the movement to Ceylon is of long standing.

Owing to the rapid expansion of tea cultivation, the number of natives of India enumerated in that island increased by 65 per cent. in the decade ending in 1901. Since then there has been a further increase of nearly 10 per cent., chiefly on account of the new rubber plantations. The great majority of these emigrants are from the southern districts of Madras. Mysore sends about 8,000, Travancore 7,000, and Cochin and Bombay 3,000 each. Most of them are temporary emigrants, who return after a time to their homes in Southern India. The total number of Tamils enumerated in Ceylon exceeds a million, but about half of them have been domiciled in the island for many centuries, and barely 100,000 are the offspring of recent settlers.

The emigration to the Straits Settlements and the Malay States is of quite recent growth, and is due almost entirely to the demand for labour on the rubber plantations. Most of the emigrants are temporary settlers, who return to their homes when they have saved a little money; and the total number of Indians enumerated there exceeds by only 12 per cent. the number who returned India as their birthplace. Almost four-fifths of the total number are males. Here also Madras is the principal source of supply, the Punjab (8,754) being the only other province which sends an appreciable number.

In Natal, there has been a great deal of permanent settlement; and of the total number of Indians enumerated there, nearly half were born in the colony. Many of these have forgotten their native language and now talk only English. But it is in Mauritius that the process of colonization has made most headway. The introduction of Indian coolies to work the sugar plantations dates from the emancipation of the slaves, three-quarters of a century ago; and from that time onwards many of the coolies who have gone there have made the island their permanent home. Though it now contains only 35,000 persons who were born in India, the total number of Indians is 258,000, or about 70 per cent. of the whole population. A large part of the land is now owned by Indians, and they are dominant in commercial, agricultural and domestic callings.

Year.	Number of persons born in India who were enumerated in Ceylon.
1881	276,788
1891	284,580
1901	436,622
1911	473,830

SUBSIDIARY TABLE I.

General distribution by birthplace of persons enumerated in each Province, etc.

PROVINCE, STATE OR AGENCY IN WHICH ENUMERATED.	BORN IN (000'S OMITTED).											
	PROVINCE, STATE OR AGENCY IN WHICH ENUMERATED.			CONTIGUOUS PARTS OF OTHER PROVINCES.			NON-CONTIGUOUS PARTS OF OTHER PROVINCES.			OUTSIDE INDIA.		
	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13
Ajmer-Merwara	405	222	183	62	24	38	33	19	14	1	1	...
Andamans and Nicobars	12	6	6	...	...	...	14	13	1	...	...	...
Assam	6,178	3,139	3,039	99	54	45	732	410	322	51	35	16
Baluchistan	776	421	355	33	26	7	9	7	2	16	12	4
Bengal	44,335	22,425	21,910	381	195	186	1,458	1,104	354	132	80	52
Bihar and Orissa	37,985	18,585	19,400	257	118	139	153	97	56	40	15	25
Bombay	26,063	13,433	12,630	798	411	387	156	114	42	67	53	14
Burma	11,465	5,653	5,812	76	72	4	418	351	67	97	78	19
Central Provinces and Berar	15,283	7,579	7,704	419	202	217	324	197	127	7	6	1
Coorg	129	66	63	45	31	14	1	1	...	...	...	...
Madras	41,616	20,474	21,142	209	101	108	30	20	10	15	10	5
North-West Frontier Province	2,075	1,097	978	37	27	10	45	36	9	53	35	18
Punjab	23,528	12,963	10,565	460	219	241	146	87	59	54	45	9
United Provinces	47,354	24,780	23,574	425	155	270	166	91	75	70	48	22
Baroda State	1,810	966	844	188	70	118	35	20	15	...	...	...
Central India Agency	8,883	4,587	4,296	321	131	190	149	80	69	4	3	1
Cochin State	871	434	437	43	20	23	4	3	1	...	...	...
Hydrabad State	13,114	6,665	6,449	127	54	73	126	71	55	8	7	1
Kashmir State	3,027	1,607	1,420	64	29	35	11	8	3	2	2	...
Mysore State	5,493	2,760	2,733	230	127	103	78	44	34	5	4	1
Rajputana Agency	10,227	5,399	4,828	262	93	169	41	23	18	1	1	...
Sikkim State	58	29	29	3	2	1	1	1	...	26	14	12
Travancore State	3,368	1,701	1,667	49	24	25	11	6	5	1	1	...

NOTE.—In Subsidiary Tables I and II the figures for Provinces include those for the States attached to them, except in the case of Madras, where they exclude Cochin and Travancore. The figures in columns 5 to 10 include immigrants (88,000) from French and Portuguese Possessions and those Indians (17,000) whose birthplace was not specified. These have not been taken into account in Subsidiary Table II.

SUBSIDIARY TABLE II.

General distribution by place of enumeration of persons born in each Province, etc.

PROVINCE, STATE OR AGENCY, IN WHICH BORN.	ENUMERATED IN (000'S OMITTED).											
	PROVINCE, STATE OR AGENCY IN WHICH BORN.			CONTIGUOUS PARTS OF OTHER PROVINCES.			NON-CONTIGUOUS PARTS OF OTHER PROVINCES.			OUTSIDE INDIA.		
	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13
Ajmer-Merwara	405	222	183	24	8	16	60	39	21	...	...	...
Andamans and Nicobars	12	6	6	...	...	...	1	1	...	...	...	...
Assam	6,178	3,139	3,039	56	29	27	18	14	4	1	1	...
Baluchistan	776	421	355	64	36	28	12	8	4	...	...	...
Bengal	44,335	22,425	21,910	314	186	128	239	169	70	31	23	8
Bihar and Orissa	37,985	18,585	19,400	709	375	334	1,192	846	346	16	11	5
Bombay	26,063	13,433	12,630	407	173	234	196	118	78	19	16	3
Burma	11,465	5,653	5,812	3	1	2	10	6	4	1	1	...
Central Provinces and Berar	15,383	7,579	7,704	162	69	93	153	79	74	1	1	...
Coorg	129	66	63	3	1	2	1	1	...	...	...	...
Madras	41,616	20,474	21,142	470	257	213	355	266	89	693	450	243
North-West Frontier Province	2,075	1,097	978	23	14	9	44	32	12	1	1	...
Punjab	23,528	12,963	10,565	323	166	157	181	138	43	13	12	1
United Provinces	47,354	24,780	22,574	307	166	201	1,102	748	354	20	14	6
Baroda State	1,810	966	844	216	84	132	19	11	8	...	...	...
Central India Agency	8,883	4,587	4,296	447	177	270	89	54	35	...	...	...
Cochin State	871	434	437	19	9	10	1	...	1	3	3	...
Hyderabad State	13,114	6,665	6,449	258	107	151	48	28	20	...	...	...
Kashmir State	3,027	1,607	1,420	59	28	31	23	18	5	...	...	...
Mysore State	5,493	2,760	2,733	75	36	39	56	30	26	8	5	3
Rajputana Agency	10,227	5,399	4,828	567	255	312	289	187	102	...	...	...
Sikkim State	58	29	29	3	1	2	...	...	...	...	...	...
Travancore State	3,368	1,701	1,667	21	10	11	5	3	2	7	4	3

Vide footnote to Subsidiary Table I.

SUBSIDIARY TABLE III.

Proportional migration to and from each Province and State.

PROVINCE, STATE OR AGENCY.	NUMBER PER MILLE OF						NUMBER OF FEMALES TO 100 MALES AMONGST—			
	IMMIGRANTS.			EMIGRANTS.			IMMIGRANTS.		EMIGRANTS.	
	Total.	From contiguous districts.	From other places.	Total.	To contiguous districts.	To other places.	From contiguous districts.	From other places.	To contiguous districts.	To other places.
1	2	3	4	5	6	7	8	9	10	11
Ajmer-Merwara	193	124	69	165	49	119	155	71	195	53
Assam	125	14	111	11	8	3	82	76	92	26
Baluchistan	70	40	30	91	76	15	28	28	79	41
Bengal	43	8	35	13	7	6	95	34	69	40
Bihar and Orissa	12	7	5	49	18	31	118	72	89	41
Bombay	37	29	8	23	15	8	94	33	135	60
Burma	49	6	43	1	...	1	6	20	106	57
Central Provinces and Berar	47	26	21	20	10	10	107	63	136	93
Coorg	260	256	4	22	17	5	46	23	117	84
Madras	6	5	1	36	11	25	107	50	83	46
North-West Frontier Province	61	17	44	30	10	20	36	39	61	39
Punjab	27	19	8	21	13	8	110	52	95	30
United Provinces	14	9	5	29	7	22	203	70	200	47
Baroda State	110	93	18	116	107	9	170	73	156	76
Central India Agency	51	34	17	57	43	14	144	83	152	66
Cochin State	51	47	4	25	20	5	113	47	114	30
Hyderabad State	19	9	10	23	19	4	134	73	141	72
Kashmir State	25	21	4	26	19	7	118	39	109	30
Mysore State	54	40	14	24	13	11	81	73	108	84
Rajputana Agency	29	25	4	81	54	27	181	78	122	55
Sikkim State	339	34	305	39	34	5	92	80	109	86
Travancore State	18	15	3	9	6	3	106	71	104	58

NOTE.—The figures for Provinces include those for the States attached to them, except in the case of Madras, where they exclude Cochin and Travancore. The proportion in this Table has been worked out on actual figures and not on those shown in Subsidiary Tables I and II in which thousands have been omitted. This is why certain columns in this Table contain figures while the corresponding columns in Subsidiary Tables I and II are blank.

SUBSIDIARY TABLE IV.

Proportion of persons born (a) in the district where enumerated and (b) elsewhere.

PROVINCE, STATE OR AGENCY.	NUMBER PER 10,000 OF POPULATION.	
	Born in district where enumerated.	Born elsewhere.
1	2	3
INDIA.	9,135	865
Ajmer-Merwara	7,978	2,022
Assam	8,572	1,428
Baluchistan	9,153	847
Pengal	9,173	827
Bihar and Orissa	9,522	478
Bombay	8,811	1,189
Burma	8,828	1,172
Central Provinces and Berar	8,689	1,311
Coorg	7,372	2,628
Madras	9,583	417
North-West Frontier Province	9,075	925
Punjab	8,532	1,468
United Provinces	9,121	879
Baroda State	8,850	1,150
Central India Agency	8,025	1,375
Cochin State	9,487	513
Hyderabad State	9,475	525
Kashmir State	9,540	460
Mysore State	9,132	868
Rajputana Agency	9,324	676
Sikkim State	6,597	3,403
Travancore State	9,711	289

NOTE.—The figures for Provinces include those for the States attached to them, except in the case of Madras, where they exclude Cochin and Travancore.

SUBSIDIARY TABLE V.

Variation as compared with 1901 in the volume of migration within India.

PROVINCE, STATE OR AGENCY.	TOTAL IMMIGRANTS.			TOTAL EMIGRANTS.			Excess (+) or deficiency (—) of Immigrants over Emigrants.	
	1911.	1901.	Variation.	1911.	1901.	Variation.	1911.	1901.
1	2	3	4	5	6	7	8	9
Provinces.	1,985,011	1,937,834	+ 47,177	1,426,177	1,537,039	-160,862	+558,834	+350,795
Ajmer-Merwara	95,112	93,113	+ 1,999	84,110	25,293	+ 58,817	+ 11,002	+ 67,820
Andamans and Nicobars	14,119	13,955	+ 164	967	349	+ 618	+ 13,152	+ 13,606
Assam	831,118	750,811	+ 80,307	73,739	51,481	+ 22,258	+ 757,979	+ 699,330
Baluchistan	42,309	34,822	+ 7,487	76,031	70,986	+ 5,045	- 33,722	- 36,164
Bengal	831,169	730,774	+ 100,395	1,035,865	872,580	+ 163,285	- 204,696	- 141,806
Bihar and Orissa								
Bombay	954,552	770,091	+ 184,461	602,966	626,799	- 23,833	+ 351,586	+ 143,292
Burma	493,699	415,953	+ 77,746	12,653	9,460	+ 3,193	+ 481,046	+ 406,493
Central Provinces and Berar	743,067	625,713	+ 117,354	814,515	302,257	+ 12,258	+ 428,552	+ 323,456
Coorg	45,427	54,960	- 9,533	3,858	3,192	+ 666	+ 41,569	+ 51,768
Madras	238,730	245,837	- 7,107	824,723	713,203	+ 111,520	- 585,993	- 467,866
N.-W. F. Province	583,927	620,875	- 36,948	466,726	435,749	+ 30,977	+ 117,201	+ 185,126
Punjab								
United Provinces	590,414	615,535	- 25,121	1,408,656	1,510,295	- 101,639	- 819,242	- 894,760
States and Agencies.	1,432,340	1,593,742	-161,402	1,886,257	1,355,368	+30,889	-453,917	-261,626
Baroda State	222,427	172,593	+ 49,829	235,523	202,302	+ 33,221	- 13,096	- 29,704
Central India Agency	470,391	668,525	- 198,134	535,847	462,310	+ 73,537	- 65,456	+ 206,215
Cochin State	47,190	49,987	- 2,797	20,381	14,622	+ 5,759	+ 26,809	+ 35,365
Hyderabad State	253,117	312,314	- 59,197	306,272	317,790	- 11,518	- 53,155	- 5,476
Kashmir State	74,397	82,932	- 8,535	81,931	83,157	- 4,226	- 7,534	- 3,225
Mysore State	303,202	303,675	+ 4,527	131,257	131,682	- 425	+ 176,945	+ 171,993
Rajputana Agency	302,489	233,718	+ 68,771	855,625	900,224	- 44,599	- 563,136	- 666,506
Sikkim State	3,808	2,186	+ 1,622	8,445	2,158	+ 1,257	+ 363	- 2
Travancore State	60,613	54,200	+ 6,413	26,270	24,486	+ 1,784	+ 34,343	+ 29,714

NOTE.—The figures for Provinces include those for the States attached to them, except in the case of Madras, where they exclude Cochin and Travancore. The figures in columns 2 and 3 include immigrants from French and Portuguese Possessions and those Indians whose birthplace was not specified. Also see footnote to Subsidiary Table VI so far as it relates to the 1901 figures. The 1911 figures for Bengal, Bihar and Orissa, the Punjab and N.-W. F. Province are shown in Subsidiary Table VI.

SUBSIDIARY TABLE VI.

Migration between Provinces and States in 1901 and 1911.

PROVINCE, STATE OR AGENCY IN WHICH ENUMERATED.																							
Serial Number.	PROVINCE, STATE OR AGENCY IN WHICH BORN.	BRITISH TERRITORY.										NATIVE STATES.										GRAND TOTAL.	
		Assam.	Bengal.	Bihar and Orissa.	Bombay.	Burma.	C. P. and Berar.	Madras.	N. W. F. Provinces.	Punjab.	United Provinces.	Other Provinces.	TOTAL.	Baroda.	Central India.	Cochin.	Hyderabad.	Kashmir.	Mysore.	Rajputana.	Sikkim.		Travancore.
1	Ajmer-Merwara	1911. { 1911. 882,068	1,970,778	440,712	1,021,224	390,565	740,985	253,877	135,345	680,219	680,065	215,015	7,589,276	222,957	474,255	47,266	200,713	76,778	312,908	303,553	29,885	61,165	1,759,425
2	Andamans and Nicobars	1901. { 1901. 775,842	394,571	86,368	199	2,673	120	16	1,543	2,417	2,398	193	5,277	60	1,266	...	83	10	11	18,586	...	...	1,936,602
3	Assam.	1911. { 1911. 194	464	406	33	740	65	11	754	2,398	154	...	946	...	...	...	...	7	14	...	...	...	2,480
4	Baluchistan	1901. { 1901. 191	80	13	38	24	38	13	117	21	323	...	323	...	...	...	...	1	14	1	...	...	2,554
5	Bengal	1911. { 1911. 207	67,810	3,162	143	1,018	191	204	21	132	1,232	178	78,601	6	8	...	5	...	13	105	1	...	73,789
6	Bihar and Orissa.	1901. { 1901. 655	43,283	...	55	1,054	191	153	...	103	340	153	51,440	6	...	...	...	2	4	8	...	...	51,431
7	Bombay	1911. { 1911. 193	116	19	65,684	8	241	23	263	3,704	567	62	75,337	41	30	...	181	30	11	210	1	...	76,031
8	Burma	1901. { 1901. 193	36	...	...	...	...	...	...	...	...	...	70,872	12	...	...	12	16	8	57	...	...	70,993
9	C. P. and Berar.	1911. { 1911. 193	185,854	...	6,574	135,756	5,798	6,547	284	4,019	25,819	1,693	546,055	382	1,004	22	717	131	413	737	3,052	124	5,532
10	Coorg	1901. { 1901. 193	1,256	...	1,256	8,392	138,598	1,401	24	1,445	105,081	1,064	1,898,969	150	1,115	25	17	79	59	398	189	2	2,094
11	Grand Total	1901. { 1901. 503,551	1,532,371	...	6,471	157,024	44,656	9,720	564	6,510	138,901	3,016	890,842	915	5,039	52	1,002	193	416	884	2,029	603	11,738
12	...	1911. { 1911. 2,553	8,537	3,431	...	12,821	101,067	18,822	666	10,583	9,326	8,454	176,200	207,748	54,111	1,075	118,830	184	29,771	14,553	232	197	496,706
13	...	1901. { 1901. 1,415	6,705	...	6,659	106,384	94,438	1,158	10,901	6,102	7,683	171,325	161,153	207,748	54,111	1,075	118,830	202	37,117	9,019	3	4,104	626,799
14	...	1911. { 1911. 2,299	2,690	173	632	...	238	2,021	29	1,550	732	1,783	12,035	63	13	...	185	...	278	32	10	22	598
15	...	1901. { 1901. 1,685	1,683	...	392	...	319	1,502	32	780	794	2,025	9,073	25	...	...	...	3	184	37	1	32	387
16	...	1911. { 1911. 77,021	20,977	32,636	34,704	623	...	7,205	87	1,500	14,823	1,368	211,093	321	80,061	12	20,947	11	1,188	986	...	41	105,512
17	...	1901. { 1901. 84,224	62,268	...	16,576	2,133	...	14,071	117	1,274	11,240	1,285	193,228	141	63,978	31	30,871	8	1,541	371	2	86	109,020
18	...	1911. { 1911. 2	3	5	11	5	13	741	...	...	1	1	784	...	...	1	1	...	3,071	...	...	1	3,074
19	...	1901. { 1901. 1	5	...	...	...	...	631	...	1	1	...	638	...	...	...	...	...	2,553	...	...	1	2,554

* The 1901 figures for Bengal, Central India and Rajputana Agencies are based on the census as they stood in that census. Those for the Central Provinces and Berar include Sanbalpur, and those for the Punjab include the N. W. F. Province.

The figures for Provinces include those for the States attached to them, except in the case of Madras, where they exclude Cochin and Travancore.

In this Table emigrants to places outside India have not been included. They are shown in Subsidiary Table X.

The difference between the 1901 figures for "Outside India" as shown here and in the corresponding Subsidiary Table in the last Census Report is due to the Lacadives and Yaghtian being treated at this census as within India.

SUBSIDIARY

Variation as compared with 1901 in the number of immigrants

Serial Number.	PROVINCE, STATE OR AGENCY.	CONTIGUOUS COUNTRIES.				DISTANT					
		NEPAL.		AFGHANISTAN.		BRITISH ISLANDS.					
						1911.			1901.		
		1911.	1901.	1911.	1901.	Persons.	Males.	Females.	Persons.	Males.	Females.
1		2	3	4	5	6	7	8	9	10	11
	India.	280,248	243,037	91,640	112,502	122,919	103,425	19,494	96,653	81,990	14,663
	Provinces.	253,255	218,732	89,639	109,879	111,045	93,303	17,740	84,933	72,222	12,711
1	Ajmer-Merwar	17	9	134	120	1,223	1,099	124	576	474	102
2	Andamans and Nicobars	14	9	34	32	181	163	18	190	177	13
3	Assam	47,654	21,347	667	1,101	1,427	1,119	308	1,287	1,080	207
4	Baluchistan	1,677	6	10,625	3,436	3,287	2,908	379	2,820	2,636	184
5	Bengal	106,727	96,155	2,710	3,502	12,179	9,355	2,824	9,767	7,695	2,072
6	Bihar and Orissa	35,954	42,625	657	903	2,572	1,859	713	2,141	1,612	529
7	Bombay	514	213	8,247	12,513	21,244	18,092	3,152	15,752	13,275	2,478
8	Burma	5,997	3,910	109	253	7,354	6,279	1,075	5,690	5,057	633
9	C. P. and Berar	253	82	1,064	796	4,846	4,275	571	3,515	2,269	1,246
10	Coorg	...	3	...	2	82	58	24	99	62	37
11	Madras	18	77	118	100	6,497	4,908	1,589	5,994	4,874	1,120
12	N.-W. F. Province	5,653	7,711	42,480	86,120	4,836	4,390	446	21,690	19,471	2,219
13	Punjab	5,430				23,311	19,954	3,357			
14	United Provinces	43,847	46,585	1,605	1,001	22,006	18,846	3,160	15,411	13,540	1,871
	States and Agencies.	26,993	24,305	1,951	2,623	11,874	10,120	1,754	11,720	9,768	1,952
15	Baroda State	49	14	87	155	55	35	20	22	12	10
16	Central India Agency	88	73	178	186	3,192	2,841	351	3,255	2,767	488
17	Cochin State	...	10	...	2	20	14	6	26	16	10
18	Hyderabad State	19	25	468	886	3,790	3,359	431	5,728	4,929	799
19	Kashmir State	1,077	1,384	943	1,038	109	69	40	92	45	47
20	Mysore State	9	8	24	21	3,939	3,289	650	2,100	1,661	439
21	Rajputana Agency	140	56	243	308	521	342	179	255	170	85
22	Sikkim State	25,610	22,720	2	1	11	11	...	...	...	...
23	Travancore State	1	15	6	26	237	160	77	242	168	74

NOTE.—The figures for Provinces include those for the States.
Australasia includes Australia, Borneo, Fiji, Java, Manila.

TABLE VII.

from certain foreign countries.

COUNTRIES.

Serial Number.	GERMANY.		FRANCE.		OTHER EUROPEAN COUNTRIES.		AFRICA.		AMERICA.		AUSTRALASIA.		Serial Number.
	1911.	1901.	1911.	1901.	1911.	1901.	1911.	1901.	1911.	1901.	1911.	1901.	
	12	13	14	15	16	17	18	19	20	21	22	23	
	1,860	1,696	1,478	1,351	5,711	4,883	10,270	8,293	2,760	2,069	1,267	841	
	1,756	1,608	1,319	1,223	5,233	4,566	9,717	8,193	2,505	1,992	1,267	796	
	...	2	29	8	14	7	9	3	9	5	12	7	1
	1	1	...	...	...	1	...	1	3	3	2	...	2
	29	22	...	5	40	26	14	15	58	49	25	25	3
	9	2	6	23	21	11	8	15	37	9	19	5	4
	306	231	175	222	843	717	232	125	312	273	306	176	5
	148	128	26	31	115	126	30	45	66	101	40	47	6
	353	658	164	240	2,219	2,172	8,006	7,007	287	340	150	36	7
	214	149	211	127	558	363	53	58	403	211	205	145	8
	74	21	101	92	111	116	46	17	145	89	60	22	9
	4	10	6	2	3	2	3	2	2	2	2	...	10
	403	239	504	385	505	363	893	672	255	212	97	114	11
	8	74	10	43	37	419	24	87	26	273	28	93	12
	76												13
	132	71	36	45	299	243	277	146	635	425	154	126	14
	104	88	159	128	478	317	553	100	255	77	60	46	
	1	1	6	5	8	5	257	23	12	2	...	...	15
	16	3	24	15	51	95	129	13	89	12	8	8	16
	4	2	2	2	24	3	...	2	3	2	1	...	17
	3	23	12	12	131	66	98	16	40	19	11	1	18
	6	...	3	6	8	12	6	8	10	2	1	2	19
	52	44	90	72	182	90	46	18	76	27	34	25	20
	8	4	20	5	12	14	16	16	16	9	4	6	21
	3	...	...	...	...	4	...	...	...	...	...	...	22
	11	11	2	11	62	28	1	4	9	4	1	4	23

attached to them, except in the case of Madras, where they exclude Cochin and Travancore.
Melanesia, New Zealand, Philippines, Polynesia, Sumatra and Tasmania.

SUBSIDIARY TABLE VIII.

Total number of immigrants from outside India at each of the last three censuses.

BIRTHPLACE.	NUMBER IN		
	1911.	1901.	1891.
GRAND TOTAL.	650,502	627,438	525,521
Asia.			
Afghanistan	504,113	511,538	402,917
Arabia	91,640	112,502	84,963
Bhotan	23,078	33,013	28,092
Ceylon	2,647	2,660	4,353
China and Japan	6,165	5,273	5,612
Further India, etc.*	81,568	47,184	25,688
Nepal	5,995	5,171	8,757
Persia	280,248	243,087	236,398
Tibet	6,772	11,660	4,411
Turkistan	4,509	3,020	1,641
Other Asiatic countries	91	816	816
Europe.			
United Kingdom	131,968	104,583	107,772
Austria-Hungary	122,919	96,653	100,551
France	599	631	418
Germany	1,478	1,351	1,258
Gibraltar, etc.	1,860	1,696	1,458
Greece	269	227	304
Holland and Belgium	274	226	236
Italy	588	711	337
Russia	894	1,010	881
Spain and Portugal	314	525	262
Sweden, Norway, Denmark and Iceland	1,101	384	378
Turkey	443	423	542
Europe, Unspecified	111	201	256
Other European countries	809	460	633
Africa.			
America.	10,370	8,293	11,568
Australasia.	2,760	2,069	2,368
At Sea.	1,267	841	648
	124	114	248

* Includes Siam, Straits Settlements, Malaya and the Maldives.

Number of Indians born in India who were enumerated in Great Britain and the Colonies in 1911.

TOTAL BORN IN INDIA.										DETAILS BY PROVINCES, STATES AND AGENCIES.										NUMBER OF NATIVES OF INDIA IN COLONY IMMEDIATELY PREVIOUS TO THE CENSUS.												
PERSONS.		MALES.		FEMALES.		ASSAM.		BENGAL.		BHUAR AND ORISSA.		BOMBAY.		BURMA.		CENTRAL PROVINCES AND BEHAR.		MADRAS.		PUNJAB.		UNITED PROVINCES.		MYSORE.		RAJPUTANA.		OTHER PROVINCES AND STATES.		INDIA UNRECORDED.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Total																																
England and Wales (a)																																
Scotland (b)																																
Ireland (c)																																
Malta (d)																																
Ceylon (e)																																
Barat Kong (f)																																
British Settlements (g)																																
Other British Possessions (h)																																
Malay States (i)																																
Arab-Egyptian Sudan (j)																																
Sudan (k)																																
Somalia (l)																																
Bechuanaland (m)																																
Cape of Good Hope (n)																																
Natal (o)																																
Transvaal (p)																																
Orange Free State (q)																																
Basutoland (r)																																
Swaziland (s)																																
Rhodesia (t)																																
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NOTE.—This Table is exclusive of the immigrants to the Colonies, and Ireland, and the returns for which had not been received when it was compiled. The returns for England and Wales did not distinguish between Assam, Bengal and Bihar and Orissa. Consequently all emigrants to that country have been shown as coming from India. The figures for England and Wales include only the persons included in the census returns for the year 1911, and 14 females (persons on vessels which put in at Colombo shortly after the census) and who were omitted from the census returns both of that colony and of India.

(a) The figures for England, Wales, and Ireland, do not show the number of natives of India, irrespective of birthplace. The figures shown against the Colony of India have been taken from the returns of the Protector of Emigrants for the year 1910.

(b) The figures for this Colony relate to natives of India and Ceylon.

(c) The figures for England and Wales include only the persons included in the census returns for the year 1911, and 14 females (persons on vessels which put in at Colombo shortly after the census) and who were omitted from the census returns both of that colony and of India.

(d) The figures for India, irrespective of birthplace, are those of the Census of India, 1911, and are not available in these cases, the details in Col. 31.

(e) The figures for India, irrespective of birthplace, are those of the Census of India, 1911, and are not available in these cases, the details in Col.

SUBSIDIARY TABLE X.

Number of emigrants to Colonies, etc., who were registered at the ports of Calcutta and Madras during the decade 1901-10.

APPENDIX.

1. Age and Civil condition of Indians enumerated in Great Britain.*

* The figures for England and Wales include 66 persons (57 males and 9 females) who were born in Ceylon.

2. Occupations of Indians enumerated in Great Britain.

Number of Order.	OCCUPATION.	ENGLAND AND WALES.		SCOTLAND.	
		Males.	Females.	Males.	Females.
1	Total	3,867	163	138	
1	Pasture and Agriculture	1	...	...	...
3	Mines	1	...	...	...
6	Textile Industries	2	...	...	...
8	Wood Industries	1	...	...	...
13	Industries of dress and the toilet	2	...	...	...
17	Production and transmission of physical forces	7	...	...	...
18	Industries of luxury and those pertaining to literature and the arts and sciences.	2	...	1	...
20	Transport by water	2,536	...	1	...
	(a) Navigating department	577	...	...	...
	(b) Engineering department	1,363	...	...	...
	(c) Cooks, stewards, etc.	591	...	...	...
21	Transport by road	...	...	1	...
22	Transport by rail	3	...	...	...
24	Banks, establishments of credit, exchange and insurance	4	...	...	...
25	Brokerage, commission and export	14	...	...	...
26	Trade in textiles	5	...	...	...
30	Trade in pottery	1	...	...	...
32	Hotels, cafés, restaurants, etc.	12	3	1	...
33	Other trade in food stuffs	4	...	...	...
35	Trade in furniture	2	1	...	...
39	Trade in articles of luxury and those pertaining to letters and the arts and sciences.	2	...	...	...
41	Trade of other sorts	34	...	...	...
42	Army	15	...	...	...
45	Public administration	14	...	...	...
46	Religion	9	...	1	...
47	Law	37	...	...	...
48	Medicine	76	...	7	1
49	Instruction	3	1	...	...
50	Letters and arts and sciences	41	3	3	...
51	Persons living principally on their income	34	27	...	...
52	Domestic service	42	27	1	...
53	General terms which do not indicate a definite occupation	964	101	122	1
	Students (included in above)	932	98	122	1

NOTE.—The figures for England and Wales in this statement relate to persons aged 10 years and upwards. They are inclusive of 66 natives of Ceylon.

CHAPTER IV.

Religion.

150. The religious distribution of the people of India is shown in Imperial Table VI. Table VIA (an optional table compiled only in a limited number of Provinces) shows the strength of certain sects of Hindus and Muhammadans, and Table XVII (a general table) the sects of Christians. In several other tables the distinction by religion is presented in connection with other data. In Table V the urban population is classified by religion. In Table VII religion is combined with age and civil condition, in Table VIII with education, in Table XIII with caste and in Table XV-D (optional) with occupation. There is also a special age Table (XVIII) for Europeans, Anglo-Indians and Armenians. In these Tables the distinction is made in order to throw light on special subjects which are dealt with in other parts of this Report, such as the constitution of the urban population, and the marriage customs of, and spread of education amongst, different sections of the population. The discussion in the present Chapter will be confined to matters arising out of the data contained in Tables VI and XVII and the corresponding tables prepared at previous censuses. The main aspects of the statistics are presented, as usual, in a series of subsidiary tables at the end of the Chapter, viz. :—

I. General distribution of the population by religion.

II. Proportional strength of the main religions in each Province, State or Agency.

III. Distribution of Christians by locality.

IV. Races and sects of Christians.

V. Proportional distribution of Christians by race and sect.

VI. Statistics of Europeans and Anglo-Indians.

151. In this country no one has any objection to stating his religion, and if all the creeds were clear and definite and mutually exclusive, there would have been no difficulty whatever in the way of obtaining an accurate return. But with the exception of the exotic religions, such as Christianity and Muhammadanism, there is no such thing as a definite creed. The Hindu word "*dharma*," which corresponds most closely to our word "religion," connotes conduct more than creed. In India the line of cleavage is social rather than religious, and the tendency of the people themselves is to classify their neighbours, not according to their beliefs, but according to their social status and manner of living. No one is interested in what his neighbour believes, but he is very much interested in knowing whether he can eat with him or take water from his hands. Before the advent of the Aryans, the inhabitants appear to have been divided into a great number of petty independent communities, each with its own social organization and tribal priests. Their beliefs were of the amorphous Animistic type of which an account was given in the last Census Report, and which have their counterpart amongst primitive races in all parts of the world.* The Aryans when they first came to India were worshippers of the great forces of nature. They held themselves aloof from the aborigines as far as possible, but a gradual intermixture was inevitable, and the process led to the evolution of caste. It also led to a gradual modification of the Aryans' religious cults and to the incorporation of many local deities in their pantheon. From time to time religious reformers appeared and gained disciples, sometimes from one particular class, sometimes from all sections of the community, but it was seldom that the fervour they evoked was sufficient to break down the growing strength of the social barriers. And even when it did so, the social influences usually remained so strong as gradually to reduce the religious differences to a position of relative inferiority. Nor is it only the strength of the social segmentation which tends to

* A very interesting description of the Animistic beliefs of the Bataks of Sumatra has been given by Warneck in his *Living Forces of the Gospel*.

make differences of belief seem a matter of relatively small importance. The Indian, though much less tolerant than the European in the matter of his neighbour's acts, is far more so where his beliefs are concerned. Fearing many gods himself, he is quite ready to admit that there may be others of whom he has no ken, and it seldom occurs to him to differentiate himself from his fellows merely because they invoke a different deity in time of trouble. It is only when a new religious cult is joined to some strong social or political propaganda that any real cleavage is established. This was the case with Buddhism, which repudiated the Brahmanical supremacy, and Jainism, which denied the authority of the Vedas, and also with Sikhism in the form given to it by Guru Gobind, who aimed at the establishment of a political ascendancy and openly repudiated many of the ordinary Hindu scruples. The peculiar tenets of the Buddhists, Jains and Sikhs are well known, and it would be superfluous to describe them here. It will suffice to say that they differ widely from the ordinary forms of Hinduism. There are numerous minor cults, such as those of the Satnāmis and Pāṇchpiriyas, which differ equally widely, and which, from a strictly logical point of view, should be placed on the same footing and treated as separate religions. But they have no history and no religious literature, and are relatively of minor importance, and it would have been somewhat absurd to elevate them to the rank of a separate religion. For census purposes the only indigenous religions which we attempted to differentiate from Hinduism are, on the one hand, its offshoots, Buddhism, Jainism and Sikhism, and on the other, the primitive beliefs of the aboriginal tribes who have not yet been absorbed in the Hindu social system, which are lumped together as Animistic. In order, as far as possible, to meet the views of those who object to the Buddhists, Jains and Sikhs being dissociated from the Hindus, all four religions have been grouped in Table VI under the general head Indo-Aryan.

152. The Hindu residuum is a most heterogeneous mixture. As stated in paragraph 4 the term includes:—

A complex congeries of creeds and doctrines. It shelters within its portals monotheists, polytheists and pantheists; worshippers of the great gods Siva and Vishnu or of their female counterparts, as well as worshippers of the divine mothers, of the spirits of trees, rocks and streams and of the tutelary village deities; persons who propitiate their deity by all manner of bloody sacrifices, and persons who will not only kill no living creature but who must not even use the word 'eat'; those whose ritual consists mainly of prayers and hymns, and those who indulge in unspeakable orgies in the name of religion; and a host of more or less heterodox sectaries, many of whom deny the supremacy of the Brahmins, or at least have non-Brahmanical religious leaders.

The category of Hindus includes not only many who do not enjoy the ministrations of the Brāhmans, nor worship in the ordinary temples, but also sweepers and other low castes, whom many Hindu enumerators in Northern India hesitated to describe as Hindus, and some who did not so class themselves, and even a few, such as certain Satnāmi Chamars in the Central Provinces, who actually objected to being so classed. Mr. McIver put the matter very clearly in the Madras Census Report for 1881, where he wrote:—

"A good deal might be said as to the propriety of the use of the word 'Hindu' as a religious classification when applied to the mass of the Southern Indian population. Regarded as a definition of religion, or even of race, it is more liberal than accurate. From the point of view of race it groups together such widely distinct peoples as true Aryan Brāhmans and the few Kshatriyas we possess, with the Vellālas and Kallars, of the South, the Nairs of the West, and the aboriginal tribes of the Southern hill sides. As a religious classification it lumps the purest surviving forms of Vedic belief with the demon worshippers of Tinnevely and South Canara. On the other hand, if it conveys no very distinct idea of a race limitation or a religious group, it serves fairly as a socio-political classification, since it treats as a whole the people who recognize caste, and who are governed by one form or other of Hindu Law."

153. It may be asked why, when the term covers such a multitude of beliefs and diversity of races, an attempt has not been made to disentangle them by a return of sect. The answer is three-fold. In the first place there is a bewildering maze of sects which overlap each other in a most extraordinary way. There are the two main divisions of Saiva and Vaishnava; and it has been said that all Hindus belong to one or other of these, but this does not seem to be correct. There is, for example, the Sakta sect, which owes its origin to the Tantrik developments that infected both Buddhism and Hinduism,

chiefly in North-East India, about the seventh century of our era. This cult is based on the worship of the active producing principle of nature as manifested in one or other of the goddess wives of Siva; it is a religion of bloody sacrifices and magic texts. The ritual is laid down in the mediæval scriptures known as Tantras, in one of which it is expressly stated that the Vedas have become obsolete. It would be incorrect to treat the followers of this cult as Saivas. The same remark applies to the Smārta, Ganpatya and Saura sects, as well as to numerous minor sects, such as the Pāṇchpiriya and Kartabhaja, which it would be equally wrong to allocate to either of the above main heads. Secondly, there is the practical impossibility of obtaining a complete return of sect. Of the great mass of Hindus, only a relatively small minority belong definitely to special sects, and still fewer have any idea that their peculiar cult differentiates them in any way from ordinary Hindus. It has been noted already that there are some sects, such as the Sakta, which cannot properly be grouped either as Saivas or Vaishnavas; but apart from this, the great mass of Hindus cannot be said to be followers of the one God rather than of the other. Thus a well known Bengali scholar and writer wrote to me recently, denying that he was a special follower either of Siva or Vishnu. He said:—

"I fast on the *Sivarātri* day because it is sacred to Siva, and I fast on the *Ekādashi* day because it is sacred to Vishnu. I plant the *bel* tree because it is dear unto Siva, and the *tulsi* because it is dear unto Vishnu. The bulk of Hindus are not sectaries. Though the sects write much and make the most noise, they are only a small minority."

The Punjab Superintendent points out that in his province the difference between Saiva and Vaishnava is by no means well defined. The religious orders are distinctively Saiva or Vaishnava, but the ordinary householder makes very little distinction between the two creeds and worships Ram, Krishna, Siva, the Goddesses, etc., as the occasion seems to require. In one sense "the bulk of the Hindus may be considered as Saivas, for Goddess worship in one form or another is very prevalent, but with reference to the main forms of worship and usages it may be equally true to call them Vaishnavas." It may be added that the results attending the attempt made in 1901 to obtain information regarding sect were very unsatisfactory. In one province, only one Hindu in nine claimed to belong to any particular sect, and in two others only one in four and one in five respectively: the proportion who used the terms Saiva and Vaishnava was even smaller, and even when a sect was named, the return was not free from doubt. In one province the number of persons returned as belonging to a certain sect rose to three times the number recorded at the previous census merely because the sect in question happened to be mentioned in the instructions to the enumerators as an illustration of the kind of entry required. At the recent census of the United Provinces a return of sect was again prescribed locally, but of the total population only one-tenth appeared in it; while the number returned as Vaishnavas was only 2·0, as compared with 2·6, millions in 1901. Lastly, the mere record of Saiva or Vaishnava means very little. Both categories include persons of all shades of belief and religious development, from the philosophic doctrines of the educated few to the gross idolatry of the masses; even the outcaste Paraiyans of the Madras Presidency, whose real religion is little better than Animism and who are utterly ignorant of the essentials of any form of Hinduism, often claim to be Saivas or Vaishnavas.

For a further discussion of this subject the Provincial Reports should be referred to, e.g., United Provinces (pages 124-30), Central Provinces and Berar (pages 75-76), Punjab (pages 125-29) and Rajputana (pages 94-97).

154. It being impossible to sort out the heterogeneous elements in the Hindu mass by means of a return of sect, the question arose whether it would be possible to distinguish between those who are really Hindus and those who have been so classed for want of any other designation. And here there was a great initial difficulty owing to the absence of any generally acceptable definition of Hinduism. The composite character of the word was pointed out by Sir Alfred Lyall who said that Hinduism—

"is not exclusively a religious denomination, but denotes also a country and, to a certain extent, a race. . . . When a man tells me he is a Hindu, I know that he means all three things taken together—religion, parentage and country. . . . Hinduism is a matter of birthright and

inheritance.....it means a civil community quite as much as religious association. A man does not become a Hindu, but is born into Hinduism."

To these three ingredients—religion, race, country—must be added a fourth, viz., social organization. The caste system is an essential feature of Hinduism, and a man who does not belong to a recognized Hindu caste cannot be a Hindu. A circular which was issued asking Provincial Superintendents to report as to the criteria which might be taken to determine whether or no a man is a genuine Hindu in the popular acceptance of the term, produced an extraordinary diversity of opinions which, if it did nothing else, served admirably to show the extreme complexity of the question and the indefiniteness of the word's connotation. Incidentally the enquiry generated a certain amount of heat, because unfortunately it happened to be made at a time when the rival claims of Hindus and Muhammadans to representation on Legislative Councils were being debated, and some of the former feared that it would lead to the exclusion of certain classes from the category of Hindus, and would thus react unfavourably on their political importance.

The subject is too large a one to be discussed adequately in the pages of a Census Report, but it will be interesting to glance very briefly at the divergent views which were expressed by many of the persons who were consulted by the Provincial Superintendents. Some looking merely to the question of country, argued that all the inhabitants of India are Hindus unless they are Muhammadans or Christians. This view appears to be based mainly on the theory that Hindu was the term applied by the early Muhammadan invaders to the races living east of the Indus. But apart from the fact that the etymology of a word is often no guide to its present connotation—as in the case of villain, knave, booby—it is absurd to suppose that because the term was applied to people living on the banks of the Indus it must also include those remote from it, of whose existence the originators of the word were ignorant, and who in race, language and customs differed altogether from the habitants of the country along the Indus. And in this case where is the line to be drawn? Why stop at Madras, Nepal or Assam rather than at Ceylon, Tibet, Burma or even China? The modern conception of India has no relation to the conditions existing when the word Hindu first came into use. The term Indian is used for a native of India, and it would be absurd to use the term "Hindu" in the same sense and thereby deprive it of its distinctive connotation.

Others, professing to take race as the sole test, say the word is equivalent to Arya. They regard all the modern castes as descended from the four traditional classes, and hold that all members of Indian castes including Jains, Sikhs and Buddhists are Aryas, and therefore Hindus, though they exclude the aborigines such as Bhils, Lepchas, Mundas and Todas. Those who rely solely on the racial test overlook, on the one hand, the fact that many Muhammadans and Christians, who are admittedly not Hindus, are descended from the same stock as many Hindu castes, and on the other, the fact that many Hindu castes are the direct descendants of aboriginal tribes and have no more claims to "Aryan" origin than have the Bhils or Mundas. This is the case not only with the great bulk of the population of Southern India, but also with large sections of it in Bengal and the United Provinces. The law books and epics are full of contemptuous references to the non-Aryan aborigines to the south and east of the comparatively limited area occupied by the Aryas at the time when they were compiled.

Others again think that the only test to be taken is that of religious belief. According to them the Hindu religion is one thing and the Hindu social system something quite different. According to this view, it is immaterial whether a person is excluded from temples, denied the ministrations of the Brahmins, kept rigidly apart and regarded as so unclean that his mere proximity causes pollution—if he believes in "the Hindu religion" he is just as good and complete a Hindu as even a Brahmin. One of the exponents of this theory objected to certain suggested tests of Hinduism on the ground that they would exclude Mrs. Besant, who is a staunch Hindu (sic). But here we are confronted with the fact that Hinduism has no definite creed. The beliefs of persons who are by all admitted to be Hindus often differ more widely from each other than do those of Christians and Muhammadans. So long as a member of a recognized Hindu caste does not flagrantly disobey his caste rules, he is recognized as a Hindu quite irrespective of his beliefs or unbeliefs. On the other hand, a person who is not a member of a Hindu caste cannot be a Hindu in the popular sense of the word.

Those who take religious belief as the main test differ among themselves as to the beliefs which are of cardinal importance. Some say that all the Hindu scriptures must be accepted, but some would exclude the Tantras, while others would regard only the Vedas as of primary importance; some again think that the sole essential is belief in the doctrine of *karma* and metempsychosis.

It was surprising to find how little stress was laid in the majority of the reports on three very important factors, viz., membership of a recognized Hindu caste, the acknowledgment of the supremacy of the Brahmins and veneration for the cow.

155. The tenour of the reports from different parts of India was so divergent, that it was clearly impracticable to lay down anything in the nature of an uniform standard. Moreover, when the term Hindu refers not only to reli-

gion but also to race, birthplace and social organization, it is impossible to say whether a man is within the pale or not on the basis of a number of tests some of which refer to his beliefs, others to his social standing and others to his relations with the Brahmins. Instead therefore of discussing whether the members of particular castes—it would in any case be necessary to take the community rather than the individual as the unit—should be regarded as genuine Hindus or not, the Provincial Superintendents were asked to enumerate the castes and tribes returned or classed as Hindus who do not conform to certain standards, or are subject to certain disabilities, leaving the reader to draw his own inferences. In this view they were asked to prepare a list of all but the minor castes which *qua* castes—

- (1) deny the supremacy of the Brahmins;
- (2) do not receive the *mantra* from a Brahmin or other recognized Hindu guru;
- (3) deny the authority of the Vedas;
- (4) do not worship the great Hindu Gods;
- (5) are not served by good Brahmins as family priests;
- (6) have no Brahmin priests at all;
- (7) are denied access to the interior of ordinary Hindu temples;
- (8) cause pollution (a) by touch;
- (b) within a certain distance;
- (9) bury their dead;
- (10) eat beef and do not reverence the cow.

The extent to which these tests are satisfied varies in different parts of India. In the Central Provinces and Berar a quarter of the persons classed as Hindus deny the supremacy of the Brahmins and the authority of the Vedas; more than half do not receive the *mantra* from a recognized Hindu guru; a quarter do not worship the great Hindu Gods, and are not served by good Brahmin priests; a third are denied access to temples; a quarter cause pollution by touch; a seventh always bury their dead, while a half do not regard cremation as obligatory; and two-fifths eat beef. Some castes satisfy certain tests but not others. Of the thirteen castes whose touch causes pollution, nine do not eat beef, while of the eight who eat beef, four are not regarded as polluting, and two are allowed access to temples.

In the Punjab the number who question the authority of the Vedas is insignificant, and practically the only persons who disown the supremacy of the Brahmins and fail to worship the great Hindu gods are the Aryas and a few minor sectarian groups. About a quarter of the total Hindu population, chiefly Chamars and Chuhars, cause pollution by touch; these alone do not enjoy the ministrations of Brahmin priests and are denied access to the interior of Hindu temples. The conditions are very similar in the United Provinces.

In Bengal and Bihar and Orissa Mr. O'Malley says that there are 59 castes, including seven with a strength of a million and upwards, who do not conform to some of the ten tests, and there are fourteen beef-eating castes all of whom are denied access to temples.

In the south of India the supremacy of the Brahmins is denied by the Lingayats, an important sectarian group, and also by certain artisan castes who themselves claim to be Brahmins. Numerous castes are excluded from the temples, and the theory of pollution generally is carried to a much greater length than in Northern India. The Madras Report, however, contains very little definite information regarding the extent to which the tests enumerated above apply to individual communities.

For further details the Provincial Reports may be referred to, e.g., Assam, page 40; Bengal and Bihar and Orissa, page 232; Central Provinces and Berar, page 73; Madras, page 51; Punjab, page 109; United Provinces, page 121; Baroda, page 55; Mysore, page 53; Rajputana, pages 94 and 105; Travancore page 198.

156. We have thus far been dealing with the Hindus and the imperfectly assimilated aboriginal elements. But it is not only in respect of them that difficulties of classification arise. In various parts of India groups are found whom it is difficult to class definitely either as Hindus or Muham-

Boundary line between Hindus and Muhammadans.

madans. There are many so-called Hindus whose religion has a strong Muhammadan flavour. Notable amongst these are the followers of the strange Pāṇchpiriya cult, who worship five Muhammadan saints, of uncertain name and identity, and sacrifice cocks to them, employing for the purpose as their priest a Muhammadan Dafāli fakir. Throughout India many Hindus make pilgrimages to Muhammadan shrines, such as that of Sakhi Sarwar in the Punjab.* A friend of mine who served in that Province tells of a Mullah most of whose clients were Sikhs. On the other hand, many descendants of persons "converted" to Islam are far from being genuine Muhammadans, though they have been classed as such at the census. Of these the Mālkānas of the country round Agra furnish a striking instance.

"These," says Mr. Blunt, "are converted Hindus of various castes belonging to Agra and the adjoining districts, chiefly Muttra, Etah and Mainpuri. They are of Rājput, Jat and Bania descent. They are reluctant to describe themselves as Musalmans, and generally give their original caste name, and scarcely recognize the name Mālkāna. Their names are Hindu; they mostly worship in Hindu temples; they use the salutation Rām, Rām; they intermarry amongst themselves only. On the other hand, they sometimes frequent a mosque, practise circumcision and bury their dead; they will eat with Muhammadans if they are particular friends; they prefer to be addressed as Mian Thakur. They admit that they are neither Hindus nor Muhammadans, but a mixture of both. Of late some of them have definitely abjured Islam."

In Gujarat there are several similar communities—such as the Matia Kunbis, who call in Brāhman for their chief ceremonies, but are followers of the Pirāna saint Imam Shah and his successors, and bury their dead as do the Muhammadans, the Sheikhas who at their weddings employ both a Hindu and a Muhammadan priest, and the Momnās who practise circumcision, bury their dead and read the Gujarāti Koran, but in other respects follow Hindu custom and ceremonial. These and similar communities lean more strongly to the one religion or the other according to their environment. Those who told the enumerators that they were Hindus or Muhammadans were classed accordingly; others who did not, were shown in the religion column of the schedule under their caste name and were classed by the Bombay Superintendent as Hindu-Muhammadans. It would have been better, if, instead of adding this new category to the religious terminology, he had followed the practice adopted in similar circumstances elsewhere, and had relegated the persons concerned to the one religion or the other as best he could, following, if he could ascertain it, the procedure adopted at previous enumerations. But as the total number of persons in this new category is less than 35,000 the mistake is not very material; and it has perhaps served a useful purpose in drawing prominent attention to the extremely indefinite character of the boundary line between different religions in India.

Hindus and Sikhs.

157. The boundary line between Hindus on the one hand, and Sikhs and Jains on the other, is even more indeterminate. The word "Sikh" is said to be derived from the same root as Sewak, meaning "disciple." The faith is founded on the teaching of Guru Nānak, but it would never perhaps have been recognized as a separate religion had it not been for the political character which was given to the creed by Guru Gobind, who organized the Sikhs as a nation and, in order to mark their individuality, imposed on them certain rules of conduct and a definite rite of initiation (*pahol*). The principal outward sign of those who follow the ordinances of Guru Gobind, is the wearing of the hair (*kes*) long. Those who do this are known as Kesdhāri, and those who do not as Sahjdhāri. Both sections alike reverence the *Granth*, a book containing the utterances of Nānak and other gurus, and above all the memory of their guru; they are strict monotheists, and have no regard for the Vedas. At the same time they are believers in the Hindu doctrines of metempsychosis and *karma* and in the three Hindu modes of attaining union with the Supreme Being. Many of the religious ideas of the Sikhs are borrowed from the Hindus, and it is the outward symbols prescribed by Guru Gobind that constitute the main distinguishing feature. In 1891 an arbitrary rule was laid down in the Punjab, where the bulk of the Sikhs are found, that only those who wore the *kes* and abstained from tobacco should be entered as Sikhs, and the same rule was

* In the same way, according to Mr. O'Malley, offerings have been made by Christians at Kāighat and there is in Bow Bazar Street, Calcutta, a shrine of Kali known as Feringi-Kali whose priest, a good Brāhman, augments his income from the offerings of low-class Anglo-Indians.

repeated in 1901. It was thought that in this way a return would be obtained of the number of Sikhs in the strict sense of the term, i.e., the Singhs, or followers of Guru Gobind, but the result showed that this was not so, and that many persons must have returned themselves as Sikhs who were not observers of his ordinances, and had never undergone his rite of initiation. Moreover, the boundary line between the Kesdhāri and Sahjdhāri is a very uncertain one. Even in the case of brothers it often happens that some belong to the former branch, and others to the latter; a man may be Kesdhāri, his son Sahjdhāri and his grandson again Kesdhāri. There is no bar on marriage between the two groups. At the recent census, therefore, the above arbitrary rule was replaced by the ordinary provision that the statements of the persons enumerated as to their religion should be accepted. The result has been largely to increase the number of persons returned as Sikhs by the inclusion in that category of many who would have been classed as Hindus at previous censuses, and especially of Mazhabi Sikhs, or converts from the Chuhra or sweeper caste, who do not wear the *kes* and have no scruples about smoking. It may be added that while a large number of persons on the border line between Hinduism and Sikhism have thus nominally crossed over from the former religion to the latter, about 44,000 expressed their view that Sikhism is a form of Hinduism by describing themselves as Sikh Hindus. These have been classed as Sikhs in Table VI.

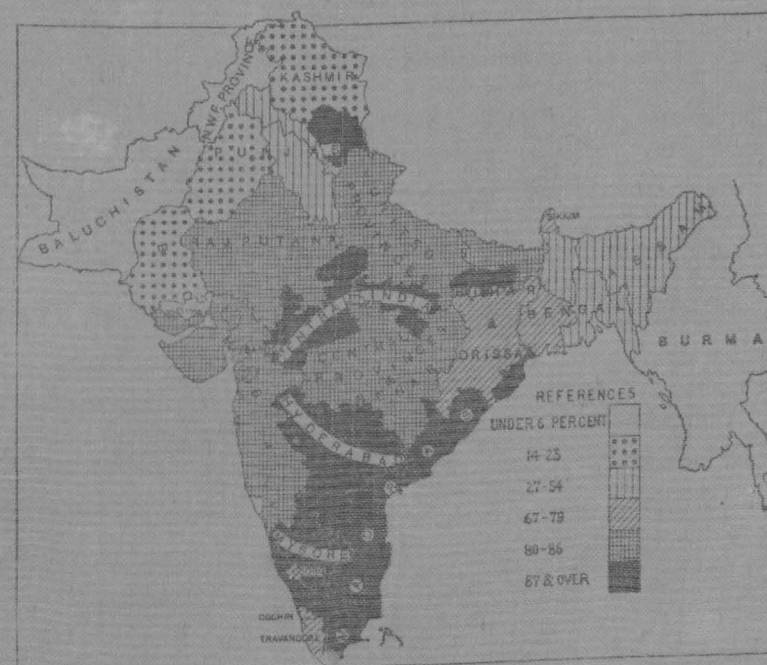
The difficulty of drawing the line between Sikh and Hindu is well illustrated by the statistics for Sind. In 1881 127,000 persons were returned as Sikhs, in 1891 the number was less than a thousand, in 1901 it was *nil*, while in 1911 about 12,000 persons were thus returned. These variations are due mainly to differences of opinion as to the correct classification of the followers of Guru Nānak.

158. The Jains share the Hindu belief in transmigration and the doctrine of *karma*; they employ Brāhman in their domestic ceremonies and they belong to the same social system. Some castes contain adherents of both religions and allow intermarriage between them. But, as noted elsewhere, the Jains reject the Vedas and worship their twenty-four deified Saints instead of the Gods of the Hindu pantheon. Their views on these matters are perfectly definite, and there would ordinarily be no difficulty in ascertaining whether a given individual is or is not a Jain. On the other hand, many of the Jains regard themselves as Hindus and are apt so to return themselves at the census. Their real number is therefore probably greater than that shown in Table VI.

159. The total number of Hindus in India is 217·3 millions,* or rather more than two-thirds of

the whole population. In British territory the proportion is 67, and in the Native States 78, per cent. Of the major provinces (British territory only), Madras with 89 per cent. has the largest proportion of persons returned as Hindus, but in that part of the country Hinduism is an exotic religion and exists in most parts as a thin veneer over the original Animistic beliefs of the people, many of whom in other parts of India

Map showing the distribution of Hindus.



NOTE—Ajmer-Merwar has here been included in Rajputana and Baroda in Bombay.

* Including Brahmos and Aryas the number is about a third of a million more.

would hardly be regarded as Hindus at all. The proportion of Hindus in the United Provinces (85 per cent.), though nominally smaller, is really greater than in Madras. In Bihar and Orissa and the Central Provinces and Berar about 82 per cent. of the people were returned as Hindus, and in Bombay 76 per cent. Assam (54 per cent.) is the only other main province where Hindus constitute more than half the population. In Burma Buddhists preponderate, and Muhammadans in the North-West Frontier Province, the Punjab and Bengal. The paucity of Hindus in the two tracts, first mentioned can be readily understood as it was by that route that successive hordes of Muhammadan invaders entered India. In the west of the Punjab only one-eighth of the inhabitants are Hindus. In Bengal, where the Hindus claim 45 per cent., the lower proportion is due, not to a large foreign element in the population, but to the wholesale conversions effected by the earlier Muhammadan invaders in the eastern part of the province, which was inhabited chiefly by various aboriginal tribes, such as Koch, Rajbansi and Chandāl, who had never been fully Hinduized and were despised by their Hindu neighbours as unclean. In West Bengal, where this element in the population is not found, the proportion of Hindus is exactly the same as in the adjoining province of Bihar and Orissa. In the latter province also there are considerable local variations; in Orissa all but 3 per cent. of the inhabitants are Hindus, while in the Chota Nagpur plateau Animists and Christians combine to reduce the proportion of Hindus to 72 per cent. Similarly in Bombay; in the Konkan and Deccan nine-tenths of the people are Hindus, but in Sind less than a quarter. The Hindus in Burma (3 per cent.) are recent immigrants, and many of them are only temporary settlers. Those who have made the province their permanent home frequently intermarry with the Burmese and gradually lose their caste scruples until, after two or three generations, they are absorbed in the general Buddhist population. Of the Native States, Mysore has the largest proportion of Hindus (92 per cent.) and Kashmir (22 per cent.) the smallest. Hyderabad, though it has been under Muhammadan rulers for nearly six centuries, has a larger proportion of Hindus than any British province except Madras.

Variation since 1901.

160. The number of Hindus has increased since 1901 by 5 per cent. while that of Muhammadans, Sikhs and Buddhists has increased respectively by 7, 37 and 13 per cent. As is now well known, the Hindus are less prolific than the Muhammadans, Buddhists and Animists and other communities owing mainly to their social customs of early marriage and compulsory widowhood. Girls are commonly married long before they reach maturity to men who may be much older than themselves, and a very large proportion of them lose their husbands while they are still of child-bearing age, or even before they have attained it. Apart from this, the Hindus have perhaps suffered more than their share from the vicissitudes of the decade: plague, malaria and famine have, on the whole, affected chiefly the tracts where they preponderate, while they are in a minority in some of the most progressive tracts, such as Eastern Bengal and Burma. In the Punjab they have sustained an artificial loss by the removal of the restriction of the term Sikh to those who wear the *kesh* and observe the other rules of conduct ordained by Guru Gobind Singh. At this census, as stated above, all persons who claimed to be Sikhs were entered as such. This led to nearly half a million persons being classed as Sikhs who in 1901 would have been returned as Hindus.

Conversions to and from Hinduism.

161. It remains to consider the question of conversions. A cardinal tenet of Hinduism is that no one can become a Hindu unless he is born one. Formal conversions from the ranks of Muhammadanism and Christianity are thus impossible. Nor can persons who have once renounced Hinduism in favour of these religions be taken back.* It is this which accounts for the numerous groups of Muhammadans whose ancestors were forcibly converted to the faith of the Prophet. Abbé Dubois mentions a typical instance of a number of Brāhmins who were forcibly converted by Tippu Sabib in the course of one of his marauding expeditions. After a long disputation their fellow Brāhmins decided to allow them to be taken back into caste on their undergoing a severe ceremony of atonement and purification. But it was then discovered that they had been compelled to eat beef; and this was at once

*Some instances of the gradual sliding back of communities into Hinduism will be given in the next paragraph.

held to make their reinstatement absolutely impossible. Forcible conversions are of course a thing of the past, but none the less there is a steady drain going on. Though there is at the present time no organized proselytism by the Mullahs, here and there individuals are constantly attorning to Muhammadanism, some few from real conviction, but more for material reasons, such as the desire to escape from an impossible position when outcasted or, in the case of widows, the allurements of an offer of marriage. Whenever there is a love affair between a Hindu and a Muhammadan, it can only culminate in an open union if the Hindu goes over to Islam, while the discovery of a secret liaison often has the same sequel. A Brāhman of my acquaintance told me that his sister's husband became a Muhammadan in order to take as his second wife a girl of that religion. His sister thereupon left him and is now supported by her brother. In Appendix II to the Bengal Census Report for 1901 I gave a large number of actual cases of conversion with the reasons assigned for each.

At the present time, however, the defections from Hinduism are chiefly the result of conversions to Christianity. These will be dealt with when the growth of that religion is examined.

162. These losses to Christianity and Muhammadanism, however, are counterbalanced by gains from the ranks of the Animists. It is true that individuals cannot ordinarily gain admission to the Hindu fold; for to become a Hindu a man must become a member of a recognized Hindu caste, and that is generally an impossibility. But the case is different where communities are concerned. An aboriginal tribe in an environment where Hindu influences are strong comes gradually and half unconsciously to adopt Hindu ideas and prejudices, to take part in Hindu festivals, to attend at Hindu temples and to pay a certain amount of homage to the Brāhmins. Some degraded member of the priestly caste, or perhaps some Vaishnava Gosāin in search of a livelihood, becomes their spiritual guide; and as time goes on, the difference between them and their Hindu neighbours, in respect of their social customs and outward religious observances, becomes less and less marked, until at last they are regarded by themselves and their neighbours as regular Hindus. The change takes place so slowly and insidiously that no one is conscious of it. There is no formal abandonment of one ritual for another. Sometimes it happens that a tribe is thus divided into two sections, the one Hinduized and the other still Animistic. In such cases open proselytization often takes place amongst the unregenerate. The theory seems to be that the latter have lapsed from a higher state, and the Hinduized section of their community make no difficulty in admitting them after they have performed such ceremonies of purification as may be prescribed by their spiritual preceptors.

In the Goalpara district of Assam the large decline in the number of Animists as compared with 1901 is due to a Sannyāsi named Siv Nārāyan Swami, an up-country Brāhman, who has preached a form of Vedic Hinduism in many parts of India. Amongst his disciples are most of the Rajbansi zamindars in the Goalpara district. The movement amongst the Meches started about ten years ago, when a few educated young men became his disciples. It has since then spread rapidly. One of his doctrines is that all men are equal in the sight of God, and that the differences in caste, rank and religion are illusional. The use of beef, pork and liquor is strictly prohibited. The followers of this Sannyāsi use the word "Brahma" as a title after their names.

For further information on this question of the Brahmanizing of the non-Aryan or casteless tribes references may be made to Sir Alfred Lyall's Essay on Missionary and non-Missionary Religions; Risley's Tribes and Castes of Bengal, Vol. I, page xv; Assam Census Report for 1891, Vol. I, pages 83 and 84, and Bengal Census Report for 1901, page 152.

It will be shown in paragraph 165 that the Aryas are bestirring themselves to counteract by active proselytization the steady drain to Islam and Christianity, but it remains to be seen whether the persons "re-converted" by them are eventually accepted as Hindus. Apart from these recent efforts it appears that here and there small communities of Christian and Muhammadan converts have drifted back into Hinduism. The Urap and Varap Agris of the Thana district of Bombay are said to have reverted to Hinduism from Christianity rather less than a century ago. The Kirpāl Bhandāris of the same district were forcibly converted to Christianity by the Portuguese, but were afterwards accepted back into Hinduism. The Matia Kunbis and Sheikhadas of Bombay have been referred to in paragraph 156. Regarding those of Baroda, the local Superintendent writes that they became Muhammadans about three centuries ago, but have gradually abandoned their Muhammadan practices, and many of them were recently admitted into the Vaishnava sects of Rāmanand and Swāmi Nārāyan.

Another indication of the awakening of Hinduism and the tendency of errant sects to return to the main fold is found in the fact reported by the Punjab Superintendent that certain Pāṇchpiriyas in that province have substituted a purely Hindu combination (Bhairon, Siva, Pārbati, Guga and Sitalā) for the five Muhammadan saints ordinarily worshipped by this sect.

Owing to the difficulty of ensuring the same method of classification at successive censuses, it is not easy to form a definite opinion from the statistics as to the extent to which the Animistic tribes are passing over to Hinduism, but it would seem that, at the present time, the movement is not very rapid. In the open plains where they are surrounded by Hindus, the Hinduizing process, nominally at least, has been almost completed, but in the hills and uplands, where these tribes predominate and the tribal constitution remains more or less intact, Hinduism is making very little headway. The Mundās and Hos of Chota Nagpur return a larger proportion of persons claiming to be Hindus than they did ten years ago, but this is not the case with most of the other tribes, such as the Khāsis, Gāros and Nāgās of Assam; the Orāons of Bihar and Orissa; the Santāls of that Province and Bengal; the Gonds and Korkus of the Central Provinces and Berar, and the Koyis and Yanadis of Madras.*

On the other hand, the losses by conversion to Islam and Christianity continue. The Punjab Superintendent estimates that during the last decade Hinduism has given 40,000 converts to Muhammadanism and nearly three times that number to Christianity. These defections are chiefly from the lowest castes, such as Chuhra and Chamār. The losses elsewhere are much smaller, but everywhere a steady drain is going on. In the whole of India the proportion of Hindus to the total population has fallen in thirty years from 74 to 69 per cent., but this is due partly to the inclusion at each succeeding census of new areas in which Hindus, if they are found at all, are in a great minority. In the area enumerated in 1881 the proportion of Hindus is now 71 per cent., or only 3 per cent. smaller than it then was. This figure represents the loss they have sustained owing to a relatively slower rate of increase and to conversions to other religions.

Hindu sects.

163. As already stated, the general scheme did not provide for a return of sects, but Local Governments were given the option of prescribing it. This was done in the North-West Frontier Province, the Punjab, the United Provinces and Baroda, but the returns disclose nothing of general interest. The reported strength of individual sects often varies greatly at successive censuses. In the Punjab, for instance, between 1891 and 1911 the number of Kalupanthis has fallen from 129 to 36 thousand, while that of Pāṇchpiriyas has risen from 24 to 89 thousand. Changes like this must be due mainly to imperfections in the record. As the Punjab Superintendent points out, a man who worships several deities or saints may be returned as the follower of one of them while another man with the same beliefs may be shown as the follower of another. A few new sects have come to notice. The dissatisfaction of certain Mārāthas with their Brāhman priests, who by refusing to use Vedic *mantras* at their ceremonies showed that they rejected their claim to be Kshatriyas, led to a dispute, which came to a head in the Kolhapur State, where some of the leading families decided to dispense with Brāhman priests and to appoint instead men of their own caste. Their lead is being followed in increasing numbers by the Mārātha Kunbis, Telis and Malis. The sect thus formed is known as Satya Shodhak Panth. The Kumbhipatia sect of the Orissa States, which is described in the Bengal Report (page 211), was founded about forty years ago by one Mukunda Dās. It is characterized by hostility to the Brāhmans and Hinduism, and its doctrines appear to be based on a survival of early Buddhist or Jain beliefs. Its real strength is estimated to be 25,000, but the census shows only 755. The Birsait sect of Chota Nagpur is named after its founder, an apostate Christian, who preached a curious mixture of religion and politics. It also is believed to have many times the number of adherents who were returned at the census. The Shains of Bankura in Bengal refuse to recognize any deity whom they cannot see, and worship only their Gurn. The Deb Dharmis of the Punjab, who began as a theistic sect allied to the Brahmo Samāj, now deny the existence of a creator. They regard the

* There has been a marked drop in the number of Animists in the Central India Agency, but this is due to change of system, vide paragraph 176.

universe and its constituents—matter and force—as eternal, and the human soul as a form of life evolved from lower forms and subject to the law of change; it may degenerate and lose its individuality, or may by gradual development attain the highest goal of human life, i.e., spiritual union with Shri Dev Guru Bhagwān, by which name the founder, Pandit Satyanand Agnihotri, is known in the literature of the sect.

Mr. McSwiney, the Assam Superintendent, has some interesting notes on the question whether Sankar Deb, the local founder of modern Vaishnavism, drew his inspiration from Chaitanya or not, and comes to the conclusion that he did not. He points out that the opposite view involves an anachronism and also that there was a marked difference in the doctrines of the two reformers:—

“Sankar Deb worshipped Vishnu alone, while Chaitanya worshipped Rādhā and Krishna: the exclusion of the female energy from the creed of the former is a most important distinction. Moreover, Sankar Deb excluded females entirely, while Chaitanya admitted them as disciples.”

164. The remark that there was no general return of Hindu sects requires one qualification. Instructions were given to the enumerators to show separately in the schedules the adherents of the two modern schismatic sects, Brahmo and Arya, both of which have been described in previous Census Reports. The Brahmos have grown in number by 36 per cent. during the last decade, but their total strength is still only 5,504. They are found chiefly in Bengal, especially in Calcutta, where more than a quarter of their total number were enumerated. About half the decennial increase comes from the Punjab, where it is due mainly to the fact that in 1901 Brahmos were not distinguished from ordinary Hindus. The gain in Bengal is extremely small. This is accounted for, as was explained in the last Report, by the greater latitude of thought and action which is now allowed to the advanced Hindus of that province; large numbers of them have thrown off many of the trammels of caste, especially those concerned with food, without let or hindrance from their neighbours. Brahmoism is thus no longer needed as a refuge for the Hindu nonconformist; and the present tendency is for Brahmos, other than those of the Sādhāran Samāj, to be reabsorbed in Hinduism. Another reason for the stagnation of the sect is that the intolerance of idolatry, which was so strong a characteristic of the founders of the Samāj, has lost its force. Idolatry is now regarded by many advanced Hindus as a stage in the evolution of religious beliefs; and they no longer think it necessary to sever connection with their society merely because most of its members are in what they consider to be a lower stage than that to which they have themselves attained. In Bengal and Bihar and Orissa two-thirds of the persons who described themselves as Brahmos by religion returned their caste also as Brahmo, and may therefore be assumed to belong to the Sādhāran sub-sect. Of the remainder, more than half were Kāyasthas and less than a quarter Baidyas.

165. Unlike the Brahmos the Aryas are a vigorous and rapidly growing body. As is well known, this sect was founded by Swāmi Dayanand Saraswati, a native of Kathiawar, who inculcated monotheism and proclaimed the infallibility of the Vedas. Their total strength now exceeds 243,000, or about two and a half times what it was ten years ago, and six times the number returned in 1891. Nearly half the total number are found in the Meerut, Agra and Rohilkhand divisions in the west of the United Provinces, and more than two-fifths in the Punjab. During the decade the number of Aryas has doubled itself in the United Provinces and quadrupled itself in the Punjab. This rapid increase is due to the elaborate missionary organization, which Mr. Blunt describes as follows:—

“Dayanand founded the first branch of the Arya Samāj at Bombay in 1875. When he died in 1883 there were over 300 branches in the Punjab and the United Provinces. By his will he constituted the *Paropkarini Sabha* at Ajmer, and left all his wealth to it, with the injunction that it should be spent on the publication of the Vedas, Vedāngas, and commentaries on them, on the preaching of the word, and the maintenance and education of orphans. It is still the central organization of the Arya community. In each province there is a *Pratinidhi Sabha* composed of delegates from each local sabha. In this province it was located at Meerut from 1886 to 1897, at Moradabad till 1907, and it is now at Agra. Its funds are raised by subscriptions; each Arya is supposed to, and most do, give one-hundredth of their income to their local sabha, who contribute one-tenth of such subscriptions to the *Pratinidhi Sabha*.

The central sabha of this province is said to control 260 branches, 73 *upadeshaks* (or missionaries), 5 *gurukuls* and 53 *pathshalas*, besides honorary lecturers and trained choirs. Ever since 1897 "*Veda Prachar*" or missionary teaching has been the chief means of propagandism. The *upadeshaks* are always moving about the province, preaching (especially at large fairs) and inspecting local branches of the Arya Samāj. The majority of converts are from Brahmanic Hindus: but special efforts are directed to the reconversion of converts from Hinduism to Christianity or Islam, whilst persons who are Christians or Muhammadans by birth are also occasionally converted. At least two persons of European parentage have in the last few years become Aryas; of such Muhammadan converts I have myself known at least one case, and others have occurred. There is a society affiliated to the Arya Samāj which is known as the *Rājput Shuddhi Sabha*, which has as its chief object the reconversion of Muhammadan Rājputs to Hinduism *via* the Arya Samāj. On a single day 370 such Rājputs were converted to Aryaism: the officiating priests were all Brāhmins of the Samāj. In three years (between 1907 and 1910) this society claims to have converted 1,052 Muhammadan Rājputs. The Samāj also maintains a certain number of orphanages—in many ways excellent institutions, as most of their scholastic institutions are; here however they are mentioned as another means whereby the Samāj increases its numbers. In brief, the organization is probably the most complete thing of its kind in India, and the propaganda are carried out in the most thorough and systematic way."

The movement originated amongst the higher castes such as Brāhman, Khatri and Baniya; and it is they who formed the bulk of the Aryas in 1901. A large proportion however of the new adherents of the Samāj are Meghs and other men of low caste, who are admitted as "clean," after going through a ceremony of purification known as *Shuddhi*. In certain districts of the Punjab, three-fifths of the Meghs and nearly half the Ods returned themselves as Aryas, while of the Khatri only 8 per cent. did so, of the Kāyasthas 4, and of the Brāhmins, Agarwals and Rājputs only 1 per cent. There is a special society which works under the auspices of the Samāj for raising the depressed classes in this way, and for converting Muhammadans and Christians to "Hinduism." The process is described at some length in the Punjab Report by Pandit Hari Kishan Kaul, who says that the mass of Hindus are apathetic but do not actively boycott the new-comers; he concludes therefore that they will ultimately be merged in the Hindu community. A leading Arya of the Punjab estimates that in that province about two-thirds of the total number of Aryas consists of persons who have been purified or raised socially through the efforts of the Samāj. The number of converts from Islam and Christianity is still very small in the Punjab. Outside the Punjab and United Provinces the number of Aryas is greatest (about four thousand) in Bihar and Orissa; there are nearly two thousand in Rajputana, and about a thousand each in Ajmer-Merwara, Kashmir and the Central Provinces and Berar. Nearly a third of the Aryas in Bihar and Orissa are Kurmis, one-ninth are Goālas and one-eighteenth adherents of this sect.

166. Mr. Blunt has some excellent notes on the Aryas from which I extract the following:—

"The claim of the Arya religion to be a pure revival of ancient Vedism is untenable. Despite the Sanskrit scholarship for which Max Müller vouches, Dayanand's interpretations of the holy books are accepted by no scholar, whether of the West or the East, outside the Arya Samāj, and many of those interpretations can only be described as more ingenious than ingenious. Some of its chief tenets are indubitably non-Vedic, such as the law of *karma* and the prohibition against the slaughter of kine. There is an obvious and serious contradiction between the idea of a merciful god and the law of *karma*. In the words of Mr. Baillie in 1891, the Arya religion is 'founded on the divine authority of books which do not bear the interpretation attached to them by it; it revives in the worship of the Supreme Creator the long forgotten ritual of a tribe of worshippers of the forces of nature.' But the cause of these contradictions is clear enough.

"Dayanand wished to reform Hinduism, but it was on particular lines. He was not merely a religious zealot; he was also a patriot, and though it would be unfair to say that with him religious reform was a mere means to national reform, there can be no doubt that he had both ends in view. Hinduism was to be reformed into, or replaced by, a religion that could be a national religion. That the Arya movement has this patriotic side is indubitable and is indeed admitted.* And for this purpose it was necessary that Hindus could accept it, yet remain in all essentials Hindus. This explains these compromises and their resultant contradictions; without the prohibition against cow killing, for instance, Aryaism would have quickly become anathema to all Hindus. In part it also explains the truistic nature and vagueness of the ten articles of the Arya faith (these will be found given in full at pages 188-9 of the Report of 1891). But when all criticisms are made, the fact remains that this religion rests

* "The Arya Samāj and its Detractors: a Vindication" by Munshi Rama and Rama Deva, page 80.

on scriptures of antiquity and high reputation, possesses a definite creed, teaches doctrines of a bold and masculine type, and is free from the formlessness and indefiniteness of Hindu polytheism on the one side and the weak eclecticism of such reformed sects as the Brahmo Samāj on the other. It has had moreover the courage of its convictions in more than one important direction. Though at first doubts were expressed whether it would live, it has not only lived but flourished. There is no doubt that it is the greatest religious movement in India of the past half century, and no reason for dissenting from Mr. Baillie's classification in 1891 of its founder as one of 'the great teachers who have been produced by a sense of the need for action against the gross idolatry of the masses of the Hindu people.'

The Aryas recognize the four castes, or rather classes, of Manu, but hold that caste is determined not by birth alone, but also by occupation, mode of living and knowledge of the Vedas. A high caste convert does not ordinarily give up his caste, but one of low social position occasionally does so. Caste restrictions amongst the Aryas are becoming far less rigid than they were even a few years ago. Restrictions in eating and drinking with members of other castes are dying out, and intermarriage between members of different castes is becoming increasingly common. The Samāj denounces the evils of early marriage and endeavours to curtail marriage expenses. It countenances widow marriage. The Aryas are not yet recognized as Hindus by the orthodox, but they will no doubt be so in time. Their great educational activity is shown by the fact that in the Punjab they own one first grade college, three *gurukulas*, sixteen high schools and a large number of middle and primary schools. They have also a female college and more than fifty girls' schools.

167. Of the three million Sikhs in India, all but 181,000 were enumerated in the Punjab and its Native States, and nearly all the rest in the adjoining areas. In the Punjab including its States, 12 per cent. of the inhabitants belong to this religion. After progressing very slowly for twenty years the number of persons returned as Sikh in the Punjab has risen by 37 per cent. in the course of last decade. This large increase, which is all the more remarkable when it is remembered that the total population of the Punjab has sustained a loss of 2·3 per cent., is to a great extent the result of the change of system already described. In 1911 people were left free to say what their religion was, whereas at the two previous censuses only those who wore the *kes* and eschewed tobacco were allowed to be entered as Sikhs. Apart from this, after a long period of stagnation, during which there was a growing tendency for the Sikhs to be absorbed in Hinduism, there has been a great Sikh revival and their various associations, or *Sabhās*, have been very active in propagating the tenets of Guru Gobind amongst all followers of Guru Nanak, and have so raised the *Kesdhāris* in public esteem that they will usually not give their daughters in marriage to *Sahjdhāris* until the latter have taken the *pahol*. The Chenab colony, says Pandit Hari Kishan Kaul, furnishes an excellent example of the activity of the Sikh religion. Almost every village where there are Hindus or Sikhs possesses a *Dharamsala* where the *Granth* is regularly read; and where Sikh influence is strong, adherence to the tenets of Guru Gobind Singh is insisted on. The Sikh preachers have also been doing a great deal towards the reclamation of the depressed classes, who are being freely admitted to their fold. The relative extent to which the two causes of increase have operated may perhaps be gauged from the fact that while the total number of Sikhs has risen by 37 per cent., that of the *Kesdhāris* has risen by 15 per cent. only. The Sikhs have gained most largely in districts where the *Sahjdhāris* are numerous, and least so at their headquarters in Amritsar and Nabha.

168. Although Buddhism had its origin in India and still flourishes in Ceylon, China, Japan and other countries to which it afterwards spread, it has practically disappeared from the land of its birth. Of the 10·7 million persons returned as Buddhists at the census, all but one-third of a million were enumerated in Burma, which is India only in a political sense. The remainder are chiefly residents of the Himalayan area marching with Tibet, or of the parts of Bengal which impinge on Burma, or belong to tribes in Assam who have immigrated from the Shan States, or are immigrants from Nepal, where Buddhism still survives, though it is rapidly yielding place to Hinduism. The only survivors of purely Indian Buddhism are the small community in the Orissa States known as *Sarāk* (from *Srāvaka*, "a hearer," the designation of the Buddhist monks who lived in monasteries) of whom nearly two thousand claimed to belong to that religion. This interesting little community was described in the Bengal Census

Report for 1901 (pages 427-30). They are vegetarians who, though they worship certain Hindu deities, also venerate Buddha and have a festival on the full moon days of Baisākh and Kārtik, which they regard as the days of Buddha's birth and his attainment of Nirvāna. They do not observe Hindu festivals nor employ Brāhman priests.

In Burma 86 per cent. of the inhabitants are Buddhists, or 91 per cent. if persons born in other parts of India be left out of account. The proportion of Buddhists in the actual population is greatest in the Central Basin, where all but 4 per cent. of the inhabitants profess that religion. The number of Buddhists has risen in the whole of India since 1881 by 214 per cent. but this is explained by the gradual expansion of census limits in Burma.

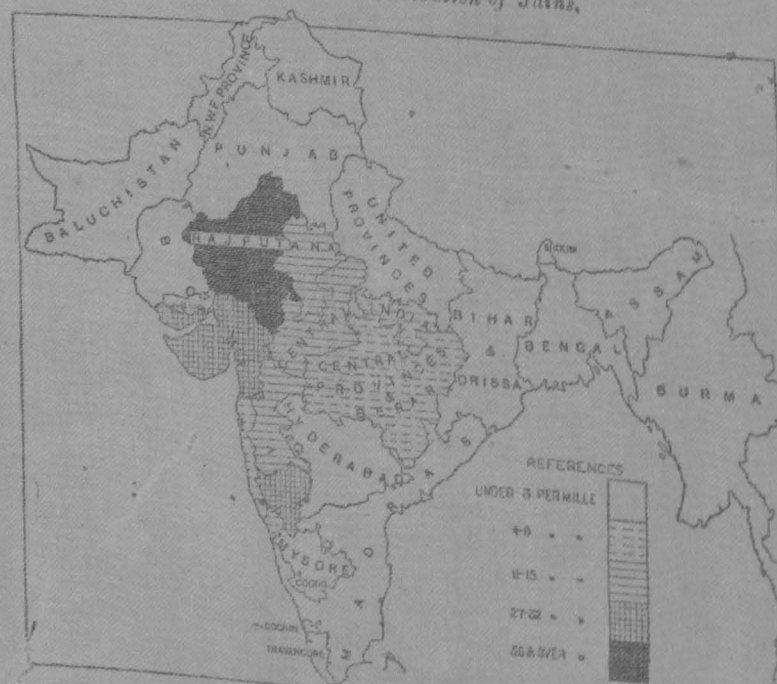
One of the most significant of recent religious developments is the formation of the South India Sakya Buddhist Society with the object of converting the people to Buddhism. The Society began work in Bangalore in 1906 and established a branch at Kolar in 1909. They already number 622 converts in the Mysore State. The Provincial Superintendent writes:—

"The disciples belong to the Indian Church of Buddhists, which is akin to the Buddhist Church of Burma and Ceylon. The lofty principles and beautifully simple life enunciated by the founder of the religion seem to appeal with peculiar force to the Tamil-speaking artisans and middle classes in the localities mentioned above. In fact it is learnt that but for the unavoidable absence of the Buddhist priests (who are naturally at this infant stage of their mission, required to be touring to all the branch societies in Mysore and elsewhere in Southern India), many more persons would have received the 'Tri Saranam' (three refuges) and the 'Pancha Sila' (five precepts) which ceremonial is necessary for admission into the fold of the Buddhist Church."

In most provinces the Chinese were returned either as Buddhists or Confucians, but in Burma the great majority of them were classed as Animists. Mr. Webb explains his procedure as follows:—

"The religion given by the majority of the Chinese in the province is ancestor-worship, or as it is translated in the vernacular, nat-worship, or Animism. A few (71) Chinese gave Confucianism as their religion; and there were small numbers of Chinese Buddhists, Muhammadans and Christians, but Animism is the correct designation to apply to a belief implying the existence of a spirit world peopled with beings producing human characteristics and emotions in an intensified degree. The inclusion of the Chinese population among the Animists introduces into this religious group an element of heterogeneity. It includes on the one hand, the primitive tribes, too backward and uncivilized to have accepted Buddhism, and on the other hand, the representatives of the oldest existing civilization in the world."

169. Of the indigenous religions of India, that of the Jains, with 1½ million adherents, is numerically the least important. Its followers are highly localized. Of their total strength 353,000 are found in Rajputana and Ajmer-Merwara and 815,000 in the adjoining States and Provinces. In Ajmer-Merwara and the Bombay States they form 4 per cent. of the population, in Rajputana 3, in Baroda 2, and in Bombay 1 per cent. Elsewhere their numbers are very attenuated. They are mostly traders, and those who are found in the East of India are chiefly emigrants who have gone thither for business purposes. In the South there is a small indigenous community of Jains who live by agriculture, and not by trade, as do their co-religionists in Rajputana. Since 1891 the number of Jains has been steadily diminishing, and a loss of



NOTE.—Ajmer-Merwara has here been included in Rajputana and Baroda in Bombay.

live by agriculture, and not by trade, as do their co-religionists in Rajputana. Since 1891 the number of Jains has been steadily diminishing, and a loss of

5·8 per cent. in 1901 has now been followed by one of 6·4 per cent. As already stated, the Jains form an integral part of the Hindu social system and are thus often disposed to regard themselves as Hindus. In quite recent times a number of them have joined the Arya Samāj. In the Punjab, United Provinces and Bombay they are prone to take part in Hindu festivals, and are likely gradually to become merged in that religion. During the decade they have lost 10·5 per cent. in the United Provinces, 6·4 per cent. in the Punjab and 8·6 per cent. in Bombay. In the Baroda State the Provincial Superintendent considers that the loss of 10 per cent. is due mainly to emigration, and says that a Jain revival, which has recently taken place, makes it impossible to suppose that it is due to some of them having described themselves as Hindus. There has also been a revival in the Central Provinces and Berar, but here it has admittedly led to secessions on the part of the lukewarm; and the Kasars of Akola and the Jain Kalars have on this account attorned to Hinduism. A loss of 22 per cent. in Central India is attributed, like that in Baroda, to emigration. It is possible that this may be a partial explanation, but there can be no doubt that a good deal of their recent losses is due to plague. The Jains are, to an exceptional degree, a town-dwelling community, and many of the places in which they are numerous have been repeatedly stricken by that disease.

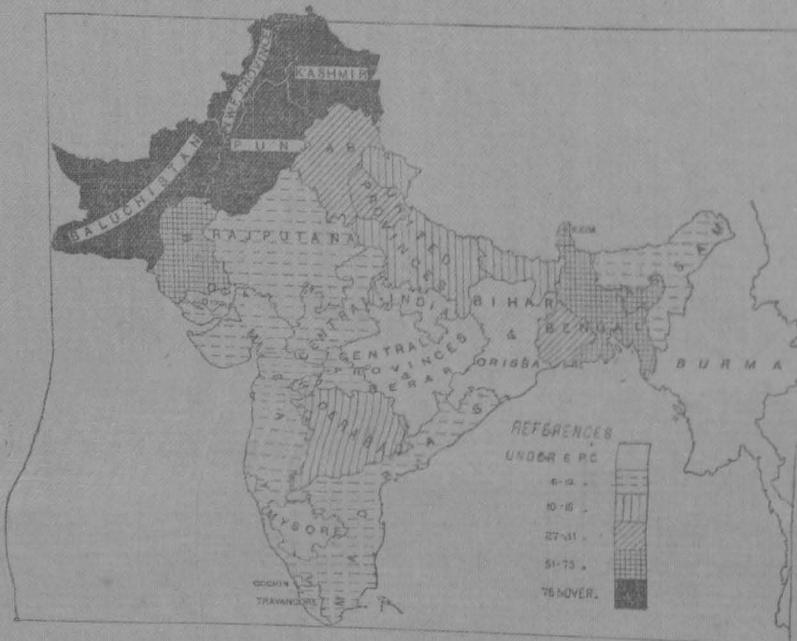
In the absence of a general return of sect it is impossible to say anything of the relative strength of the Digambara and Svetambara sects, or of the rate at which the offshoot from the latter, variously known as Sthānakvāsī, Dhundia or Samaiya, is growing. The members of this sect carry to an extreme the solicitude for the preservation of animal life, and do not worship idols. They are ardent sectarians, and submitted numerous petitions asking to be shown separately in the census returns, but not until it was too late to take action.

170. The religion of the Pārsis is called Mazdeism, from the name of their Supreme Deity, or more popularly Zoroastrianism, from the Greek rendering of Zarathustra, the reputed founder of the creed. In spite of their importance and wealth, the total number of Pārsis in India is only 100,096. Nine-tenths of them are concentrated in the Bombay Presidency and Baroda, and more than half in Bombay city. The remaining tenth are scattered all over India, but are most numerous in the Central Provinces and Berar, Hyderabad and the Central India Agency. There are practically no artificial changes in the number of Zoroastrians; the Pārsis do not proselytize, neither do they readily abandon their own distinctive creed. Except for a negligible loss by emigration, the variations in their number are identical with the difference between the number of births and deaths. During the last decade they have increased by 6·3 per cent., as compared with 4·7 and 5·3 per cent. respectively in the two preceding decades. This slow rate of increase in a community that boasts of exceptional material prosperity is in accordance with the state of things in Europe where, as is well known, the classes multiply much less rapidly than the masses. The Pārsis are disinclined to contract improvident marriages, and their families are small. The greater part of their increase during the last decade has taken place at the ages above 20. It must, therefore, be due mainly to a fall in the death-rate, rather than to a higher birth-rate.

171. The Muhammadans number 66·6 millions, or more than one-fifth of the total population of India. Their distribution is far from uniform. In the North-West Frontier Province and Baluchistan 93 and 91 per cent. respectively of the inhabitants profess this religion, in the Punjab 55, and in Bengal 53, per cent. The proportion falls to 28 per cent. in Assam, 20 per cent. in Bombay and 14 per cent. in the United Provinces of Agra and Oudh. Bihar and Orissa is the only other major province where it exceeds 10 per cent., while in the Central Provinces and Berar it is only 4, and in Burma 3·5, per cent. In the Native States, taken as a whole, the proportion of Muhammadans is much smaller than in British territory, but they are very numerous in the Baluchistan States and Kashmir and fairly so in the States of the Punjab, Bengal and United Provinces. Within Provincial boundaries there are often great local variations. In the Punjab four-fifths of the inhabitants of the North-West Dry Area are Muhammadans and three-fifths of those of the Sub-Himalayan Area, but in the Indo-Gangetic Plain West the proportion falls

to two-fifths and in the Himalayan Area to less than one-twentieth. The same is the case in Bengal, where the proportion ranges from 13 per cent. in West, to 59 per cent. in North, and 68 per cent. in East, Bengal. About half the Bombay Muhammadans are found in Sind, and half those of Burma in the

Map showing the distribution of Muhammadans.



NOTE.—Ajmer-Merwara has been included in Rajputana and Baroda in Bombay.

population of the North-West Frontier Province and adjoining tracts through which successive generations of Pathān and Moghal invaders marched on their way to the conquest of India, and are least numerous in the Central Provinces and Berar and on the east coast of the Peninsula, where Muhammadan rule was never securely established. There is, however, one remarkable exception—Bengal contributes 24 millions, or 36 per cent., to the total number of Muhammadans in India. They are found chiefly in the eastern and northern districts. In this tract there was a vigorous and highly successful propaganda in the days of the Pathān kings of Bengal. The inhabitants had never been fully Hinduized, and at the time of the first Muhammadan invasions most of them probably professed a debased form of Buddhism. They were spurned by the high class Hindus as unclean, and so listened readily to the preaching of the Mullahs, who proclaimed the doctrine that all men are equal in the sight of Allah, backed as it often was, by a varying amount of compulsion.* Another, but less notable, exception is found in Malabar, where the Mappillas are the descendants of local converts, the earliest of whom were made by the Arabs, who began to frequent the coast in the eighth century. A certain number of new converts are still being made. It should be added that even in Northern India the Muhammadan population is by no means wholly of foreign origin. Of the 12 million followers of Islam in the Punjab, 10 millions showed by the caste-entry (such as Rājput, Jat, Arain, Gujar, Muchi, Tarkhan and Teli) that they were originally Hindus. The number who described themselves as belonging to foreign races, such as Pathān, Baloch, Sheikh, Saiyid and Moghal was less than 2 millions, and some even of these have very little foreign blood in their veins. Pandit Hari Kishan Kaul is of opinion that only 15 per cent. of the Muhammadans of the Punjab are really of foreign origin.

172. The number of Muhammadans has risen during the decade by 6.7 per cent., as compared with only 5 per cent. in the case of Hindus. There is a small but continuous accession of converts from Hinduism and other religions, but the main reason for the relatively more rapid growth of the followers of the Prophet is that they are more prolific. This may possibly be due partly to their more nourishing dietary, but the main reason is that their social customs are more favourable to a high birth-rate than those of the Hindus. They have

fewer marriage restrictions; early marriage is uncommon, and widows remarry more freely. The greater reproductive capacity of the Muhammadans is shown by the fact that the proportion of married females to the total number of females aged '15—40' exceeds the corresponding proportion for Hindus. The result is that the Muhammadans have 37 children aged '0—5' to every 100 persons aged '15—40' while the Hindus have only 33. Since 1881 the number of Muhammadans in the areas then enumerated has risen by 26.4 per cent. while the corresponding increase for Hindus is only 15.1 per cent. Their advantage over the Hindus is clearly seen by an examination of the Provincial figures. Since 1901 the Muhammadans have everywhere grown more rapidly than the Hindus or sustained a smaller loss, in all provinces except the Central Provinces and Berar, where their total number is small and many of them are immigrants, and Burma where the result is due entirely to migration. The exceptionally rapid growth in Assam since 1901 (20 per cent.) is due to the drift of Muhammadan cultivators from Bengal along the course of the Brahmaputra, which has already been mentioned in paragraph 97. The proportion which the Muhammadans bear to the total population of India is now 213 per mille against 197 in 1881.

The general distribution of the Muhammadans is in accordance with historical considerations. They bulk most largely in the

Statement showing increase in the number of Hindus and Muslims in the areas enumerated in 1881.

Province.	INCREASE PER CENT. SINCE 1881.	
	Hindu.	Muslim.
Assam	+18.7	+43.2
Bengal	+15.9	+31.8
Bihar and Orissa	+13.3	+11.2
Central Provinces and Berar	+22.0	+24.4
Madras	+30.6	+43.0
Punjab and N.-W. F. Province	-5.0	+22.5
United Provinces	+5.6	+12.0

not so with the Muhammadans. There are scattered communities of Muhammadans who have been settled in Burma for several generations and still retain their faith unimpaired. When a Muhammadan marries a Burmese wife he brings up his children in his own religion. The offspring of these mixed marriages are known as Zerbadis.

For a fuller discussion of the origin of the Indian Muhammadans and the reasons for their more rapid growth, the Report for 1901 should be referred to. The matter is also dealt with at some length in several of the Provincial Reports for the present census, including those for Bengal, the United Provinces and the Punjab. In the Bengal Report Mr. O'Malley shows that, where the social practices of the Muhammadans differ little from those of their Hindu neighbours, there is not much difference in their relative prolificness. He also points out that the average height and weight of Hindu and Muhammadan prisoners on their admission to jail are much the same in both cases.

174. Animism is the term used to cover the miscellany of superstitions which prevail among primitive tribes in all parts of the world. These tribes are very vague in their religious conceptions, but they all agree in believing in the presence on earth of a shadowy crowd of powerful and malevolent beings, who usually have a local habitation in a hill, stream or patch of primeval forest, and who interest themselves in the affairs of men. Illness and misfortunes of all kinds are attributed to their influence. There is also a general belief in magic and witchcraft. Wizards are employed to ascertain the cause of trouble, and to remove it either by incantations and exorcism, or by placating the offended ghostly being by a suitable sacrifice; their services are also requisitioned when it is desired to ensure good crops, to cause an injury to an enemy, or to ascertain the omens relating to some proposed course of action. These features of Animism are, I believe, universal. They may sometimes be coupled with belief in a supreme God, usually faint, and an after life or metempsychosis; and the shadowy beings may, sometimes, be invested with definite powers and functions and provided with a genealogy and bodily form. These are possibly later developments, and they are, in any case, far less universal. The subject, however, is far too large a one to be discussed here. From the point of view of the census it will suffice to say that Animism is used as the name of the category to which are relegated all the pre-Hindu religions of India. The practical difficulty is to say at what stage a man ceases to be an Animist and becomes a Hindu. The religions of India, as we have already seen, are by no means mutually exclusive, and it does not by any means follow that a man gives up his inherited Animistic beliefs because he seeks the help of a Brahman priest or makes offerings at a Hindu shrine. When he does this

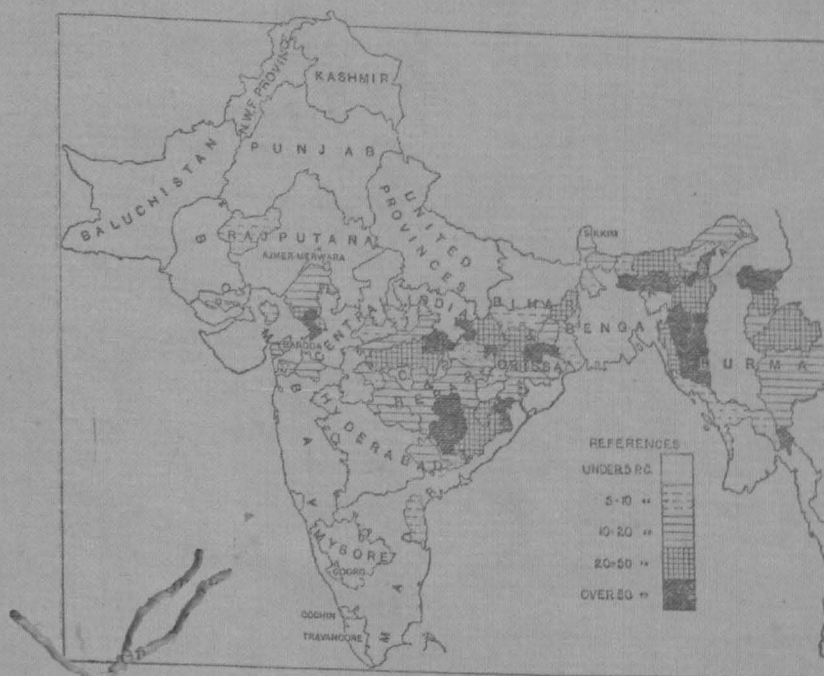
* For a more complete discussion of this question, see Bengal Census Report for 1901, page 185 et seq.

regularly he is labelled a Hindu. This label is applied more freely in Southern India than elsewhere, and it would be no exaggeration to say that in that part of the Empire the majority of the so-called Hindus are still in essentials Animists.* Broadly speaking, it may be said that the persons shown as Animists in the census returns are those who have not yet made a practice of worshipping Hindu gods and have not remodelled their original tribal organization on the lines of a Hindu caste. The Hinduizing process, however, is a very gradual one, and it is extremely difficult to say at what stage a man should be regarded as having become a Hindu.

There is no difficulty in classifying the tribes of Assam who are outside Hindu influences. But there are others whose classification is less easy, such as the Bhils of Gujarat and the Central India and Rajputana Agencies and the Gonds of the Central Provinces, whose tribal system is breaking down and who are coquetting to a varying extent with Hindu gods. The decision in many cases would depend on the idiosyncrasy of the enumerator and on the exact wording of the instructions laid down for his guidance. A high caste Hindu enumerator might record as Animists those whom a Christian or aboriginal enumerator might enter as Hindus. The practice followed in different tracts varied according to local conditions. The aboriginal tribes of South Mirzapur were almost all shown as Hindus, while their congeners in Palamau were usually entered as Animists. Mr. MacGregor says that the vast majority of the Dangi Bhils of the Bombay Presidency, who were returned as Hindus, are outside the pale of Hinduism and ought to have been shown as Animists.

175. There is thus a considerable element of uncertainty in the figures. As they stand, they show that in the whole of India the Animists number 10·3 millions, or about 3 per cent. of the total population. They form 17 per cent. of the population of Assam where they are the principal inhabitants of all the hill districts, 13 per cent. of that of the Central Provinces and Berar, and 6 per cent. of that of Bihar and Orissa. The Animists of Bengal are chiefly immigrants from Bihar and Orissa, who have either drifted across the boundary, or have migrated temporarily for work during the winter months or as coolies in the tea-gardens of Darjeeling and the Duars. Of the Native States, Animists are most

Map showing the distribution of Animists.



those of the Central Provinces and Berar to Bastar, Mandla and the five Chota Nagpur States, those of Madras to the Agency tracts, and those of Burma to four hilly tracts. In fine the universal rule is that they are most common in the remote upland tracts which are, or were until recently, comparatively difficult of access. In the open plains they have nearly all been submerged in Hinduism.

* The same remark applies in Burma to the Buddhists.

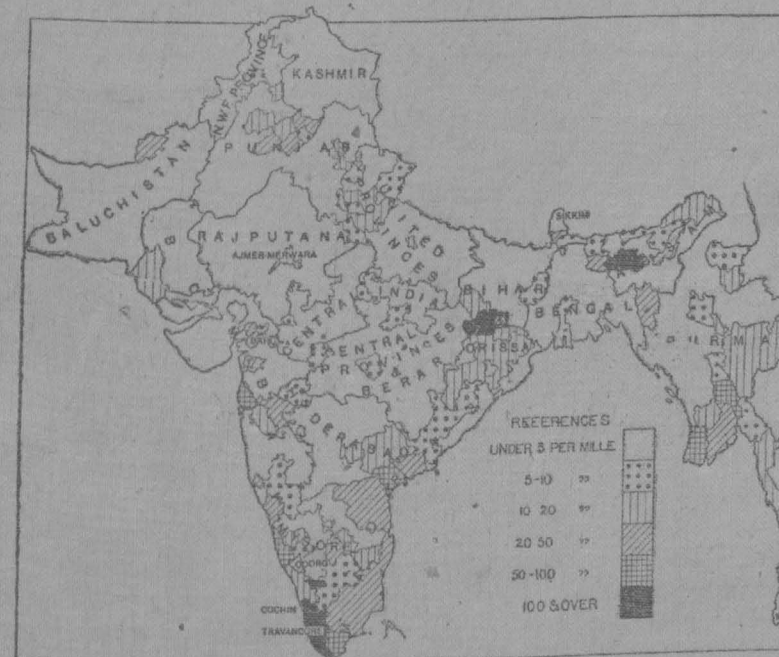
Thus in the hills to which they have given their name the Khonds are still purely Animistic but those of the Puri district have all become Hinduized. Many similar instances could be given.

176. The uncertainty of the classification to which attention has been drawn above prevents any effective comparison with the results of previous censuses. The figures as they stand show an increase of 20 per cent. during the last ten years, but it is not worth dwelling on them at length. In Bombay where more care was taken than at the previous census to discriminate between Animists and Hindus, the former have an increase of 238 per cent. while in Central India, where in 1901 all Bhils had been treated as Animists without regard to the entry in the religion column, they are only half as numerous as they were then shown to be. A third of the increase of 30 per cent. in the Central Provinces and Berar is attributed by Mr. Marten to changes of classification; the Korea and Udaipur States now return 40 and 43 thousand Animists respectively, against only 10 and 4 thousand in 1901.

Although the figures for individual provinces are marred by these errors due to the personal equation, it is probable that the net gain recorded for India as a whole is not far wide of the mark. The social customs of the Animistic tribes are favourable to a rapid growth of population. Child marriage is rare and widows remarry freely. The proportion of females aged '15-40' who are married is slightly smaller than amongst Muhammadans, but the proportion of children aged '0-5' to persons aged '15-40', is higher, viz., 43 as against 37 per cent.

177. There are now 3,876,203 Christians in India or 12 per mille of the total population. Of these 3,574,770 are Indian Christians, the remainder being chiefly Europeans and Anglo-Indians. Of the Indian Christians nearly two-fifths are Roman Catholics, and one-ninth Romo-Syrians. The Anglicans and the Baptists each claim about one-eleventh of the total, and the Jacobite and Reformed Syrians taken together, one-twelfth. Of the other sects the Lutherans claim 6 per cent., the Methodists and Presbyterians each less than 5, and the Congregationalists 4 per cent. About three-fifths of the total

Map showing the Distribution of Christians.



number of Indian Christians are found in Madras and its Native States, including Cochin and Travancore. In these two States, where the old Syrian Church has most of its adherents (705,000 out of 725,000), more than a quarter of the total population are Christians. About half the Christians of Madras proper are found in the Southern districts, where many of them are the descendants of converts made in the days of St. Francis Xavier and Schwarz. A long interval separates Madras from any other province, but then come in close succession Bihar and Orissa (268,000), Bombay (246,000), Burma (210,000), the Punjab (200,000), and the United Provinces (180,000). Of the major provinces the smallest number of Christians is found in Bengal (130,000), the Central Provinces and Berar (73,000), and Assam (67,000). As will be seen from the map, the local distribution of Christians is very irregular. In some tracts they are numerous while in others they are

scarcely to be found. Except in the case of the Syrians main factors are the location and strength of the missionary agencies and the period for which they have been established, but much also depends on the amenability of the classes whom they seek to convert; the hill tribes of Chota Nagpur and the Assam range, and the depressed castes of Madras and the Punjab are far more ready to accept Christianity than the Muhammadans or higher Hindu castes.

Variation
1901.

since

178. Though the total number of Christians is still small, it is increasing very rapidly. During the last ten years it has grown by 32.6 per cent., and it has more than doubled since 1881; the number of Indian Christians has multiplied nearly three-fold since 1872. The rate of increase would be still greater if the adherents of the ancient Syrian Church could be excluded from the calculation, but this is impossible, as so many of them now call themselves Roman Catholics. Of the major Provinces and States, Travancore has registered the largest actual addition (206,000) to the number of its Christians; and then Madras (170,000), the Punjab (133,000), Bihar and Orissa (96,000), the United Provinces (77,000), and Burma (63,000). The proportional increase is greatest by far in the Punjab, where there are now three times as many Christians as there were in 1901; in the

period.	Variation per cent. in the number of Indian Christians.
1872-1881	+22.0
1881-1891	+33.9
1891-1901	+30.8
1901-1911	+34.2

Central Provinces and Berar there is a gain of 169 per cent. and in Hyderabad, Assam and the United Provinces of 136, 85 and 75 per cent. respectively. Bihar and Orissa has a gain of 56, Burma of 42, and Travancore of 30 per cent. During the last ten years the greatest absolute increase has been won by the Roman Catholics who have added 289,000, or 24 per cent., to their numbers, but much larger proportional gains have been made by the Presbyterians (235 per cent.), Salvation Army (176 per cent.), Methodists (123 per cent.) Baptists (53 per cent.), and Lutherans (41 per cent.). The gain of 257 per cent. recorded by the Congregationalists is due mainly to their having been largely returned in 1901 under the heads Protestant and Unsectarian.

Distribution by
sect.
Anglican Com-
munion.

179. The Anglican Communion has increased during the decade by only 9 per cent., but its numbers in 1901 were unduly swollen by the addition of persons returned simply as Protestants without further specification. The real increase is probably at least 14 per cent. In Madras there has been a gain of 29,000 or 21 per cent., in the Punjab of 17,000 or 47 per cent., and in Bihar and Orissa of 15,000 or 66 per cent. In the Hyderabad State, where there are now 14,000 Anglicans, the number has more than doubled since 1901; but the actual increase is smaller here than in several British districts such as Kistna in Madras and Lyallpur in the Punjab. In Burma and the Baroda, Cochin, Mysore and Travancore States the reported number of Anglicans is smaller than it was ten years ago, but this is due entirely to the fact that at that census the Protestants who did not specify their precise denomination were classed as Anglicans.

Baptists.

180. The Baptists, who now approximate to the Anglicans in the number of their Indian Christians, have grown much more rapidly. Their principal centre is in Madras where about two-fifths of their converts are found, chiefly in the districts of Guntur, Nellore, Kurnool and Kistna. They have here grown by 24,000, or 22 per cent., during the decade. In Burma, where there are now 122,000, they have nearly doubled their number, but the increase is probably less than would appear from the figures, as in 1901 many failed to return their sect and were thus not shown as Baptists. In Assam, though the actual figures are comparatively small, the proportional increase is even greater. The Baptist Missions in this province have been at work for many years, and the seed thus laboriously sown is now yielding its harvest.

Lutherans.

181. The Lutherans, who now number 218,000, have grown by 41 per cent. since 1901. Nearly half of them are found in Madras, where they have gained 35 per cent. Their number is only slightly smaller in Bihar and Orissa, where an increase of 43 per cent. has been registered. Their head-quarters there are in the Ranchi district, but they have spread during the last few years into the adjoining Native States, where their efforts are meeting with marked success.

182. The Methodists with 172,000 adherents are 2½ times as numerous as Methodists. they were ten years ago. Three-fifths of their present strength is in the United Provinces, where they have doubled their following in the course of the decade. Though their number is still comparatively small, they have grown even more rapidly in the Punjab, Bombay, Baroda and Hyderabad.

183. The figures show that the Presbyterians have achieved even more remarkable results. Their present strength of 181,000 is more than three times what it was only ten years previously. The most phenomenal progress has been made in the Punjab, which now contains 95,000 Presbyterians against only 5,000 in 1901; in the two districts of Sialkot and Gujranwala alone there are now 52,000, whereas in 1901 there were only 500. Most of the converts belong to the Chuhra, Chamār and other depressed castes. The 31,000 Presbyterians in Assam are mainly converts of the Welsh Calvinistic Mission in the Khāsi and Jaintia Hills, where their number has risen from 16 to 28 thousand. In the United Provinces there are 14,000 adherents of this sect, or nearly three times as many as in 1901. Etah is here the most successful centre.

184. The Roman Catholics have grown by only 8 per cent. in Madras where they are most numerous (694,000), but they have gained 68 per cent. in Bihar and Orissa, chiefly in the Ranchi district and the State of Gangpur, 62 per cent. in Burma, 35 per cent. in Bombay and 19 per cent. in Bengal. Their most remarkable success is in the Jashpur State of the Central Provinces and Berar, where they have now 33,000 adherents, chiefly aboriginal Oraons, practically all of whom have been gathered into the fold since 1901.

185. The Salvationists, whose numbers have risen from 19 to 52 thousand, have shown remarkable activity in the Punjab, where they had only a few hundred adherents in 1901 and now have 18,000, and the Travancore State, where their present strength of 17,000 is five times what it was at the previous census. A special feature of the activities of the Salvation Army is the attention which they pay to the criminal tribes and depressed classes generally. In several provinces they have entered into special arrangements with Government for the reclamation of tribes whose criminal proclivities it has been found impossible to curb by means of police surveillance. They endeavour to improve the moral and material condition of these people by sympathetic supervision and by teaching them various industries which will enable them to earn an honest livelihood. They are also actively engaged in attempts to improve economic conditions generally. They have established numerous weaving schools; and one of these at least attracts pupils from all parts of India. Steps are being taken to foster the silk industry; and the rearing of silk worms and various food and fodder crops are experimented with. Fruit farming is carried on in the Kulu Valley.

186. The ancient Syrian Church on the Malabar coast, which claims to have been founded by the apostle St. Thomas and is known to have been in existence as far back as the beginning of the sixth century* consists, as is well known, of three main divisions—Romo-Syrians who acknowledge the authority of the Pope but whose services are in the Syrian language and who follow in part the Syrian ritual; Jacobite Syrians who are under a bishop consecrated by the Patriarch of Antioch, and Reformed Syrians who differ from the last mentioned in that they have adopted certain practices of the Anglican Church: there are also a few Chaldeans. The total number of Syrians is 728,304, of whom more than half are Romo-Syrians, less than a third Jacobites, about a tenth Reformed, and a fiftieth Chaldean. As compared with 1901 the Syrians as a whole have gained over 27 per cent., the increase being fairly evenly distributed between the Romo-Syrians and the other sections of the Syrian Church. Nearly four-fifths of this community are found in Travancore, and most of the remainder in Cochin. In Travancore the Syrians have increased by nearly 27 per cent., while the population as a whole has gained only 16 per cent.

* Kosmas Indikopleustes, writing about the middle of the 6th century, spoke of a church of Christians in Ceylon and on the west coast of India under a bishop appointed from Persia. There were also Christians in Socotra descended from Greek colonists sent by the Ptolemies who succeeded Alexander. McCrindle's *Ancient India*, VI, 165.

Distribution by
Provinces—Assam.

187. The total number of Christians in Assam is nearly 67,000, of whom all but about 3,000 are Indian Christians. The number of the latter has nearly doubled in the last decade and has increased nearly eleven-fold since 1881. Almost all the converts come from the ranks of the aboriginal tribes, such as the Khâsis, Nâgâs, Gâros, Lushâis and Kachâris. The principal missions in Assam are the Welsh Calvinistic Methodist, whose adherents, numbering 31,000, or nearly double their strength in 1901, are classed as Presbyterian. Their head-quarters is in the Khasi and Jaintia Hills, where nearly half the Indian Christians of the province were enumerated. This mission has branches in Cachar, Sylhet and the Lushai Hills. The last mentioned branch is meeting with wonderful success. Founded only a very few years ago it already claims 1,700 converts. The American Baptists (over 21,000) are at work chiefly in the Brahmaputra valley and in the Garo and Naga Hills. There are also Roman Catholic, Anglican and Lutheran missions, but they are small and of comparatively little importance.

Bengal.

188. Bengal now contains nearly 130,000 Christians, of whom rather more than a third are Europeans and Anglo-Indians and the remainder (83,000) Indians. The Indian Christian community has risen during the decade by 30 per cent. Of the total number 35 per cent. are Roman Catholics, 27 per cent. Baptists and 22 per cent. Anglicans. Nearly two-fifths of the Roman Catholics are found in the single district of Dacca. The Baptists have obtained their greatest success amongst the Namasudras of Eastern Bengal, and half their converts are in the Dacca division. The great majority of the Indian members of the Anglican Communion are found in Nadia, 24-Parganas and Calcutta.

Bihar and Orissa.

189. The number of Christians in Bihar and Orissa is 268,000, of whom 259,000 are Indian Christians. The latter have grown by about 58 per cent. in the course of the last ten years. Nearly the whole of this increase has taken place in the Chota Nagpur plateau, where an addition of 92,000 has been registered, of which the Ranchi district claims 52,000 and the adjoining State of Gangpur 32,000. Ranchi is one of the greatest centres of missionary activity in India, and one-eighth of its inhabitants are now Christians; of these 78,000 are Roman Catholics, 76,000 Lutherans and 24,000 Anglicans. Nearly nine-tenths of the Indian Christians belong to the aboriginal tribes of Orâon, Mundâ, Kharia and Santâl. The spread of Christianity in Gangpur is very remarkable. Ten years ago the number of Christians there was less than 2,000, but it now exceeds 33,000; two-thirds of them are Roman Catholics and nearly all the remainder are Lutherans.

Bombay.

190. The strength of the Christian community in the Bombay Presidency is about 246,000, or 12 per cent. more than in 1901. Of the total number about four-fifths are Indian Christians; and these have increased by 12 per cent. since 1901. About three-fourths of them are Roman Catholics; the Anglicans, Congregationalists and Methodists each claim about 12,000 and the Salvationists 10,000. Except in the case of the Roman Catholics, who have gained 35 per cent., it is impossible to institute an effective comparison with the figures for the previous census, when the return of sects was very defective. The principal fields of missionary enterprise are Ahmadnagar, Kaira and Poona.

Burma.

191. The Christian population of Burma has risen from 84 to 210 thousand in the course of the thirty years ending in 1911. Of the latter all but 24,000 are Indian Christians. By far the largest mission is that of the Baptists, who now have 185 missionaries and 122,000 adherents, or almost double the number recorded ten years previously. Their chief work is amongst the Karens, of whom nearly one-eighth are now professed Christians. The Shans, Talaings and Kachins also show a fair amount of receptivity; but not so the Burmans, who are quite content with the Buddhist beliefs in which they have been brought up. One element, says Mr. Webb, in the success of this mission is its press, which serves to bring all sections of the community into close touch with each other. The Roman Catholics, who now have nearly a hundred missionaries, have also made great progress, and their present strength of 60,000 represents a gain of 62 per cent. in ten years. As with the Baptists, most of their converts are Karens. The only other sect of local numerical importance is the Anglican (21,000) which on paper appears to have

lost ground, but this is because at the previous census it was credited with a large number of persons who had returned themselves as Protestants, the majority of whom were in reality Baptists.

Central Provinces
and Berar.

192. There are over 73,000 Christians in the Central Provinces and Berar, of whom nearly 63,000 are Indians. Between 1881 and 1901 the number of the latter rose from six to nineteen thousand, or by 220 per cent, and there has now been a further increase of 223 per cent. This is mainly the result of the extraordinary success of the Roman Catholic mission in the Jashpur State, which now has 33,000 adherents against only 12 in 1901. The total number of Roman Catholics in this province exceeds 44,000, of whom 41,000 are Indian Christians. They maintain a number of educational institutions of all kinds, including special schools for the depressed Mahars. Regarding their methods, Mr. Marten says:—

"The Roman Catholic missionaries admittedly do not interfere with caste distinctions. They object only to those caste customs which are distinctly idolatrous, and the converts conform to most of their caste customs and often claim to belong to their caste. The conditions exacted from a proselyte before baptism are probably not as exacting in this sect as in some others, nor is a public profession of faith required. There is, however, a high standard of organization and discipline, and the priests keep constantly in touch with the members of their flock."

Madras.

193. Though attached to the Madras Presidency, the returns for the States of Cochin and Travancore were compiled separately and the results were not included in the Madras Census Report. There are in all 1.1 million Christians in these two States of whom the great majority belong to some branch or other of the Syrian church. Excluding the above States, Madras now contains 1.2 million Christians, of whom all but 3 per cent. are Indians. The number of the latter has grown by 17 per cent. in the last decade. They are found chiefly on the east coast, and especially in the southern portion. About three-fifths of the Indian Christians are Roman Catholics; the Anglicans and the Baptists claim respectively 13 and 12 per cent. and the Lutherans 9 per cent. The Roman Catholics are found mainly in South Canara and the east coast districts south of Madras city, while half the Anglicans are congregated in the single district of Tinnevely. The Baptists are most numerous in the districts of Guntur, Nellore, Kurnool and Kistna. They have gained 22 per cent. in the course of the last ten years. The Lutherans, of whom two-fifths are found in Guntur, have an increase of 35 per cent. The Syrians have multiplied eight-fold; but nearly the whole of this increase has taken place in Malabar, where there has been a large falling off in the number of Roman Catholics, and Mr. Molony thinks that these changes are in the main artificial and due to a number of Romo-Syrians having been wrongly entered as Roman Catholics in 1901.

Punjab.

194. Of the 200,000 Christians in the Punjab, 164,000 are Indians, compared with only 38,000 in 1901. More than half the Indian Christians are Presbyterians, who have multiplied twenty-fold in the course of the decade. Their most remarkable gains have occurred in Sialkot and Gujranwala and the neighbouring districts. The two districts mentioned now contain between them a third of the total number of Christians in the province. The Anglicans, who greatly outnumbered the Presbyterians in 1901, are now barely half as numerous, and claim less than a third their following, of Indian Christians. They are found chiefly in Lyallpur, Sialkot, Lahore and Amritsar. Their nominal gain during the decade is artificially reduced, on the one hand, by Protestants unspecified having been classed as Anglicans in 1901, and increased, on the other, by a large addition to the European garrison, which was then much below its normal strength. The Salvationists, who were a negligible quantity in 1901, now have about a third the strength of the Anglicans; they are found chiefly in Gurdaspur, Lyallpur and Amritsar. The Roman Catholics have more than doubled their number in the ten years. Nearly half of them are Europeans and Anglo-Indians. Their Indian converts have increased most largely in Sialkot, Gujranwala and Lyallpur. The Methodists have gained practically the whole of their Indian converts since 1901. They are found chiefly in Lahore, Delhi and Gurdaspur.

195. The total number of Christians in the United Provinces has risen from 103 to 180 thousand, and that of Indian Christians from 69 to 138 thousand.

United Provinces.

In 1881, there were only 13,000 Indian Christians. The striking increase which has taken place in recent years has occurred chiefly in the three western divisions of Rohilkhand, Meerut and Agra. The most successful of the local missions from a numerical point of view is the Methodist, which has 104,000 converts, or twice as many as in 1901. This is an American Mission; it is concerned chiefly with the lower castes and it maintains a large number of schools, both for boys and girls. The next most important mission is that of the Church Missionary Society, which is responsible for most of the 6,000 Anglican Indian Christians. It commenced operations in 1813 and now carries on work in eleven districts. It maintains two colleges and schools of all kinds for both sexes, and in this way its influence for good is far greater than would appear from the number of its professed adherents. The society is more particular than many others as to its catechumens' fitness for baptism, and a relatively large proportion of its converts belong to the better castes. The Baptist Missionary Society (2,000 Indian adherents), which began work in the United Provinces in 1811, also carries on a certain amount of educational work; it is engaged chiefly in the Agra and Muttra districts. The Salvation Army have as yet only about a thousand followers, but they are actively at work on the lines already described in paragraph 185.

The accuracy of the return of Christians.

196. There is no reason to suppose that, taken as a whole, the returns are otherwise than accurate. Isolated instances occurred where an attempt was made to induce Christians to return themselves as Hindus but, except perhaps in Rajputana, these were very rare, and any losses on this account were no doubt balanced by persons who returned themselves as Christians without having been admitted to any Christian communion. It occasionally happened that the census returns differed from those prepared by the missionaries themselves, but the latter sometimes referred to a date later than that of the census, which in a growing mission may make a great deal of difference. Moreover, while taking count of all new adherents, mission returns often fail to allow for deaths, defections and departures, and they occasionally include enquirers and catechumens who at the census did not themselves profess to be Christians.

Mr. Blunt discusses at some length a discrepancy of this kind which was brought to his notice, and gives good reasons for accepting the census figures as more accurate than those of the mission. The Superintendent of Census Operations in Assam enquired at my request into a similar discrepancy to which my attention had been drawn, with the result that the local missionaries informed him that the census figures were substantially correct.

A few months after the general census, a systematic count was made by the Roman Catholic missions in India, with a view to ascertain the number of their adherents. The result was to show 1,624,267* Roman Catholics according to the Ecclesiastical census, as compared with 1,490,363 according to that carried out by Government. The Mission figures include 95,000 catechumens, some of whom may not have been returned as Christians at the Government census; and having been compiled some six months later they were no doubt augmented by a certain number of new converts. The differences between the two sets of figures were greatest in Southern India where they were due largely to many of those claimed as Roman Catholics at the Ecclesiastical census having been treated as Syrians or Romo-Syrians at the census carried out by Government. Fr. J. C. Houpert, S.J., who collected the returns from the various Roman Catholic missions, objects to the distinction which has been drawn in Imperial Table XVII between Roman Catholics and Romo-Syrians. He points out that both groups belong to the same denomination, that their rites are equally Catholic, and that they acknowledge the same spiritual head; and he urges that even if the Romo-Syrians are tabulated separately (which I think they ought always to be) they should be classed under the main head Roman Catholic and not under Syrian. There is much to be said in favour of this suggestion, but it was received too late to be acted on at the present census. In other parts of India the chief discrepancies between the two sets of figures occurred in two thanas of the Ranchi district of Chota Nagpur and in several districts of Southern Burma, where the Government figures were far below those reported by the local missionaries. It has unfortunately not been found possible at this stage to check all the figures, but in the case of Ranchi there is I fear no doubt that at the Government census, owing to a mistake in the local tabulation office, about 2,500 Roman Catholics and 2,800 Lutherans were wrongly shown under the head Anglican Communion.

Conditions affecting Christian propaganda.

197. The greatest success of Christian missions is attained amongst aboriginal tribes such as the Khâsis of Assam, the Mundâs and Oraons of Chota Nagpur, and the Karens of Burma, whose beliefs are of the undefined Animistic type and who, being outside the caste system, are not, on conversion, so completely cut off from their relations and friends. In the case of Hindus Mr. Blunt points out

* Excluding 25,918 in French, and 296,148 in Portuguese, territory.

that the main obstacle to the success of the missionary propaganda is the fear of social ostracism. The high caste convert has literally to lose all if he is to follow Christ. The low caste convert has much less to lose, while he gains materially in the facilities for education, assistance in getting employment and the like; and he can drop his despised caste designation. The great majority of the converts from Hinduism belong to the lowest castes, such as the Chuhars of the Punjab, the Mahars of the Central Provinces and Berar and the Shânâns of Madras, to whom conversion means an accession of respectability as well as a cleaner and purer life. The social difficulty is growing less with the increasing number of Christians; for though a convert from Hinduism or Islam is still turned out of his original community, he has another into which he is received. The converts, as their numbers increase, find the loss of caste rights easier to bear. The missionaries have raised their converts' standard of cleanliness in dress and habits, and their position in general estimation has improved accordingly. The success of a mission cannot always be judged by the number of its converts. Most missions are very careful to baptise no one until he has given satisfactory proof of his being at heart a Christian, but a few accept all who are willing to join their fold, and occasionally take in, not only individuals, but the people of entire villages, when they are willing for any reason to accept Christianity. It is obvious that in such cases the converts, of the first generation at least, are often far from being genuine Christians. They are often only half-hearted and are apt to apostatize. Mr. MacGregor says that in Kaira many converts made during the famine reverted afterwards to their ancestral beliefs, and Mr. Blunt mentions the case of a number of persons who, though they had been duly baptised, refused to record themselves as Christians.

A well known Roman Catholic Missionary in Chota Nagpur writes to me as follows regarding the inducements to conversion:—

"As a general rule religious motives are out of the question. They want protection against zamindari and police extortions and assistance in the endless litigation forced on them by zamindars.* As a consequence—

- (a) most of the converts came over (after panchayats) in whole villages or in groups of villages;
- (b) a certain number of isolated families came over, either for help against zamindars or police extortion, or against the rest of their co-villagers who persecuted them because they were pointed out by the *Sokhas* as wizards or witches.
- (c) Personally I know of some cases where individuals came over from religious motives. But these cases are rare."

198. The Hindu has no fanatical opposition to Christianity. So long as he is not asked to abandon his own religion, he is quite ready to appreciate what is good in Christianity and to listen to the teaching of the missionaries. Mr. Molony mentions that he has even seen a Brâhman presiding at a missionary meeting, and it is well known that many Hindus have no prejudice whatever against sending their children to mission schools and colleges. In this way Christian thought influences large numbers who remain Hindus, and Christian ideals and standards are everywhere gaining vogue. There is a growing tendency to monotheism amongst the educated classes throughout India. The European reader of Indian newspapers is frequently astonished at the writers' familiarity with the Bible, while no politician can fail to take note of the influence of Christian thought on social questions, such as polygamy, child marriage and the inequalities of the caste system.

The influence of missions.

Of the effect of conversion on the Indian Christians themselves Mr. Blunt writes:—

"The missionaries all these years have been providing the *corpus sanum* (if one thing is noticeable about Indian Christians it is their greater cleanliness in dress and habits) and now they are being rewarded by the appearance of the *mens sana*. The new convert, may be, is no better than his predecessors; but a new generation, the children of the first generation of converts, is now growing up. If the missionaries could and can get little out of that first generation, the second generation is in their hands from their earliest years. The children of the converts born in Christianity, are very different to their parents; their grand children will be better still. It is this which provides the other side to the black picture so often drawn of the inefficiency of Christian conversion. And this generation is now beginning to make its influence felt. The Hindu fellows of these converts have now to acknowledge, not only that they are in many material ways better off than themselves, but that they are also better men."

Similar testimony is borne by a Bengali gentleman* :—

"The most careless observer can tell the house of a Christian convert of some years' standing from that of his non-Christian fellow tribesman by the greater cleanliness of the Christian's house and the general neatness and orderliness of everything about it. The contrast illustrated by the various pictures given in this book of Mundā and Orāon Christian men and women, boys and girls on the one hand, and, on the other, of non-Christian Mundās and Orāons at their feasts and elsewhere will, we hope, help the reader towards an appreciation of the brilliant achievements of the Christian Missions in their noble work of civilizing and educating the aborigines of Chota Nagpur."

The Census Superintendent of the Mysore State, himself a Hindu, says that the missionaries work mainly among the backward classes and that—

"the enlightening influence of Christianity is patent in the higher standard of comfort of the converts, and their sober, disciplined and busy lives. To take education, for instance, we find that among Indian Christians no less than 11,523 persons or 25 per cent. are returned as literate, while for the total population of the State the percentage is only 6.* ** The success in gaining converts is not now so marked as the spread of a knowledge of Christian tenets and standards of morality."

The opinion of the Roman Catholic missionary from whom I have already quoted is as follows :—

"For a long time Christian influence was practically non-existent. It would be a stupendous wonder if masses of aborigines, so limited in intellectual capacity and so indifferent to our teaching in itself, had suddenly risen to a higher standard of morality. The non-Christians among the Mundās looked upon the Christians rather with a certain moral indignation because they gave up some social religious practices which Mundās hold as sacred, and which for them really are strong preservatives against immorality in the joint family system still in practice to a great extent."

But I can assert with full and critically-tested personal knowledge that large numbers of boys and girls having remained long in our schools do rise to quite a serious moral life as exacted by the moral precepts of the Church, and although I am not an optimistic enthusiast in any sense of the word, I have a great confidence in the moral regeneration of the race through a well developed school system. I have also personal knowledge of the good and strong impression made on pagans and nominal Christians by the truthfulness and the morality of young people during the past few years."

The great work done by the missions in bringing education within the reach of the backward classes among whom they chiefly work will be seen from the statistics of education by religion which will be discussed in Chapter VIII.

199. One noticeable feature of the decade has been the tendency shown by certain Protestant missions in the south of India to sink their denominational differences and to form a United Christian Church. All the Christians of the following five missions are now organized as one body under the name of the South India United Church, viz., The United Free Church of Scotland Mission in and about Madras, the Arcot Mission of the Reformed Church of America in the Arcot and Cuddapah districts, the American Madura Mission, and the two great London Missionary Society Missions, viz., the Travancore Mission and the South Indian District Committee Mission. In order to enable the progress made by these missionary bodies to be gauged, and to permit of comparison with the returns of the last census, the adherents of these missions have been shown in Table XVII according to the sect of the mission; but it should be understood that the denominational differences connoted by these names are now a thing of the past. Their converts are all members of the South India United Church, which is organized as a homogeneous religious community. Its affairs are managed by a small committee, elected by the General Assembly, which meets once in two years. The individual units of the South India United Church are the local churches organized in the associated missions. The Ministers and lay representatives of these local churches are grouped in the Church Councils, of which there are nine in all. These Church Councils elect the delegates who form the General Assembly. The organization of the South India United Church has attracted the attention of other missions, and some of them, especially the Basel German Evangelical Mission and the Mission of the Wesleyan Missionary Society, are considering the question of uniting with it organically. There are certain other Churches with which a much closer association than has hitherto existed is regarded as desirable, although for various reasons, organic union is at present impossible. To this end it is

* The Mundas by Babu Sarat Chandra Roy, Calcutta, 1912, page 168.

proposed to incorporate in a "Federation of Christian Churches in India" all Churches and Societies that "accept the Word of God as contained in the Scrip- of the Old and New Testament as the supreme rule of faith and practice, and whose teaching in regard to God, sin and salvation is in general agreement with the great body of Christian truth and fundamental doctrines of the Christian faith." The declared object of this Federation is to emphasize the essential unity and brotherhood of all Christians without interfering with the existing creed of the individual Churches or with their system of Church government. These proposals for federation do not extend to Churches which regard the mutual recognition of ministry and sacraments to be contrary to their fundamental principles. In the case of such Churches all that is thought possible is "co-operation," but no definite steps in that direction have yet been taken.

200. On the other hand the rising national spirit in India sometimes manifests itself in hostility to the missionaries and determined efforts to impede their progress. This is notably the case with the Arya Samāj and may perhaps be one of the motives for the efforts which they are making to get the untouchable castes placed on a higher level in the estimation of the Hindu public. A spirit of independence is also abroad in the Indian Church itself. Of this there are various local manifestations. The Karens of Burma show a tendency to break adrift from the missionaries and set up their own church under tribal leaders. The Yuyomayam sect in Travancore is an offshoot from Christianity. The Bible is the basis of its beliefs, but no higher ecclesiastical authority than the family of the founder is recognized. The sect have no places of public worship, and their ceremonial benedictions are after the manner of the Brāhmans. Many of the missionary bodies are recognizing the desirability of encouraging the spirit which has given rise to these movements and guiding it along right lines. As an instance of this it may be mentioned that the Anglican Christians have just been given their first Indian bishop, who was consecrated by the Metropolitan of India in the Calcutta Cathedral a few months ago.

201. According to the returns the number of Europeans and allied races is 199,787, as compared with 169,677 in 1901 and 168,158 in 1891. The figures are not altogether reliable, owing to the tendency of persons of mixed race to return themselves as pure Europeans. Some special enquiries made in certain towns by Mr. O'Malley showed that three-tenths of the persons returned as Europeans were in reality Anglo-Indians. There are, however, some reasons for thinking that the errors due to this cause at the recent census were considerably less numerous than on previous occasions, owing to the use, under the orders of the Government of India, of the term Anglo-Indian as the official designation of the mixed race, instead of Eurasian, their former designation, which was very unpopular amongst them. The real increase in the number of Europeans is thus greater than would appear from the figures. On the other hand in 1901, owing to the despatch of a force to South Africa, the European garrison was about 7,000 below its normal strength. This deficiency has since been made up. The real increase in the number of Europeans, which is probably not less than 25,000, is attributable to the growth of railways, the extension of collieries and the general industrial development which has taken place, and which is still financed and fostered mainly by European enterprise. Of the total number of Europeans, about 76,000 are in the army, and their wives and dependants probably account for at least another 15,000. The number of Europeans in each province is thus determined largely by the strength of its European garrison. They are most numerous in the United Provinces (33,000), and almost equally so in the Punjab and Bombay. Bengal (25,000) has very few European soldiers and owes its position mainly to the large number of Europeans engaged in trade and the jute, tea and coal industries. Madras and Burma are the only other provinces where there are more than ten thousand Europeans. The States and Agencies taken together have fewer Europeans than the single province of Bengal. Most of them were enumerated in Mysore, where they are numerous in the Kolar gold field and the coffee plantations, and in Hyderabad and the Central India Agency, which contain the large cantonments of Secunderabad and Mhow respectively. As would be expected from their occupations,

Europeans tend to congregate in cities and large towns. Of the total number in Bengal, three-fifths were enumerated in Calcutta, Howrah and the suburban municipalities; of those in Bombay, 36 per cent. were found in the capital of the Presidency, and of those in Burma, 44 per cent. were in Rangoon.

By nationality all but 7 per cent. of the Europeans are British subjects. About one-third of them were born in India; the proportion falls to one-fifth if we exclude children under 15, most of whom may be assumed to have been born in this country, but it rises again to one-third if we exclude the army, which may be taken to be wholly English-born. Of the British born, England and Wales contribute 79, Scotland 11 and Ireland 10 per cent. Females, though still in marked defect, are gradually becoming more numerous. In 1911 there were 388 females per thousand males against 384 in 1901. Up to the age of 15, *i.e.*, amongst those born in India, there is comparatively little difference in the proportions (957 females per thousand males) but at the age-period '15-30,' which includes the bulk of the European troops, males outnumber females in the ratio of five to one, and at '30-50' they are still twice as numerous. Of the males of British nationality, no less than 84 per cent. are between 15 and 50 years of age, and less than 5 per cent. are over 50, as compared with 11 per cent. in the general population. This abnormal age distribution is of course due to the fact that very few Europeans make their permanent home in India. It would be still further removed from the normal but for the inclusion in the figures of a certain number of Anglo-Indians, who have still succeeded in returning themselves as Europeans. Nearly two-thirds of the Europeans and allied races claim to belong to the Anglican Communion; one in five is a Roman Catholic, one in thirteen a Presbyterian, and one in 29 a Methodist. The number belonging to other sects is very small. The high proportion of persons professing to belong to the Anglican Communion is due largely to the tendency of persons of all denominations thus to return themselves, when not very ardent sectarians, in a country where that church is often the only one whose religious ministrations are available. The number of Presbyterians has grown by 56 per cent. since 1901, owing partly to the presence of more Scotch regiments, but it is still far less than might be expected from the large number of Scotsmen in India. The large proportion of European Roman Catholics is possibly the result of the intrusion of Anglo-Indians into this category.

202. As explained in the last paragraph, the term Anglo-Indian is used at the census as the designation of the mixed race, descended usually from European fathers and Indian mothers, which was formerly known as Eurasian. The total number of persons returned under this head, excluding Feringis, is now 100,451 or 15 per cent. more than in 1901. Anglo-Indians are most numerous in Madras (26,000) and Bengal (20,000). In the United Provinces, Bombay and Burma the number ranges from 8 to 11 thousand, and in Bihar and Orissa, the Central Provinces and Berar and the Punjab it is about 3,500. In the States and Agencies Anglo-Indians aggregate only 14,000, more than half being found in Mysore and Hyderabad. The increase in their number as compared with 1901 may be due partly to some Anglo-Indians having returned themselves under their new designation who would have claimed to be Europeans if Eurasian had been the only alternative, and it is also perhaps due in part to a growing tendency amongst certain classes of Indian Christians to pass themselves off as Anglo-Indians; the Punjab Superintendent accounts in this way for the greater part of the increase of 42 per cent. in the number returned as Anglo-Indians in his province. The proportional increase is also large in the United Provinces, Bombay, Burma, the Central Provinces and Berar and the Cochin State. Although Madras still has the largest number of Anglo-Indians, the total is slightly less now than it was twenty years ago. Possibly this is because more careful enumeration has reduced the number of Indian Christians who thus returned themselves. The number of Anglo-Indians in Burma is remarkably large in view of the comparatively short time that has elapsed since it became a British possession and the strength of its European population. In this community there are 984 females per thousand males, or slightly more than the corresponding proportion in the general population of India. More than half of the persons returned as Anglo-Indians are Roman Catholics, and one-third are Anglicans; the number of Presbyterians, Baptists and Methodists ranges from 2 to 2½ per cent.

SUBSIDIARY TABLE I.

General distribution of the population by religion.

RELIGION.	Actual number in 1911.	PROPORTION PER 10,000 OF POPULATION IN				VARIATION PER CENT. (Increase +, Decrease—)			
		1911	1901	1891	1881	1901-11	1891-01	1881-91	1881-1911
1	2	3	4	5	6	7	8	9	10
INDO-ARYAN.	232,570,993	7,417	7,479	7,596	7,688	+5.6	+.9	+11.8	+19.2
Hindu	217,586,892	6,939	7,037	7,232	7,432	+5.04	—3	+10.1	+15.3
Brahmanic	217,937,943	6,931	7,034	7,231	7,432	+5.0	—3	+10.1	+15.3
Arya	243,445	8	3	1		+163.4	+131.3		
Brahmo	5,504	.18	.14	.1	.04	+35.9	+32.7	+165.9	+379.9
Sikh	3,014,466	96	75	67	73	+37.3	+15.1	+2.9	+62.6
Jain	1,348,182	40	45	49	48	—6.4	—5.8	+15.9	+2.2
Buddhist	10,721,453	342	322	248	135	+13.1	+32.9	+108.6	+213.6
IRANIAN.	100,096	3	3	3	3	+6.3	+4.7	+5.3	+17.2
Zoroastrian (Parsi)	100,096	3	3	3	3	+6.3	+4.7	+5.3	+17.2
SEMITIC.	70,544,482	2,251	2,222	2,076	2,048	+7.9	+9.7	+14.6	+35.7
Musalman	66,647,299	2,126	2,122	1,996	1,974	+6.7	+8.9	+14.3	+33.0
Christian	3,876,203	124	99	79	73	+32.6	+28.0	+22.6	+108.1
Jew	20,980	.7	.6	.4	.5	+15.1	+6.0	+43.1	+74.7
PRIMITIVE.	10,295,168	328	292	323	259	+19.9	—7.5	+41.2	+56.7
Animistic	10,295,168	328	292	323	259	+19.9	—7.5	+41.2	+56.7
MISCELLANEOUS.	37,101	1	4	2	2	—71.4	+203.7	—28.7	—38.1
Minor Religions and Religions not returned.	37,101	1	4	2	2	—71.4	+203.7	—28.7	—38.1

SUBSIDIARY

Proportional strength of the main religions in each Province, State or

Serial No.	Province, State or Agency.	NUMBER PER 10,000 OF THE											
		Hindu.				Sikh.				Jain.			
		1911	1901	1891	1881	1911	1901	1891	1881	1911	1901	1891	1881
1	India	2	3	4	5	6	7	8	9	10	11	12	13
		6,931	7,034	7,331	7,432	96	75	67	73	40	45	49	48
1	Ajmer-Merwara	6,688	6,835	7,014	7,197	89	68	64	63	19	21	23	23
2	Andamans and Nicobars	7,750	7,977	8,054	8,102	18	6	4	4	405	418	497	528
3	Assam	3,578	3,758	...	...	172	150	...	...	...	25	...	...
4	Baluchistan	5,418	5,578	5,472	5,273	1	1	...	...	3	3	2	...
5	Bengal	622	643	...	...	129	85	...	...	...	...	...	...
6	Bihar and Orissa	4,480	4,660	4,727	4,555	1	...	...	...	1	1	1	...
7	Bombay	8,223	8,333	8,290	8,430	1	...	...	...	1	1	1	...
8	Burma	7,585	7,651	7,756	7,480	6	1	1	77	108	123	127	133
9	Central Provinces and Berar	514	436	306	236	4	3	1	...	1	...	...	...
10	Coorg	322	272	223	...	6	6	5	...	1	...	...	...
11	Madras	8,261	8,320	8,244	8,206	2	2	...	...	50	56	52	55
12	North-West Frontier Province (Districts and Administered Territories)	7,339	8,840	9,063	9,113	...	...	...	...	6	6	7	6
13	Punjab	8,889	8,014	8,081	9,141	...	...	...	...	7	7	8	8
14	United Provinces of Agra and Oudh	546	629	658	708	138	125	103	50	...	...	...	...
	States and Agencies.	3,297	3,876	4,077	4,130	1,046	746	737	658	20	21	21	21
15	Assam State (Manipur)	8,504	8,532	8,609	8,627	3	3	2	1	16	18	16	18
16	Baluchistan States	7,78	7,769	7,957	8,277	132	99	76	109	114	136	140	140
17	Baroda State	5,516	5,906	...	5,921	...	...	...	...	3	...	...	...
18	Bengal States	282	342	...	...	74	...	...	...	...	...	...	...
19	Bihar and Orissa States	8,340	7,922	8,850	8,490	1	...	...	...	214	247	208	214
20	Bombay States	6,900	6,985	6,955	6,262	...	...	...	...	7	5	3	2
21	Central India Agency	8,689	8,624	8,627	8,245	...	...	...	...	...	...	...	...
22	Central Provinces States	8,169	8,278	8,414	7,962	3	1	...	...	375	440	391	400
23	Hyderabad State	8,630	8,081	7,408	8,422	1	2	2	2	94	131	87	54
24	Kashmir State	6,106	6,802	7,356	8,621	1	1	...	...	5	5	3	1
25	Madras States	8,693	8,860	8,947	9,033	3	4	4	4	16	18	24	8
26	Madras States	2,183	2,371	2,720	...	106	80	45	...	1	1	2	...
	Cochin	6,903	7,111	7,459	...	...	...	...	...	...	...	...	...
	Travancore	6,709	6,895	6,938	7,169	...	...	...	...	...	...	...	...
27	North-West Frontier Province (Agencies and Tribal areas)	6,657	6,895	7,318	7,312	...	...	...	...	1	...	...	...
28	Punjab States	0,199	9,206	9,248	9,308	1	...	...	...	30	28	27	...
29	Rajputana Agency	1,984	...	...	...	828	...	...	...	...	...	...	...
30	Sikkim State	4,953	5,592	5,949	5,495	1,876	1,325	1,127	1,541	17	16	14	18
31	United Provinces States	8,311	8,327	8,361	8,750	9	2	1	...	316	349	398	375
		6,674	6,491	...	...	...	1	...	...	...	...	...	...
		7,008	6,663	6,934	6,794	...	...	...	...	4	2	3	...

* This is due to the inclusion of 127,059 persons who were shown under Norn.—The proportions for Hindu in columns 2 to 5 relate to Hindu. The Roman figures against Burma relate to Lower Burma. The figures for Animists are in many cases (e.g. Coorg) The proportions in the case of Agencies and Tribal areas of the

TABLE II.

Agency at each of the last four censuses.

POPULATION WHO ARE																				Serial No.
Buddhist.				Musalman.				Christian.				Animist.				Others.				
1911	1901	1891	1881	1911	1901	1891	1881	1911	1901	1891	1881	1911	1901	1891	1881	1911	1901	1891	1881	
14	16	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
342	322	249	135	2,126	2,122	1,996	1,974	124	99	79	73	328	292	323	259	13	11	7	6	
436	406	321	172	2,351	2,324	2,240	2,260	102	82	68	58	301	250	264	221	14	14	7	6	
...	...	...	...	1,616	1,510	1,369	1,255	108	78	50	48	79	...	...	...	24	11	26	3	
604	755	...	...	1,731	1,707	...	...	214	197	...	...	3,670	3,326	...	...	31	82	...	...	
16	15	14	14	2,810	2,689	2,710	2,699	99	61	31	15	1,652	1,652	1,771	1,609	1	1	...	...	
...	...	...	...	9,106	9,150	...	...	121	116	...	...	...	...	...	...	23	6	...	...	
53	50	48	43	5,274	5,158	5,108	5,009	29	25	21	20	161	105	98	70	1	1	2	3	
...	...	...	...	1,063	1,061	1,076	1,089	67	51	34	18	644	554	598	454	1	...	1	9	
...	...	...	...	2,046	2,026	1,871	1,839	119	112	86	84	87	38	113	342	40	40	46	40	
8,351	8,533	8,680	8,702	547	509	452	452	281	237	240	225	300	281	320	364	2	1	1	1	
5,571	5,755	9,063	...	347	323	333	...	173	141	159	...	679	381	221	...	1	122*	1	...	
...	...	...	...	406	421	385	386	25	23	11	11	1,264	1,176	1,307	1,281	2	2	1	...	
...	...	...	...	761	756	732	703	203	204	196	177	1,099	183	...	...	2	2	2	1	
...	...	...	...	662	643	631	623	289	268	243	227	154	168	133	...	...	...	4	1	
...	...	...	...	9,286	9,221	9,230	9,212	30	25	29	30	...	...	...	...	...	...	...	...	
2	2	3	2	5,485	5,325	5,136	5,173	99	39	26	16	...	...	...	...	49	...	...	...	
...	...	...	...	1,411	1,411	1,353	1,343	38	22	13	11	...	...	...	...	28	14	5	...	
11	10	5	...	1,331	1,376	1,176	946	299	162	120	123	425	445	520	594	9	3	6	6	
...	5	...	...	419	365	...	221	4	2	...	...	3,758	3,632	...	3,658	...	...	...	...	
...	...	...	...	9,643	9,658	...	...	1	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	791	845	781	801	35	39	3	3	568	403	124	465	42	44	34	37	
73	81	66	...	3,009	2,885	2,902	2,886	3	4	6	2	7	39	14	848	1	1	54	...	
4	2	4	2	42	39	40	48	97	9	6	3	1,267	1,326	1,314	1,702	1	...	9	...	
...	...	...	...	1,184	1,217	1,060	1,085	17	16	10	10	202	36	121	532	51	6	4	5	
...	...	...	...	546	606	546	551	10	10	6	8	517	1,168	1,890	962	2	2	1	1	
...	...	...	...	95	96	87	85	189	4	2	...	3,521	3,002	2,522	1,293	...	...	...	...	
...	...	...	...	1,082	1,037	987	940	41	21	18	14	214	59	25	...	1	1	1	1	
116	121	116	...	7,594	7,416	7,051	...	3	1	1	...	...	...	...	...	3	1	65	...	
...	1	...	...	654	634	609	573	2,399	2,174	1,911	1,956	41	77	...	...	3	3	4	4	
...	...	...	...	695	671	649	555	2,539	2,425	2,404	2,279	46	48	...	...	18	14	16	21	
...	1	...	...	661	646	621	619	2,636	2,369	2,000	2,076	49	95	...	...	...	1	1	...	
1	...	...	...	542	523	512	479	103	90	77	70	124	156	136	117	...	...	...	...	
...	...	...	...	7,096	...	...	...	98	...	...	...	...	...	...	...	...	...	...	...	
8	6	1	...	3,133	3,069	3,006	2,945	4	2	1	1	...	...	...	...	10	1	2	...	
...	...	...	...	936	952	811	863	4	3	2	1	422	366	403	...	2	1	1	21	
3,289	3,481	...	...	5	4	...	...	32	23	...	...	...	...	...	...	...	...	...	...	
...	...	1	...	2,961	3,026	3,061	3,236	21	6	1	...	...	...	...	...	6	4	...	...	

the head "Minor Religions and Religions not returned." (Brahmanic). only : those in italics are for the whole Province. Madras, Hyderabad, included in those for Hindus in 1881. N. W. F. Province relate to Trans-Frontier posts only.

SUBSIDIARY TABLE III.

Distribution of Christians by locality.

PROVINCE, STATE OR AGENCY.	ACTUAL NUMBER OF CHRISTIANS IN				VARIATION PER CENT. (INCREASE +, DECREASE -)			
	1911	1901	1891	1881	1901-11	1891-01	1881-91	1881-1911
1	2	3	4	5	6	7	8	9
INDIA.	3,876,203	2,923,241	2,284,380	1,862,634	+32.6	+28.0	+22.6	+108.1
Provinces.								
Ajmer-Merwara	2,663,026	1,935,358	1,516,356	1,175,738	+34.5	+27.6	+29.0	+121.2
Andamans and Nicobars	5432	3,712	2,683	2,225	+40.3	+38.4	+20.6	+144.1
Assam	569	483	483	...	+16.5	+8	...	...
Baluchistan	66,562	35,969	16,844	7,093	+85.1	+113.5	+137.2	+838.4
Bengal	5,085	4,026	3,008	...	+26.3	+33.8	...	...
Bihar and Orissa	129,746	106,596	82,339	72,289	+21.7	+29.5	+13.9	+79.5
Bombay	268,265	172,340	110,360	65,943	+55.7	+56.2	+97.3	+279.5
Burma	245,657	220,087	170,009	145,154	+11.6	+29.5	+17.1	+69.2
Central Provinces and Berar	210,081	147,525	120,922	84,219*	+42.4	+22.2	...	...
Coorg	73,401	27,252	14,451	13,174	+169.3	+88.6	+9.3	+457.2
Madras	3,553	3,683	3,392	3,252	-3.5	+8.6	+7.6	+12.7
N.-W. F. Province	1,208,515	1,038,863	879,438	711,117	+16.3	+18.1	+23.7	+69.9
Punjab	6,718	5,273	5,437	5,645	+27.4	-3.0	-3.7	+19.0
United Provinces	199,751	66,591	48,472	28,054	+200.0	+37.4	+72.8	+612.0
States and Agencies.	179,094	102,955	58,518	47,673	+74.5	+75.9	+22.7	+276.9
Baroda State	1,273,177	987,883	768,024	686,896	+28.9	+28.6	+11.8	+85.4
Central India Agency	7,203	7,691	646	771	-6.3	+1,090.6	-16.2	+834.3
Cochin State	9,358	8,113	5,992	7,005	+15.3	+35.4	-15.2	+32.5
Hyderabad State	239,092	198,239	173,331	136,361	+17.6	+14.0	+27.5	+70.9
Kashmir State	54,296	22,993	20,429	13,614	+136.1	+12.6	+50.1	+298.8
Mysore State	975	422	218	...	+131.0	+93.6	...	...
Rajputana Agency	59,844	50,059	38,135	29,249	+19.5	+31.3	+30.4	+104.6
Sikkim State	4,256	2,841	1,862	1,294	+49.8	+52.6	+43.9	+228.9
Travancore State	285	135	...	...	+111.1	...	...	...
	903,868	697,387	526,911	498,542	+29.6	+32.4	+5.7	+81.3

NOTE.—The figures in this Table include the States attached to each Province, but those for Madras exclude Cochin and Travancore. The figures for previous censuses in Bihar and Orissa, Central Provinces and Berar, Madras, Central India and Rajputana Agencies have been adjusted with reference to the subsequent changes in area.

SUBSIDIARY TABLE IV.

Races and sects of Christians (actual numbers).

SECT.	DISTRIBUTION BY RACE.						TOTAL.		Variation Increase +, decrease -.
	EUROPEAN AND ALLIED RACES.		ANGLO-INDIAN.		INDIAN.		1911.	1901.	
1	2	3	4	5	6	7	8	9	10
INDIA	143,974	55,802	51,232	50,125	1,815,523	1,759,247	3,876,203	2,923,241	+952,962
Abyssinian	...	...	...	...	7	18	25	9	+16
Anglican Communion	91,729	33,664	17,591	16,962	168,095	164,112	492,752	453,462	+71,470
Protestant (Unsectarian or sect not specified)	1,849	1,043	924	775	14,694	12,890	32,180	...	...
Armenian	737	400	25	5	16	17	1,200	1,353	+147
Baptist	1,071	1,145	1,156	1,083	167,599	164,572	337,226	221,040	+116,186
Congregationalist	443	293	173	116	65,160	66,080	135,265	37,874	+97,391
Greek	408	113	8	9	31	25	594	656	-62
Lutheran	974	495	124	65	107,182	109,660	218,500	155,455	+63,045
Methodist	5,099	1,805	1,122	1,451	85,374	76,993	171,844	76,907	+94,937
Minor Protestant Denominations	295	286	80	106	6,039	5,663	12,469	22,699	-10,230
Presbyterian	11,991	3,159	1,164	747	86,759	77,310	181,130	54,029	+127,101
Quaker	21	24	3	3	623	571	1,245	1,399	-64
Roman Catholic	27,338	12,781	28,542	28,482	702,434	691,286	1,490,863	1,202,169	+288,694
Salvationist	93	96	11	8	27,699	24,407	52,407	18,960	+33,447
Syrian, Romo-Syrian	1	1	3	3	209,409	203,725	413,142	322,586	+90,556
Syrian, Chaldean	3	...	...	...	7,244	6,533	13,780	...	...
Syrian, Jacobite	1	1	...	...	114,232	110,956	225,190	248,741	+66,421
Syrian, Reformed	...	...	...	...	39,801	36,047	75,848	...	...
Syrian, Unspecified	...	...	...	...	194	150	344	...	...
Sect not returned	857	376	271	601	8,516	7,333	17,954	104,785	-86,831
Indefinite Beliefs	465	115	35	9	815	806	2,245	1,507	+738

NOTE.—The difference between the number of Europeans and Anglo-Indians as shown in this Table and that in Subsidiary Table VI has been explained in the Title page to Imperial Table XVIII.

SUBSIDIARY TABLE V.

Distribution of Christians per mille—(a) Races by sect and (b) Sects by race.

SECT.	RACES DISTRIBUTED BY SECT.				SECTS DISTRIBUTED BY RACE.			
	European.	Anglo-Indian.	Indian.	Total.	European.	Anglo-Indian.	Indian.	Total.
1	2	3	4	5	6	7	8	9
TOTAL	1,000	1,000	1,000	1,000	52	26	922	1,000
Abyssinian	...	...	...	...	...	...	1,000	1,000
Anglican Communion	628	340	93	127	255	70	675	1,000
Armenian	6	...	...	...	947	25	28	1,000
Baptist	14	22	93	87	8	7	985	1,000
Congregationalist	4	3	35	35	6	2	992	1,000
Greek	3	...	...	...	877	29	94	1,000
Lutheran	7	2	61	56	7	1	992	1,000
Methodist	34	25	45	44	40	15	945	1,000
Minor Protestant Denominations	3	2	3	3	47	15	933	1,000
Presbyterian	76	19	46	47	84	10	906	1,000
Protestant (Unsectarian or sect not specified)	14	17	8	8	90	53	857	1,000
Quaker	...	...	...	...	36	5	959	1,000
Roman Catholic	201	561	390	315	27	38	935	1,000
Salvationist	1	...	15	13	4	...	996	1,000
Syrian, Chaldean	...	...	4	4	...	...	1,000	1,000
Syrian, Jacobite	...	...	63	68	...	...	1,000	1,000
Syrian, Reformed	...	...	21	20	...	...	1,000	1,000
Syrian, Romo-Syrian	...	...	116	107	...	...	1,000	1,000
Syrian, Unspecified	...	...	...	...	...	...	1,000	1,000
Sect not returned	6	9	4	5	69	48	883	1,000
Indefinite Beliefs	3	...	...	1	253	20	722	1,000

SUBSIDIARY TABLE VI.

Statistics of Europeans and Anglo-Indians.

TABLE XVIII.									
PROVINCE, STATE OR AGENCY.	NUMBER OF PERSONS BORN IN EUROPE, AMERICA, AND AUSTRALIA.*		EUROPEAN AND ALLIED RACES IN 1911.				Total European and Allied Races in 1901	Anglo-Indians.	
	1911	1901	British Subjects.	Others.	Armenians.	Total.		1911	1901
1	2	3	4	5	6	7	8	9	10
INDIA									
Provinces									
Ajmer-Merwara	122,851	94,932	167,259	11,323	1,696	180,278	154,894	86,227	73,873
Andamans and Nicobars	1,287	605	1,702	53	...	1,755	1,009	710	341
Assam	187	195	243	8	...	251	250	78	71
Baluchistan	1,574	1,409	2,172	73	5	2,250	2,089	475	275
Bengal	3,378	2,870	4,169	41	...	4,210	3,477	123	124
Bihar and Orissa	14,080	11,359	22,327	2,061	1,063	25,451	22,096	19,833	18,060
Bombay	2,967	2,574	5,046	578	92	6,316	5,464	3,405	2,909
Burma	24,380	19,179	28,963	3,680	64	32,727	31,879	9,175	6,889
Central Provinces and Berar	8,896	6,588	11,828	1,342	273	13,443	2,885	11,106	8,440
Coorg	5,333	3,818	7,033	300	...	7,333	3,165	3,488	2,539
Madras	99	115	174	33	...	207	228	138	235
N.-W. Frontier Province	8,238	7,285	12,741	2,130	34	14,905	14,022	26,023	26,209
Punjab	4,945	22,591	5,098	29	14	5,741	4,698	100	42
United Provinces	24,260	31,732	507	39	...	82,278	26,155	3,479	2,456
States and Agencies	23,213	16,320	32,811	498	112	33,411	28,437	8,094	5,330
Baroda State	12,916	12,366	18,175	1,325	9	19,509	14,783	14,324	13,151
Central India Agency	82	35	123	36	...	159	91	82	57
Cochin State	3,372	3,388	3,965	612	2	4,582	3,827	565	572
Hyderabad State	54	35	47	29	1	77	55	2,446	1,494
Kashmir State	3,983	5,848	5,230	152	2	5,384	4,347	3,004	3,202
Mysore State	187	114	226	25	...	251	197	17	23
Rajputana Agency	4,373	2,349	7,123	399	1	7,463	4,753	5,827	5,721
Sikkim State	580	293	1,127	50	2	1,179	969	529	503
Travancore State	14	4	11	3	...	14	10	4	...
	321	300	320	70	1	400	334	1,750	1,439

NOTE.—The figures for Provinces are inclusive of the ...

* Includes New Zealand ...

NOTE.—The figures for Provinces are inclusive of the States attached to them, except in the case of Madras, where they exclude Cochin and Travancore. In this Table the Feringis have not been taken into account. * Includes New Zealand and Tasmania.

CHAPTER V.

Age.

Part I.—General Observations.

203. The instruction to the enumerators for filling in the age column of the census schedule was:—

Col. 7 (age). Enter the number of years which each person has completed. For infants less than one year of age enter the word infant.

The rule was sufficiently precise, but the results obtained were extremely unsatisfactory. Even in western countries the entries of age are most unreliable, owing partly to ignorance, partly to carelessness, and partly to deliberate misstatement, which is very common amongst women, especially elderly spinsters. Errors due to ignorance are far more common in India than in Europe. The common people have so little idea of their real age and give such absurd replies when questioned regarding it that Magistrates seldom trouble to ask persons appearing before them what their age is, preferring to guess it for themselves. In the same way, at the census, the ages were usually guessed by the enumerators. If the latter had been educated persons, the result might not have been unsatisfactory; but ordinarily they were not so, and their guesses must often have been very wide of the mark. Of the total number of persons returned at the age of 10 and upwards, the ages of no less than 31 per cent. were shown as multiples of 10 and of 22 per cent. as uneven multiples of 5. This use of round numbers can be eliminated by various processes of smoothing; and if there were no general tendency to exaggerate or understate age at certain periods of life, the errors due to individual inaccuracy would disappear in the return for the whole of India, or even in that for the larger provinces. Intentional misstatement exists chiefly in connection with unmarried girls who have attained the age of puberty, who are almost invariably returned as younger than they really are. Men approaching the meridian of life, especially if they are widowers, also commonly understate their age. Unintentional error in a particular direction occurs chiefly in the case of very old people, who are prone to exaggerate their age, and of young wives with children, who also are nearly always entered as older than they are. The measures adopted to eliminate these errors are explained in Mr. Ackland's report on the age statistics which will be found on page 154. It may be added that the errors in the return may be assumed to be fairly constant from one census to another, so that even if the actual data are unreliable, they can be relied upon as showing the periodic changes which take place in the age distribution, where the errors are not too large.

The extent to which the age return is affected by misstatements, intentional and otherwise, was discussed at some length in the Census Report, and it is unnecessary to repeat what was there said. I may mention, however, one cause of misstatement given by the Punjab Superintendent which has not, I think, previously been noticed. There is, he says, an idea that telling one's correct age tends to reduce the span of life; and in the *Nili Shāstra* it is laid down that a man's age is one of the nine things which he must carefully conceal. A Hindu, therefore, who knows his age, will very often state it to be a few years more or less than it really is. It is suggested that the reason for this practice is that a man's age, coupled with the *Rāshi* (sign of the Zodiac), which is usually indicated by his true name, would give his enemies an opportunity of setting the forces of black magic against him. This explanation would also account for the common Hindu practice of concealing the true name and adopting a secondary one for actual use.

It has been suggested by an European critic that the errors in the age return might be reduced if the persons enumerated were asked to give the date of their birth instead of the number of years lived. This, however, is not the case. There is probably not one Indian in a thousand who could give the date of his birth. The very small minority who possess horoscopes could no doubt ascertain it by a reference to these documents, but it is not likely that they would take the trouble to do so in order to answer the enumerator's enquiry regarding their age.

Reference to the statistics.

204. The statistics of age are capable of a two-fold use. In the first place, they enable a calculation to be made of the birth and death rates and the probable duration of life at different ages. In the second place, by combination with other data, they throw light on certain social practices, such as early marriage and enforced widowhood, on the liability to certain infirmities at various periods of life and the like. For the second, or indirect, use of the age statistics reference should be made to the chapters on Sex, Marriage, Education and Infirmities. The present chapter is concerned only with the direct results deducible from the age distribution. The absolute figures will be found in Imperial Table VII, where the age distribution of the population is given for each year of life up to 5, and then for quinquennial periods up to 70, with a single head for persons aged 70 and over. This method of tabulation is the same as that previously followed, except that two new quinquennial periods have been added; on former occasions all persons aged 60 and over were grouped under a single head. In view of the very general use of round numbers already alluded to, it appeared unnecessary to incur the extra cost which would have been involved in tabulating by annual age-periods, but in all provinces such tabulation was carried out for a sufficient number of persons to show how the numbers in each quinquennial period are distributed over the individual years. The total number of persons in the whole of India whose age was thus tabulated by annual periods was about 10·3 millions. The following subsidiary tables in which certain aspects of the statistics are brought more prominently to notice by means of proportional figures will be found at the end of this Chapter:—

- I. Age distribution of 10,000 of each sex in India and the main provinces.
 - II. Age distribution of 10,000 of each sex in each main religion.
 - III. Proportion of children under 10 and of persons over 60 to those aged '15—40'; also of married females aged '15—40' per 100 females.
 - IV. Variation in population at certain age-periods.
 - V. Age distribution per thousand of each sex in certain castes.
- Four other tables have been added based on the vital statistics of the decade, viz.:—
- VI. Reported birth-rates per mille during the decade 1901-1910.
 - VII. Reported death-rates per mille during the decade 1901-1910.
 - VIII. Reported death-rates per mille in certain provinces by sex and age.
 - IX. Reported death-rates per mille from certain diseases.

Actuarial examination of the statistics.

205. As at previous censuses, the age statistics have been examined by an English Actuary. On this occasion the duty was entrusted to Mr. T. G. Ackland, and Honorary Fellow of the Faculty of Actuaries, who has prepared a report on the estimated age distribution at the present census and the rates of mortality deduced from a comparison of the returns with those for 1901. On previous occasions this expert examination of the statistics was not completed in time for incorporation in the general Census Report, and it was necessarily published separately. At this census special arrangements were made to send home the raw material at the earliest possible date; and its examination was taken in hand by Mr. Ackland so promptly that the corrected proof of his report was received two and a half years sooner than that of his predecessor in 1901. I have thus been able to include his Report in this volume, thereby not only adding greatly to the interest of this volume, but also securing to the actuarial examination of the statistics a publicity which they have hitherto failed to obtain. It is perhaps needless to add that in these circumstances my own comments on the age statistics will be compressed within very narrow limits.

Sundbärg's theory regarding age distribution.

206. The Swedish statistician Sundbärg, in an address before the International Statistical Institute in 1899, showed that in all western countries the number of persons aged '15—50' is uniformly about half the total population, and

that any variations which occur in the age constitution take place in the other two main groups—'0—15' and '15 and over.' Where the population is growing, the number in the former group is much greater than in the latter, but where it is stationary the numbers in the two groups approach equality. The mortality in these two groups, he says, is far greater than in the intermediate one, but it is about the same in both cases. Consequently variations in their relative size do not affect the total mortality, which is thus independent of the age distribution.

Province.	NUMBER OF PERSONS PER MILLE AGED		
	0—15.	15—50.	50 and over.
India	384	503	113
Bengal	408	497	97
Bihar and Orissa	402	488	110
Bombay	372	521	107
Burma	378	502	120
Central Provinces and Berar	390	499	111
Madras	381	493	126
Punjab	384	494	122
United Provinces	368	514	118

NOTE.—These proportions are calculated on the unadjusted ages.

The conclusion that the age group '15—50' contains about half the total population, holds good in India, but the local deviations are somewhat greater than in Europe, and the proportions are apt to be disturbed by famine, which, as noted elsewhere, affects chiefly the persons at the two extremes of life. Thus in Mysore which suffered severely from the famine of 1877, the proportion of persons aged '15—50' rose to 535 in 1881 and fell to 473 in 1901. The proportion tends to vary, not only locally, but also by religion; it is 510 per mille amongst Hindus against only 484 and 483 in the case of Muhammadans and Animists.

207. Sundbärg's theory that the general rate of mortality is independent of the age distribution is inapplicable to India, partly because, as just stated, the proportion of persons in the intermediate age group, where the mortality is lowest, is somewhat less constant than in Europe, but chiefly because, owing to the shorter lives of people in India, the rate of mortality amongst those aged 50 and over is considerably greater than that amongst those under 15. Moreover the mortality among persons under the age of 15 varies from time to time according to the proportion of very young children which that age group contains. The mortality amongst very young children in India is extraordinarily high; while between the ages of 5 and 15 it is very low.* The proportion of very young children to the total number aged '0—15' varies greatly from time to time. Thus in Bombay at the recent census 39 per cent. of the

Number of deaths per mille in the decade 1901-1910.

Province, ¹	0—15.	15—50.	50 and over.
Bombay	41	23	66
Burma	31	14	42
Madras	27	13	47
Punjab	57	26	73
United Provinces	57	21	61

persons in the age group '0—15' were under 5 years of age against only 31 per cent. in 1901.

208. But at the same time there can be no question as to the advantage of instituting a comparison between the number of persons in the prime of life, who are generally least liable to be affected by changing conditions of health and food supply,† and those at the two extremes. The proportion of children shows whether the population is progressive or not, while that of old persons is some guide to its longevity; and where the proportion of people in the prime of life is relatively high, a comparatively rapid growth of population in the immediate future may confidently be anticipated. Subsidiary Table III has been prepared in order to throw light on this aspect of the statistics,‡ but the comparison has been made between children under 10 and persons over 60 on the one hand (the variability being greatest at these ages), and those aged '15—40' on the other. I have taken '15—40,' instead of '15—50' as Sundbärg has done, partly because old age comes on quicker in India, and partly because in India this corresponds more closely to the reproductive period of life. This table shows that in tracts, such as the Central Provinces and Berar, Central India and Rajputana, where the famines of 1897 and 1900 were severe,

* According to the vital statistics of the decade 1901-1910, in British territory except the Central Provinces and Berar, the death-rate for males at the age 0—1 is 291 per mille; it is 52 per mille at 1—5, 17 at 5—10 and 12 at 10—15. It is 16 at 15—20 and rises steadily to 28 at 40—50; at 50—60 it is 42, and amongst persons over 60 it is 84. The female mortality follows the same general curve, but it is lower than that of males, except at the ages 10 to 30.

† This is not always the case. Plague attacks persons at these ages more than those at the extremes of life.

‡ A similar Table will be found at page 497 of the last Census Report for India.

the proportion of children under 10 years of age was much below the normal in 1901, but since then it has risen considerably, though in the two last mentioned areas it is still somewhat below the average for all India. In Burma, where there has been no famine, the proportion of children has remained practically unchanged since 1891. In the Bombay Presidency there has been a slight decline as compared with 1901, and a more marked one in the United Provinces and Madras. In the tracts which had suffered from famine shortly before the census of 1901, the proportion of old persons was then abnormally low; it has now again risen but it is still below that existing in 1891. In India as a whole the proportion of children under 10, though greater than in 1901, is still less than it was in 1891; while the proportion of persons over 60 has been exactly the same at each succeeding census.

Periodic variations
in the age distri-
bution.

209. It has already been stated that the age distribution varies from time to time. To some extent this is due to migration. Where whole families emigrate the age distribution is not affected, but the case is otherwise where adults only do so, as usually happens when the migration is of the temporary type. Such migrants are mainly males in the prime of life, and where the movement is large, its result is to disturb the proportion of persons between the ages of 20 and 45. The statistics of birthplace were not combined with those of age, but it is possible to gather some idea of the effect of this form of migration from the statistics for Burma, where the native inhabitants are mainly Buddhists and the Hindus and Muhammadans are nearly all immigrants. Amongst the Buddhists of that province only 35 per cent. of the males are from 20 to 45 years of age, but amongst Hindus and Muhammadans the corresponding proportions are 71 and 52 respectively. The difference is greatest at the age period '25—30' which contains only 76 males per mille in the case of Buddhists against 191 and 137 respectively amongst Hindus and Muhammadans. It is impossible in other provinces to throw light on the figures by a reference to the religious distribution, but there can be no doubt that the relatively high proportion of persons in the prime of life in Assam is due primarily to immigration, and the low proportion in Madras to emigration.

Variations in the age distribution are also due sometimes to epidemics, which have a tendency to attack persons at certain ages more than those at others. Thus in the Punjab in 1907, owing to a severe outbreak of plague, there was a great excess in the mortality of persons from 10 to 50 years of age and especially of those aged 15 to 40. But the most potent factor of all is famine. When this occurs the mortality rises in a greater or less degree according to the severity and duration of the calamity and the efficacy of the measures taken to combat it. All sections of the population, however, are not equally affected. The very old and the very young suffer most, while the mortality is comparatively small amongst those in the prime of life. The number of young children, moreover, is reduced not only by a high mortality, but also by a greatly diminished birth-rate. During the Madras famine of 1877 a Medical officer examined about 15,000 women of child-bearing age in the famine camps and relief works of the Nellore district and found that only 2·5 per cent., or one-ninth of the normal number, were pregnant.

A striking instance of the effect of famine on the infantile population is furnished by the figures for the Rajputana Agency. In 1891 the number of children under five years of age was 1,396 per 10,000 of the population. In 1901, after the famine of 1900, it fell to 914, and it has now risen to 1,445. The number of children under one year of age was three times as great in 1911 as it was in 1901. Very similar results are to be seen in the figures for the Central India Agency, Bombay and other tracts which suffered severely from the famine of 1900.

210. In paragraph 753 of the last Report it was shown that the decrease in 1901 of over 8 per cent. in the population of the Central Provinces due to the famines of 1897 and 1900 had occurred entirely at the two extremes of life. There was a loss of 20·6 per cent. amongst persons under ten and of 30 per cent. amongst those over sixty, whereas the number of persons aged 15 to 40 remained practically the same as at the previous census. It was therefore concluded that the process of recuperation would be rapid. This forecast has been substantiated. The population of the province as now constituted has

grown by 17·9 per cent. since 1901. The greatest gain is at the two extremes of life; there is an increase of 33·5 per cent. at the age period '0—10' and of 42·2 per cent. at '60 and over.' At the present time the general age distribution is very similar to that existing in 1881, but there are many fewer persons in the age group '10—20' which contains the juvenile population of the famine years. The persons in this group will soon enter the reproductive stage, and the secondary effects of the famines must then become apparent in a diminished birth-rate, and a consequent slackening in the rate of increase.

211. The Superintendent of Census Operations, Mysore, makes the following interesting observations showing how famine influences the age distribution for a series of decades:—

"A comparison of the figures for the last four censuses reveals unmistakable traces of the famine of 1876-77. Taking only the case of males, as their ages are likely to be more accurately returned than those of females, it will be noted that in 1881, close after the famine, the proportion of children aged 0-5 was considerably reduced, with a similar shrinkage in the age-groups comprising their survivors in the next three censuses, viz., 10-15 in 1891, 20-25 in 1901 and 30-35 in 1911. So also is the rebound after famine visible in the large proportion of children aged 0-5 in 1891 and a perceptible increase due to the inclusion of their survivors in the age-group 10-15 in 1901 and in 20-25 in 1911. The statistics relevant to the subject are exhibited in the marginal statement where the inflated and reduced figures are shown in italics and marked (a) and (b) respectively.

Year.	Number per 10,000 males aged.			
	0-5	10-15	20-25	30-35
1881	915(b)	1,396	848	902
1891	1,284(a)	921(b)	850	829
1901	1,282	1,326(a)	664(b)	702
1911	1,157	1,256	665(a)	719(b)

"It will also be seen from the statement that the disparity in the italicized figures as compared with those against the same age-groups in other censuses becomes less and less marked as we recede farther and farther from the famine period 1876-77. The inflated figures for 1881 under the age-groups 10-15, 20-25 and 30-35 must be due to the circumstance that the majority of victims in the famine of 1876-77 were either children or aged persons."

It follows from what has been said above that, in tracts where famine occurs periodically, there can be no such thing as a truly normal decade. The age constitution is constantly changing. A famine is followed by a period of unusually rapid increase, and this again is succeeded by a period of retarded growth, when the generation born shortly before the famine, and reduced in numbers by it, arrive at the child-bearing ages.

212. The age distribution by religion is exhibited in Subsidiary Table II. The Animists have by far the largest proportion of children under 10. Their girls are usually married after the age of puberty to youths not much older than themselves. The proportion who become widows when still in the prime of life is thus comparatively small, while those who do so almost invariably marry again. They are thus very prolific. The Muhammadans and Christians also have a considerably larger proportion of children than the Hindus, whose social customs are less favourable to rapid growth. Hindu girls are, as a rule, married before puberty, and the difference in age between them and their husbands is often very great. A very large proportion of them become widows while they are still capable of bearing children; and these are frequently not allowed to marry again. The proportion of persons over 60 is lowest amongst the Animists. Though this is due partly to their greater number of children, which necessarily affects the proportions at other ages, it is also in part the result of their shorter duration of life. Their standard of comfort is very low; they subsist largely on jungle products, which at the best are not very sustaining; they lead a hard life; and many of them inhabit tracts which are particularly unhealthy. Apart from this, it seems not unlikely that the Dravidian and Mongolian races are by nature less long-lived than the Aryan. The Muhammadans have a larger proportion of males over 60 than the Hindus, but the latter have more elderly females. It has sometimes been said that Anglo-Indians, or the mixed race resulting from the union of Indians and Europeans, have very small families, but this does not appear to be the case. The children under 12 years of age constitute about one-fourth of their total population; and though this is considerably less than the corresponding proportion amongst the lower Hindu castes, it is higher than that existing amongst those at the top of the social ladder, such as Brāhman, Khatri, Bābhan and Kāyastha. In this respect the results of the census are confirmed

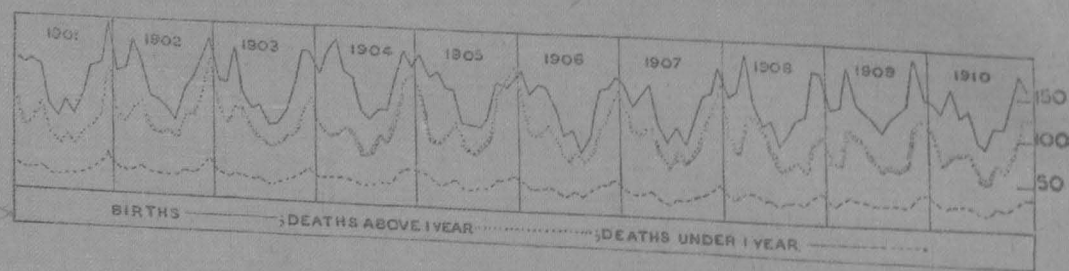
Variations by
religion and caste.

by a special enquiry made in Madras by Mr. Thurston, who found that of 74 Anglo-Indian marriages only three were infertile: the total number of children that had been born at the time of the enquiry was 271, of whom 141 were males and 130 females.

The hypothesis that the Aryan race has a lesser fecundity and greater longevity than the Dravidian or Mongolian is supported by the statistics of the various castes (Subsidiary Table V). Those at the top of the scale, which are supposed to have the largest infusion of Aryan blood, have fewer children and more old people than those at the bottom, which are almost purely Dravidian or Mongolian. It would, however, be dangerous to press this argument too far. As pointed out by Mr. Blunt, it is possible that custom and occupation may have as great an influence as race. Statistics collected in Europe show that a person's longevity is greatly influenced by his way of living. In England and Wales it has been found that between the ages of 20 and 65 the mortality amongst clergymen is only half, and that among lawyers only three-quarters, the normal rate; but it is about double that rate amongst general labourers and inn servants.*

Correspondence
between infantile
mortality and the
general death-rate.

213. In India, where about a quarter of the children born die within twelve months, years when births are exceptionally numerous are frequently years of high mortality. The seasonal fluctuations in the death-rate correspond very closely with those in the birth-rate; and it has often been thought that this correspondence is to be explained in the same way, *e.g.*, that deaths are most numerous at the seasons when the birth-rate is highest because so many infants die within the first month after birth. Mr. O'Malley has shown by him in which the deaths occurring amongst infants under one year of age are distinguished from those at all other ages:—



Mr. O'Malley explains the correspondence between the seasonal variations in the number of births and deaths by pointing out that the birth-rate depends on the conditions obtaining at the time of conception. Conceptions are most numerous in the healthiest months, whereas the periods at which births take place are unhealthy, so that a high birth-rate is synchronous with a high death-rate. Colonel Robertson, Sanitary Commissioner with the Government of India, who has kindly investigated the matter at my request, while agreeing with Mr. O'Malley, explains the coincidence in somewhat greater detail. He says:—

"In India the birth-rate and death-rate curves usually follow each other very closely. This fact has generally been interpreted as indicating a direct correlation between the two, and the high mortality during the first year of life has frequently been put forward as the most obvious explanation. This explanation, however, will not bear scrutiny and Mr. O'Malley's chart illustrates the error. The chart shows that while at the periods of minimum total mortality the ratio of the infantile to total mortality (I use infantile mortality here in the sense of mortality amongst children of one year of age) is approximately 1 to 4. This ratio tends to fall as the total mortality rises. Still when the latter rises at a maximum it is 1 to 5. The infantile mortality instead of tending to force up the total mortality in reality acts as a drag. Both have their maxima at the same time, but the total mortality rises relatively higher than the infantile mortality and has really no direct connection with it.

It is not sufficient, however, where curves correspond so closely, merely to deny their direct connection, but it becomes necessary to give an explanation of this correspondence and what is actually taking place. This, it appears to me, becomes quite clear so soon as we recognize that the similarity of contour of the curves of birth-rate and total mortality is not due to any direct connection between the two, but to the action on both of the same outside cause—malaria. The relation between the seasonal prevalence of this disease and the curve of total mortality requires no explanation, but its connection with the curve of birth-rate, though

equally direct, is not quite so obvious. The effects of malaria on the birth-rate curve are due to its action—

- (a) in lowering the rate of conception,
- (b) in tending to cause abortion in early pregnancy and
- (c) in tending to cause premature delivery in late pregnancy.

Assuming now that normally the number of women liable to conceive, and the number of conceptions, would be approximately the same in each month of the year, the tendency of malaria prevalent from August to October would be—

- (1) to abort the conceptions of June and July,
- (2) to prevent conception from August to October and
- (3) to cause premature delivery in the conceptions of the previous October, November and December.

The cumulative effect would be to cause a preponderance of women liable to conception at the end of the malarial season and, allowing some time for recovery, a large number of pregnancies starting from January to March and a high birth-rate from October to December. The exact months would of course vary according to the duration of malaria prevalence and its severity. As this sequence of events was repeated year after year, the effect would become more marked. The birth-rate and death-rate curves are thus not directly connected and, while each is due to malaria, the latter is due to the malaria of the same year but the former chiefly to that of the year before.

That the above explanation of the similarity of contour of the birth-rate and death-rate curves is the true one, is confirmed by the fact that, in places where there is a marked double malaria prevalence yearly, there is also, as we should expect, a corresponding double rise in the birth-rate curve. That the maxima of the birth-rate and death-rate should fall close together, is only a coincidence due to pregnancy lasting nine, and malaria as a rule being prevalent for three, months.

The explanation of the close connection between the infantile mortality curve and the birth-rate curve is that from one-half to one-third of the deaths amongst infants occurs during the first month of life and is chiefly due to non-seasonal causes. As births increase therefore, deaths amongst infants increase also, and in a fairly constant ratio. The chief exception to this is during the malarial season, when the ratio of deaths amongst infants to births rises somewhat. This, in my opinion, is due more to the indirect, than to the direct, effects of malaria on the children. The former are premature birth, death of mothers, and shortage of mothers' milk.



Part II.—Actuarial Report.

REPORT ON THE ESTIMATED AGE-DISTRIBUTION OF THE INDIAN POPULATION, AS RECORDED AT THE CENSUS OF 1911, AND THE RATES OF MORTALITY DEDUCED FROM A COMPARISON OF THE CENSUS RETURNS FOR 1901 AND 1911.

214. I have made an investigation, as instructed by the Secretary of State for India in Council, into the estimated age-distribution of the Indian population, as indicated by the Census figures for 1911, with discrimination of sex and geographical areas, and into the rates of mortality and expectations of life, as deduced by a comparison of the Census records of 1901 and 1911; and now beg to submit the results of my investigation.

215. It has long been recognised that the figures recorded in the several Provincial and General Censuses of the Indian population, taken in past years, are subject to characteristic peculiarities and anomalies, as compared with figures deduced from Censuses taken in European countries. So far as these peculiarities arise from defective data, that is, from certain male and female members of the population having been omitted from the Returns, there has undoubtedly been a progressive improvement, as the organisation and administration of the Census operations have become more complete, and as the Native population have grown more accustomed to the idea of the Census, with perhaps a better appreciation of its true objects. Further anomalies in the Indian figures arise from errors or mis-statements in age, either by under-estimating or over-estimating the true age, or from some preference for particular digits of age. There are also special tendencies affecting the accuracy of the returns of female lives, usually taking the form of an under-estimate of the numbers and ages in early life (about ages 9—14) and an over-estimate of those in the next following group of ages (about 15 to 19); whilst for both sexes there are further anomalies, after middle life, and a decided tendency to over-state the more advanced ages.

216. The age-distribution of the figures in the Censuses are also much disturbed by the effects of serious famines, plagues, malaria, etc., arising in the past, and the effect of these disasters upon the birth-rate, and upon the death-rate, especially in the early and later years of life, will remain in evidence, like permanent scars from old wounds, so long as the populations, in the age-groups originally affected, are in existence. For instance, a serious famine, reducing the birth-rate in a particular Province, between 50 and 60 years ago, should still be in evidence in the figures of the present Census, between the ages of 50 and 60 years, although the results are probably much obscured by defective data at these and later ages.

217. The data supplied for the purposes of my investigation included—

- (i) The Census Returns, showing, in each Province and for each sex, the numbers living in quinary groups, which were on this occasion extended to age 69, the numbers at later ages being included in a single group.
- (ii) Specimen schedules, showing, out of a selected number, usually about 100,000 or 200,000 of each sex in each Province, the numbers recorded as living at each individual age throughout life.
- (iii) Birth-place returns, showing (a) the number of emigrants born in each Province, or State, and enumerated elsewhere; (b) the number of immigrants enumerated in each Province or State, and born elsewhere.

- (iv) The vital statistics over the period 1901—1911, showing, in each year, separately stated for each sex, and for the areas under registration in each Province, the total number of births and deaths, also the deaths from certain specified causes, the number of deaths in quinary age-groups, the birth-rates and death-rates per 1,000 of population, the ratio of deaths in each age-group to a population of 1,000 in 1901, and the proportion of female births and deaths to 1,000 male births, and deaths, respectively.

- (v) I have also had access to Mr. G. F. Hardy's Reports on the Census figures of 1881, 1891 and 1901, and to the several volumes comprising the detailed Returns at those dates, and the Report of the Census Commissioner on each of these Censuses.

218. The Provinces dealt with in my investigation are Bengal (including Eastern Bengal and Assam), Bombay, Burma, Madras, Punjab (including the North-west Frontier Province), and the United Provinces of Agra and Oudh (formerly called the North-west Provinces). As regards the Province of Bengal, it was thought preferable, in view of the modification of the partition of that Province announced by the King at Delhi, and of the fact that the boundary between the new Provinces of Bengal and Bihar had not been precisely fixed when the figures were under investigation, to prepare a single Life Table for Bengal and Eastern Bengal and Assam, combined. Mr. Hardy's figures for Bengal in 1901 included Eastern Bengal, but did not include Assam, but as the population was not equal to 5 per cent. of that of the combined Provinces, the inclusion of Assam in the figures for 1911 could not affect the age-distribution at all appreciably.

219. The Census Returns for 1911 give the figures, for male and female lives respectively, in respect of each of the infantile ages 0 to 4, and subsequently in quinary groups, up to age 69 inclusive, the numbers in respect of 70 and over being included in a single group. At the 1901 Census, and at previous enumerations, the quinary groups extended to age 59 only, the data at age 60 and over being returned in a single group. As the Returns in quinary groups would give no information as to individual ages after age 4, separate schedules were supplied, as already specified, showing the numbers recorded at each individual age. These numbers, reduced to a total of 100,000 for each sex, are given, for each Province included in my investigation, in Table A. The total recorded population in each Province was appended to this Report. The total recorded population in each Province was then reduced to a similar total of 100,000 of each sex. If the specimen age-distributions were true samples of the actual population, the totals of the quinary groups should of course agree in both cases. As, however, these totals did not agree (although the data included in the specimen schedules were fairly representative) it was necessary to distribute the figures in each quinary group, age by age, in proportion to the figures shown in the specimen schedules. This re-distribution is given for all ages in Table B.

220. The anomalies referred to above are very evident in the figures recording the numbers at individual ages, and are illustrated by the accompanying Table I, which shows the number of male lives recorded in each Province, in respect of each of the digits of age 0 to 9, reduced for comparison to a total of 1,000 in each Province. The totals for the six Provinces are also given in the Table, and the mean numbers, with the order of preference in which the digits of age have been selected, in each Province, and over the whole.

It will be seen that in the six Provinces combined, 262 per mille, or more than a fourth of the whole, have been returned in respect of figure 0 (that is to say, at the ages 0, 10, 20, 30, etc.), whilst 183 per mille, or nearly a fifth of the whole, have been returned at figure 5 (in respect of ages 5, 15, 25, etc.). The selection of the two numbers 0 and 5 no doubt arises from ignorance or indifference as to the exact age, which is stated at the assumed nearest multiple of 10 or of 5, and in this respect European Census figures show similar characteristics, although to a much less marked extent.

221. As regards the remaining figures of age, there is a very curious preference for the even numbers, taken in the order 2, 8, 6, 4, so that 348 per mille, or more than a third of the whole number, are returned at these even

TABLE I.—MALES.

Showing in each of the six Provinces undermentioned the numbers, out of a total of 1,000 returned in respect of each digit of age; also the mean values for the six Provinces, and the order in which the several digits were recorded.

Provinces.	DIGIT OF AGE RECORDED IN CENSUS :—									
	0	1	2	3	4	5	6	7	8	9
	Numbers (per 1,000) recorded in respect of each Digit of Age :—									
Bengal	253	43	121	56	64	187	76	57	106	37
Bombay	(1)	(9)	(3)	(8)	(6)	(2)	(5)	(7)	(4)	(10)
Burma	292	43	110	56	60	215	66	47	78	33
Madras	(1)	(9)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(10)
Punjab	187	76	106	98	78	142	85	80	84	64
United Provinces.	(1)	(9)	(3)	(4)	(8)	(2)	(5)	(7)	(6)	(10)
TOTALS	264	48	113	64	73	171	89	48	90	40
Mean Values	(1)	(9)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(10)
Order of Record	279	44	110	55	67	198	78	49	84	36
	(1)	(9)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(10)
	294	47	113	45	65	186	83	43	91	33
	(1)	(7)	(3)	(8)	(6)	(2)	(5)	(9)	(4)	(10)
	1,563	301	673	374	407	1,099	477	324	533	243
	262	50	112	62	68	183	79	54	89	41
	(1)	(9)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(10)

figures, with a marked preference for the particular age 12. The remaining returns are in respect of the odd figures, and come out in the order 3, 7, 1, 9, comprising 207 per mille, or about a fifth of the whole number recorded. It is further remarkable that these characteristics are reproduced, in precisely the same order of preference, in the three Provinces of Bombay, Madras and Punjab, whilst in Bengal and the United Provinces the order of preference for the even numbers is identical, and there are only slight deviations as to the order in which the odd numbers are selected. In the specimen schedules for Burma, however, there is a marked deviation from the general characteristics shown in the other Provinces, and, although there is still a preference for the ages which are multiples of 10 and 5, it is not nearly so marked as in the other Provinces, and the remaining numbers, odd and even, are in something more like their natural order, though there is still perhaps some preference for the final figure 2. It is quite evident, and this is confirmed by later investigations, that the specimen schedules for Burma are more normal, and presumably therefore more accurate, as to age-distribution, than those in any of the other Provinces.

222. It is evident from the above that the age-distribution of the population, as taken at the Census date in the several Provinces, is entirely untrustworthy, as representing the true age of the lives, and that any rates of mortality, deduced on the basis of such figures, would also be quite unreliable. It is therefore necessary, in the first instance, to make some attempt to adjust the age-distribution, so as to be more in accordance with what may be presumed to be the real facts as to age. Even the figures recorded in quinary groups cannot be considered as properly appertaining to the groups as returned, since the individual ages at which there are the most serious disturbances, namely, those which are multiples of 10 and 5, occur at the beginning of the age-groups, and undoubtedly a certain proportion of the excessive numbers returned at these points should be transferred to the previous age-group. The method followed by Mr. G. F. Hardy, in his investigation of the figures of previous Censuses, dating from 1881, was to assume that the figures returned, in the specimen schedules, at the ages which are multiples of 5, should be reduced, by deducting from them any excess over and above the mean value of the numbers at the

preceding and following ages, and that one half of this excess should be transferred to the preceding age-group, and the remaining half retained in the group in which they were returned. A different correction was apparently applied by Mr. Hardy (referred to in paragraph 3 of his Report on the 1901 Census) by adding half the numbers recorded at age 5 (instead of half the excess referred to above) to the group 0-4, and deducting the same quantity from the groups 5-9. This correction is not given effect to by Mr. Hardy in the numbers for 1901 given in his Table C, but was no doubt allowed for in deducing his graduated results. By this means, he obtained corrected figures for the quinary groups, which are, perhaps, as near an approach to accuracy as can be obtained from the very defective data; and, as I do not see that any alternative method would secure greater presumed accuracy, I have followed Mr. Hardy's method in this respect, adopting also the correction referred to above, which undoubtedly brings the figures for age-groups 0-4 and 5-9 into a more natural progression. The process followed, set out symbolically, would be as follows, and it will be seen that this can also be expressed in a form applicable to columnar summation and differencing :—

TABLE II.

Adjustment for Errors of Age.

$$(u_{5n} + u_{5n+1} + u_{5n+2} + u_{5n+3} + u_{5n+4}) - \frac{1}{2}[u_{5n} - \frac{1}{2}(u_{5n-1} + u_{5n+1})] + \frac{1}{2}[u_{5n+5} - \frac{1}{2}(u_{5n+4} + u_{5n+6})]$$

$$= \sum_0^4 u_{5n+t} - \frac{1}{4}(\Delta^2 u_{5n+5} - \Delta^2 u_{5n})$$

Example by columnar method—Bengal (Males).

n	Age (5n+1).	Un- grada- uated numbers u _{5n+t} .	$\sum_0^4 u_{5n+t}$	Δu_{5n} Δu_{5n+1}	$\Delta^2 u_{5n}$	Δ^3	$-\frac{(6)}{4}$	Corrected numbers (3)+(7).
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
0	0	3,065	..	..	..	..	..	..
	1	1,586	..	..	..	..	..	..
	2	2,961	13,541	..	..	-1,499	374	13,915
	3	3,072	..	..	..	..	..	..
	4	2,857	..	+832	-1,499	..	..	..
1	5	3,689	..	-667	..	..	..	..
	6	3,022	..	..	..	..	..	..
	7	3,003	15,599	..	..	-3,525	882	16,481
	8	3,949	..	..	..	..	..	..
	9	1,936	..	+2,206	-5,024	..	..	..
2	10	4,142	..	-2,818	..	..	..	..
	11	1,324	..	..	..	..	..	..
	12	3,782	11,975	..	..	4,624	-1,156	10,819
	13	1,048	..	..	..	..	..	..
	14	1,679	..	+317	-400	..	..	..
3	15	1,996	..	-83	..	..	..	..
	16	1,913	..	..	..	..	..	..

Note.—The addition to age group 0-4, and deduction from age group 5-9, of $\frac{1}{4}(u_1 + u_6)$ or 1,470, in the final column gives effect to the further correction, referred to in the text, making the values 15,385 and 15,011, respectively, as given in Table C.

223. The figures corrected for age, having been thus obtained in quinary groups, relative to a total of 100,000 of each sex in each Province, and the mean values in each age-group at the 1901 and 1911 Censuses computed, and corrected for migration as explained later on, a curve was passed through each age-group (in respect of male lives) so as to produce the graduated mean numbers, relative to a total number of 100,000 in each Province, which should, as far as practicable, show an approximation to the total figures in each age-group, and at the same time produce that smooth progression of the figures, which would certainly be in evidence, where a large body of facts is dealt with, if the real numbers were recorded at each age. For the purposes of this graduation, a mathematical formula was adopted, which gave the graduated numbers at every age, and, at the same time, supplied a basis for those at the older ages, where the data were

Computation and
Graduation of
Mean Census
Figures.

manifestly most defective, and the recorded numbers gave little or no trustworthy indication of the facts. In all the Provinces, except the Punjab, this mathematical expression took the form of a frequency curve, and would be represented, where the origin is taken at age 0, by the general formula:—

$Y_x = ax^b (\omega - x)^c$ where Y_x represents the adjusted numbers at age x ; a , b , and c , are constants deduced from investigation of the unadjusted data; and ω is the age (varying in the six Provinces from 90 to 95) at which the numbers in the mortality table vanish. In Bengal and Burma, the formula employed was modified, after age 59, to bring the adjusted numbers into closer agreement with the unadjusted figures. In the case of the Punjab, the figures were not found to be amenable to treatment by this method, and this was one of the many indications that the figures in this Province are not complete or reliable. The figures were ultimately adjusted by the adoption of a formula, based upon grouped figures of the class under consideration, and a smooth curve was thus produced for the Punjab, involving the least possible departures from the adjusted figures in quinary groups. In Table C, the mean figures, deduced from the Census Returns for 1901, after correction for age, are given in quinary age-group, also the graduated figures for each group, as deduced by the mathematical formulæ above referred to; and in Table D, the graduated figures are given for each age, in respect of each Province; all numbers in Tables C and D corresponding to a total of 100,000 persons. In an appendix following Table R, full details are given of the mathematical formulæ employed in the graduation of the mean Census figures.

Table C.

Table D.

Investigation of Rate of Increase of the Population, and of Rate of Mortality at Each Age.

Defective Registration.

Comparison of Figures at successive Censuses.

224. The figures of a single Census, even if accurately returned at each age, will not give any trustworthy indication of the mortality arising among the lives, and the usual plan, in such cases, is to take the figures of two successive decennial Censuses, together with the number of births, and the number of deaths at each age, during the intervening ten years, as recorded in the birth and death registers respectively. Unfortunately, in the case of the Indian Provinces, the registers of births and deaths, although showing great and progressive improvement as compared with previous years, are still very incomplete, and probably contain many inaccuracies. It appears, from an investigation made in India of the variation of the population during the ten years 1901-1910, by comparison of the relative numbers of registered births and deaths with the movement in population as shown by the Censuses of 1901 and 1911, that the movement, as shown by these alternative methods, varies quite materially in each Province. For instance, in the Province of Bombay, whilst the comparison of births and deaths statistics shows a reduction in the total population of 217,469, the comparison of the Census Returns for the same Province shows an increase of 1,110,801 persons, the difference between these figures being 1,328,270; and the inflow of immigrants during the decennium in the Province of Bombay will only account for a small portion of this difference. Again, in the United Provinces of Agra and Oudh, the excess of births over deaths during the decennium amounts to 1,017,726, whilst the comparison of the population statistics shows a diminution in the population of 510,233, a difference of 1,527,959, and here, again, the outflow of emigrants during the decennium will not account for this large discrepancy. It is evident, therefore, that the registers of births and deaths are at present practically useless for deducing rates of mortality, and, even if these discrepancies in the numbers were eliminated, it is probable that the death registers would show serious inaccuracies of age, which could not be assumed to be similar, in direction and extent, to the inaccuracies arising in the Census Returns.

225. Under these circumstances, I have had to deduce, as best I could, the rates of increase in the population, and thence the rates of mortality and expectations of life, from the comparison of successive Census figures for each Province. In his Report on the 1901 Census, Mr. Hardy deduced the rates of mortality which might be assumed to hold, on the average, irrespective of exceptional periods of stress and strain, arising from famine, plague, etc.; and he carried this into effect by taking the Census figures of 1881, 1891, and 1901, and deducing a mean of the results in each quinary age-group, after giving

double weight to the figures of 1891. In investigating the 1891 Census figures, Mr. Hardy adopted a different method, and limited his investigation to a comparison between the Census figures of 1881 and 1891. In his report on the 1881 Census, where the figures of the previous Census were known to be extremely defective, he attempted, as in 1901, to deduce estimated average rates of mortality. I fully concur in the view that, in deducing tables of mortality for the Indian Provinces, and for all India, the effect of quite exceptional attacks of plague, malaria, and famine, should as far as practicable be eliminated.

226. The decennium preceding the 1911 Census has fortunately not been characterised by any general visitations such as those referred to, and although there were several local famines, and a severe famine in the United Provinces in 1907, and plague has been largely in evidence in Bengal and Bombay, and both plague and malaria in the Punjab and the United Provinces, the period will, I think, taking the country as a whole, compare favourably with previous decenniums, when these visitations have been more widely extended and prolonged in duration. The rate of increase in the population of India as a whole is considerably greater than in the previous decennium, though much less than in 1881-1891; and the improved rate of increase is shown in all the provinces included in my investigation, excepting Burma (where the figures between 1891 and 1901 are apparently disturbed by variations of boundary) and the Punjab and United Provinces, where plague and malaria have been severely felt, and where the male population is practically in a stationary condition. I have therefore felt justified in basing my figures on a comparison of the Census returns of 1901 and 1911, and in this respect have followed the method adopted by Mr. Hardy in 1891. This point must be borne in mind, when comparing my tabular results with those deduced by Mr. Hardy in 1881 and 1901, which were intended to represent the experience of average periods.

227. The process followed has been to compare the figures in quinary groups, as corrected for age, for male lives in each Province, in respect of the 1901 and 1911 Censuses, and to deduce from this comparison rates of increase or decrease during the decennium. The rates under observation were found to be widely different in different age-groups, and I therefore deemed it advisable (excepting in the Punjab, where a constant rate of increase was assumed at all ages) to deduce rates varying with age, which, whilst showing a curve of smooth progression, should bring out the relative figures in each age-group as nearly as practicable. The graduated values of $\log r_x$, where r_x is the rate of decennial increase in the population, were deduced by mathematical formulæ, which are given in the Appendix following Table R. The graduated rates of increase, thus deduced for male lives, are given for each age and for each Province in the accompanying Table III.

The graduated mean figures for the age-distribution of the population, deduced by a mathematical formula as explained in § 223 above, would represent approximately the age-distribution in the middle of the decennium (say in September 1906), and it was then possible, by multiplying and dividing the mean population figures by the square root of the graduated rate of decennial increase at each age, obtained as above, to deduce the graduated numbers assumed to be living at each age in March 1911 and in March 1901, and, from these two sets of numbers to deduce, at each age in 1901, the probability of living 10 years, up to 1911, and from these by interpolation the probability of living for one year at each age. An alternative process was followed, in the case of some of the Provinces, which appears to secure equally accurate results, with somewhat greater facility. This was by taking the graduated mean numbers as in the middle of the decennium, deduced as above, and multiplying and dividing them by $r_x^{1/10}$, where r_x is the graduated decennial rate of increase at age x , thus obtaining the estimated population at each age, six months after, and six months before, the mean date. By this process the probability of living one year at each age was directly deduced.

228. The above methods of deducing the mean population, and thence the probabilities of living at each age, apply, generally speaking, from about age 18 to the end of life, although it was necessary to introduce a supplementary

Decennium 1901-1911.

Rates of Increase or Decrease in decennium.

Ages of Infancy and Childhood.

TABLE III.

Showing the adjusted decennial rate of increase at each age, as deduced from the 1901 and 1911 Census figures for each Province.

Age x.	Bengal.	Bombay.	Burma.	Madras.	United Provinces.	Age x.	Bengal.	Bombay.	Burma.	Madras.	United Provinces.
0	1.111	1.122	1.107	1.082	.966	45	1.029	1.065	1.146	1.088	1.028
1	1.107	1.116	1.118	1.081	.970	6	1.028	1.067	1.147	1.087	1.031
2	1.104	1.112	1.126	1.081	.975	7	1.027	1.069	1.147	1.086	1.033
3	1.100	1.107	1.132	1.081	.980	8	1.026	1.071	1.148	1.086	1.035
4	1.097	1.103	1.136	1.080	.984	9	1.026	1.074	1.148	1.086	1.037
5	1.094	1.098	1.139	1.080	.989	50	1.027	1.076	1.148	1.086	1.038
6	1.092	1.096	1.142	1.080	.994	1	1.028	1.078	1.148	1.087	1.039
7	1.089	1.090	1.143	1.081	.999	2	1.029	1.080	1.148	1.088	1.040
8	1.087	1.087	1.144	1.081	1.004	3	1.030	1.083	1.148	1.089	1.040
9	1.085	1.083	1.145	1.082	1.009	4	1.031	1.085	1.148	1.090	1.040
10	1.083	1.080	1.145	1.083	1.013	55	1.033	1.087	1.148	1.092	1.039
11	1.082	1.077	1.145	1.084	1.016	6	1.034	1.090	1.148	1.094	1.038
12	1.081	1.074	1.144	1.084	1.018	7	1.035	1.092	1.148	1.097	1.037
13	1.080	1.070	1.144	1.086	1.019	8	1.036	1.094	1.148	1.100	1.035
14	1.079	1.068	1.142	1.087	1.019	9	1.036	1.096	1.148	1.104	1.033
15	1.070	1.065	1.140	1.088	1.018	60	1.036	1.098	1.148	1.108	1.031
16	1.079	1.062	1.138	1.090	1.016	1	1.036	1.100	1.148	1.113	1.028
17	1.080	1.060	1.135	1.092	1.012	2	1.035	1.101	1.148	1.118	1.025
18	1.080	1.057	1.131	1.094	1.009	3	1.033	1.103	1.148	1.123	1.022
19	1.080	1.055	1.127	1.096	1.005	4	1.032	1.104	1.148	1.127	1.020
20	1.081	1.053	1.123	1.098	1.002	65	1.030	1.106	1.148	1.132	1.017
1	1.081	1.051	1.118	1.100	.998	6	1.027	1.107	1.148	1.136	1.014
2	1.081	1.049	1.114	1.102	.995	7	1.025	1.108	1.148	1.140	1.011
3	1.080	1.048	1.109	1.104	.993	8	1.022	1.109	1.148	1.143	1.008
4	1.080	1.046	1.105	1.105	.991	9	1.020	1.110	1.148	1.146	1.005
25	1.078	1.046	1.101	1.106	.990	70	1.018	1.110	1.148	1.150	1.003
6	1.076	1.045	1.099	1.106	.989	1	1.015	1.110	1.148	1.153	1.000
7	1.074	1.044	1.097	1.106	.989	2	1.013	1.110	1.148	1.155	.998
8	1.073	1.044	1.096	1.106	.990	3	1.011	1.110	1.148	1.158	.996
9	1.072	1.044	1.097	1.106	.990	4	1.009	1.110	1.148	1.160	.994
30	1.071	1.044	1.099	1.105	.991	75	1.007	1.110	1.148	1.162	.992
1	1.070	1.044	1.102	1.105	.993	6	1.006	1.109	1.148	1.164	.991
2	1.069	1.045	1.105	1.104	.994	7	1.005	1.108	1.148	1.165	.989
3	1.066	1.046	1.109	1.103	.996	8	1.004	1.106	1.148	1.166	.988
4	1.064	1.047	1.114	1.102	.998	9	1.003	1.104	1.148	1.167	.987
35	1.061	1.048	1.118	1.100	1.000	80	1.002	1.103	1.148	1.168	.986
6	1.057	1.049	1.123	1.099	1.003	1	1.002	1.100	1.148	1.169	.985
7	1.054	1.050	1.128	1.098	1.005	2	1.001	1.098	1.148	1.169	.985
8	1.050	1.052	1.132	1.096	1.008	3	1.001	1.095	1.148	1.169	.984
9	1.046	1.053	1.135	1.095	1.011	4	1.001	1.092	1.148	1.169	.984
40	1.043	1.055	1.138	1.093	1.014	85	1.000	1.088	1.148	1.169	.983
1	1.039	1.057	1.141	1.092	1.017	6	1.000	1.085	1.148	1.169	.983
2	1.036	1.059	1.143	1.091	1.020	7	1.000	1.080	1.148	1.169	.983
3	1.033	1.061	1.144	1.090	1.022	8	1.000	1.076	1.148	1.169	.983
4	1.030	1.063	1.145	1.088	1.025	9	1.000	1.071	1.148	1.169	.982
						90	1.000	1.066	1.148	1.169	.982

NOTE.—For the Punjab, a constant decennial rate of increase of 1.0088 was employed at all ages.

adjustment after age 60 in Bengal and Burma. (See formulæ in Appendix.) For the ages of infancy and childhood, the Census data were evidently quite unreliable. The deficiencies and inaccuracies in the Returns, at these early ages, are well recognized, and in each of his investigations into previous Censuses, Mr. Hardy found it impossible to make any use of the recorded figures at these ages. The plan which he adopted was to employ the data in respect of the Proclaimed Clans, in the United Provinces of Agra and Oudh, where infanticide was formerly rife, and where a strict legal supervision has

been made into the births and the deaths at the earlier ages of life. From the figures available as regards these Proclaimed Clans from 1876 to 1891, Mr. Hardy deduced a Table of mortality from age 0 to 12, which is given, as finally corrected and adjusted, in his Report on the 1901 Census. A mathematical formula was employed in deducing the adjusted numbers living, which reproduced the original figures with remarkable fidelity. This formula, as printed in the 1901 Report, is disfigured by several misprints, so as to be almost unintelligible, and as it may be useful to set it out correctly, I have included it in the Appendix on page 190.

229. I have been supplied, in connection with my present investigation, with the Reports on the Proclaimed Clans figures for the four years from 1st April 1900 to 31st March 1904. I understand that no later Reports are available, and, so far as the four Reports supplied to me are concerned, they are practically useless for the purpose of investigating the juvenile mortality at each age; as the population under twelve years of age, and the deaths, are given in three groups, children under one year of age, from one to six years, and over six years. These data would not enable me to deduce the mortality for each year of life, and I believe that, for similar reasons, Mr. Hardy was unable to avail himself of any figures after those for the year 1890-1891. I have, therefore, had no alternative but to adopt, for the ages of infancy and childhood, the figures of the Proclaimed Clans from 1876-1891, as employed and adjusted by Mr. Hardy. This is, of course, far from satisfactory, but the only alternative course appeared to be to omit the figures for the younger ages altogether. For many reasons, it appears to be the preferable course to deduce estimated rates of mortality at each age from birth throughout the whole of life, but it will, of course, be understood that the figures in respect of ages 0 to 12 in Tables E to R, cannot be regarded as more than an approximate representation of the course of mortality during the decennium at those ages.

230. In the practical application of the Proclaimed Clans figures, as above, in deducing the estimated mortality table at the early ages in respect of each Province, these figures were adopted as a sort of base-line, and such modifications were made in the curve, indicating the rate of mortality from age 0 to 12, as appeared to be necessary to make a continuous curve throughout life, and a smooth junction with the graduated figures mathematically deduced at higher ages. In the United Provinces of Agra and Oudh, for ages 0 to 12, and in the Punjab for ages 0 to 6 (with an arbitrary adjustment from 7 to 12) the Proclaimed Clans figures were adopted, without alteration; and in the other Provinces, a constant addition to, or a constant or proportionate deduction from, the number of deaths was made, in order to fit in with the graduated curve at higher ages.

231. In Burma, where the rates of mortality throughout appear somewhat more to approximate to those observed in European countries, it was necessary to make the large deduction of 25 per cent. from the number of deaths, as given in the mortality table of the Proclaimed Clans, at each age between 0 and 12. In Madras, the deduction was made of 10½ per cent. from the force of mortality at these ages; whilst in Bengal, a constant addition of 75, and in Bombay a constant deduction of 100, was applied to the number of deaths shown in the mortality table of the Proclaimed Clans at each age from 0 to 12. After making these several adjustments, a smooth progression was obtained in the adjusted rate of mortality throughout life in each Province. The modifications in Mr. Hardy's original formulæ, brought about by these several adjustments, are given in the Appendix on page 190.

232. I now turn to the subject of the effect of migration on the Census figures in the several Provinces. Particulars were furnished to me as to the population enumerated in each Province, separately for each sex, and the numbers, out of those so enumerated, who were born in other specified Provinces of India, or outside India. From these statistics the following results were obtained, showing, for male lives, the mean population during the decennium of each Province brought under investigation, the number of immigrants included at the Censuses of 1901 and 1911 respectively (that is, those who were enumerated in a particular Province, but born in other parts),

and the number of emigrants included in 1901 and 1911 (that is, those who were born in a particular Province, but enumerated elsewhere); and also, the net number of immigrants and emigrants in 1901 and 1911.

TABLE IV.

Migration 1901-1911. Male lives.

Province.	Mean population 1901-1911.	Number of Immigrants 1901.	Number of Emigrants 1901.	Net Immigrants 1901.	Net Emigrants 1901.	Number of Immigrants 1911.	Number of Emigrants 1911.	Net Immigrants 1911.	Net Emigrants 1911.
Bengal (including Eastern Bengal and Assam)	44,339,406	699,868	225,520	474,348	—	757,285	264,296	492,989	—
Bombay	13,553,830	477,316	321,605	155,711	—	578,454	280,602	297,852	—
Burma	5,762,763	464,781	6,455	458,326	—	530,623	5,559	525,064	—
Madras	19,824,988	139,176	451,277	—	312,101	120,379	482,572	—	362,193
Punjab (including North-West Frontier Province)	14,510,769	413,586	243,408	170,178	—	374,708	234,696	140,012	—
United Provinces	24,845,106	310,908	881,926	—	571,018	293,393	818,107	—	524,714

Rates of Male Migration in the several Provinces. Burma.

United Provinces.

Madras.

Bengal.

Punjab.

Bombay.

Adjustment for emigration in Madras and United Provinces.

233. It will be seen that there was a very large male immigrant population included in the Census figures for Burma, equal in 1901 to about 8 per cent. and in 1911 to about 9 per cent. of the mean male population. It is understood that this arises from an influx of industrial workmen, mainly Hindus and Muhammadans, the indigenous population being almost exclusively engaged in agricultural pursuits. The effect of immigration was eliminated by including in my investigation, for purposes of age-distribution, the Buddhists only, who comprise about 86 per cent. of the whole population, and are understood to be little affected by migration. In the United Provinces, there was in 1911 a balance of emigrants equal to about 2 per cent. of the mean population, the proportion differing only slightly from that observed in 1901. In Madras, there was also a balance of emigrants, equal in 1911 to rather less than 2 per cent. of the mean population, a rate which was in approximate agreement with that recorded in 1901. Allowance was made for emigration in these two areas (Madras and the United Provinces), as explained later on. In Bengal (including Eastern Bengal and Assam), the excess of immigrants was slightly over 1 per cent. both in 1901 and 1911; and in the Punjab (including the North-West Frontier Province), the excess of immigrants was rather more than 1 per cent. In 1901, and rather less in 1911. In these two Provinces (Bengal and the Punjab) the effect of migration on the estimated age-distribution was evidently negligible, and no correction was therefore made in the Census figures. In Bombay there was an excess of male immigrants of rather more than 2 per cent. of the mean population in 1911, whilst in 1901 the rate was rather more than 1 per cent. No allowance was made by Mr. Hardy in the adjustment of the 1901 figures, for the net immigrant population in Bombay, and its effect would certainly not have appreciably affected the age-distribution, as then deduced. The average rate of net immigration in Bombay, over the decennium preceding the 1911 Census, would be about $1\frac{1}{2}$ per cent. of the mean male population; a correction has therefore been made for migration in the 1911 Census figures for Bombay.

234. As regards the Province of Madras, and the United Provinces, where an adjustment has been made in the population figures for emigration, the matter has been dealt with, very much on the lines adopted by Mr. Hardy, in his Report on previous Censuses, based on an investigation made by him of three areas, in which the immigrant population was exceptionally large, and on estimated figures deduced as to the age-distribution of the migrant population. The proportions which I have employed for the purpose of this age-distribution,

do not materially differ from those employed by Mr. Hardy, and are shown in the following Table:—

TABLE V.

Showing the estimated Age-distribution of the Male Migrant Population.

Age-group.	Percentage of Migrants.	Age-group.	Percentage of Migrants.
0-4	0	35-39	11
5-9	1	40-44	9
10-14	4	45-49	7
15-19	9	50-54	5
20-24	14	55-59	3
25-29	19	60-64	2
30-34	15	65-69	1
		70 and over.	0

The number of net male emigrants in the Province of Madras, and in the United Provinces, having been deduced to correspond with a total male population of 100,000, the reduced numbers were distributed in the above proportions over the population figures, which were then again reduced to a total of 100,000, and the effects of migration were thus allowed for in these two areas. The method followed, and the effect of the assumptions made as to migration, is shown in the following Table:—

TABLE VI.

Showing the effect of Migration on the age-distribution, in the Province of Madras and in the United Provinces. (Male Lives.)

Age groups.	MADRAS.				UNITED PROVINCES.				Age groups.
	Mean numbers 1901 and 1911 Censuses corrected for age (males).	Net emigrants per 100,000 of population.	Mean numbers corrected for emigration.	Corrected numbers reduced to 100,000.	Mean numbers 1901 and 1911 Censuses corrected for age (males).	Net emigrants per 100,000 of population.	Mean numbers corrected for emigration.	Corrected numbers reduced to 100,000.	
0-4	14,998	..	14,998	14,739	13,493	..	13,493	13,207	0-4
5-9	13,737	18	13,755	13,517	12,648	22	12,670	12,402	5-9
10-14	11,122	70	11,192	10,999	11,495	86	11,581	11,336	10-14
15-19	10,139	158	10,297	10,119	9,976	194	10,170	9,954	15-19
20-24	7,558	246	7,804	7,669	8,887	303	9,190	8,996	20-24
25-29	8,776	334	9,110	8,953	9,466	412	9,878	9,669	25-29
30-34	6,574	264	6,838	6,720	7,209	325	7,534	7,375	30-34
35-39	6,902	193	7,095	6,972	7,111	238	7,349	7,193	35-39
40-44	5,237	158	5,395	5,302	5,633	195	5,828	5,705	40-44
45-49	4,609	123	4,732	4,650	4,558	151	4,709	4,609	45-49
50-54	3,352	88	3,440	3,381	3,376	108	3,484	3,410	50-54
55-59	2,679	53	2,732	2,685	2,489	65	2,554	2,500	55-59
60-64	1,944	35	1,979	1,945	1,796	43	1,839	1,800	60-64
65-69	943	18	961	944	760	22	782	764	65-69
70 and over.	1,430	..	1,430	1,405	1,103	..	1,103	1,080	70 and over.
	100,000	1,758	101,758	100,000	100,000	2,164	102,164	100,000	

235. I have, so far, dealt only with the age-distribution and graduation and the methods followed in deducing the rates of increase and of mortality, for male lives. As regards female lives, it is evident, for reasons which are fully stated in the reports on previous Indian Censuses, that the data are extremely defective. The age-distribution appears to be quite untrustworthy, and is certainly affected seriously by inaccuracies in the age returns. It also appears to me to be probable that some of the anomalies in the figures, as returned, must arise from omissions of data in certain Provinces, although this cannot be certainly determined. It has therefore appeared to me that any elaborate and detailed investigation of the female data, as recorded, would not be

Female Lives. Defective and inaccurate Data.

worth the trouble taken in making it, and would not be likely to produce results which could be considered as even approximately accurate, or as indicating the true rates of mortality at the several ages throughout life. I have therefore adopted the plan, followed at previous Censuses, of taking the adjusted male numbers living as a base-line, and deducing therefrom estimated numbers for female lives, having regard to the proportion of female lives relatively to male lives assumed to be in existence at each age. For this purpose I have compared, in each Province, the male and female population in grouped ages, and thus deduced the number of female lives recorded in each group, corresponding to 10,000 males. Taking, then, the proportion of registered female births to a thousand male births registered in

TABLE VII.

Showing the adjusted number of females (k_x) to 10,000 males living at each age, in each of the Provinces specified, also the rise or fall in the adjusted numbers (Δ) from age to age throughout life.

Age x	BENGAL.		BOMBAY.		BURMA.		MADRAS.		UNITED PROVINCES.	
	k_x	Δ	k_x	Δ	k_x	Δ	k_x	Δ	k_x	Δ
0	10,233	+15	9,886	+15	9,772	+34	9,600	+224	9,874	+5
1	10,243	13	9,901	15	9,806	35	9,824	163	9,879	5
2	10,261	13	9,916	14	9,841	35	9,987	178	9,884	4
3	10,274	12	9,930	14	9,876	35	10,165	112	9,888	4
4	10,286	10	9,944	14	9,911	35	10,278	73	9,892	4
5	10,296	8	9,958	12	9,946	33	10,351	23	9,896	2
6	10,304	6	9,970	12	9,979	31	10,374	-26	9,898	1
7	10,310	3	9,982	11	10,010	28	10,348	24	9,899	1
8	10,313	2	9,993	10	10,038	26	10,324	23	9,900	-1
9	10,315	0	10,003	9	10,064	25	10,301	22	9,899	2
10	10,315	-3	10,012	8	10,089	22	10,279	-21	9,897	-2
11	10,312	-4	10,020	6	10,011	21	10,258	20	9,895	4
12	10,308	-6	10,026	4	10,132	18	10,238	19	9,891	3
13	10,302	-6	10,030	4	10,150	16	10,219	18	9,888	2
14	10,296	-7	10,034	2	10,166	13	10,201	17	9,886	3
15	10,289	-9	10,036	1	10,179	12	10,184	-16	9,883	-1
16	10,280	-9	10,037	0	10,191	10	10,168	14	9,882	-1
17	10,271	-10	10,037	-1	10,201	8	10,154	14	9,881	+1
18	10,261	-10	10,036	1	10,209	7	10,140	13	9,882	2
19	10,251	-10	10,035	2	10,216	6	10,127	12	9,884	4
20	10,241	-10	10,033	-3	10,222	4	10,115	-10	9,888	4
21	10,231	-9	10,030	3	10,226	2	10,105	10	9,892	6
22	10,222	-8	10,027	3	10,228	2	10,095	8	9,898	7
23	10,214	-7	10,024	5	10,230	-1	10,087	7	9,905	8
24	10,207	-6	10,019	4	10,229	2	10,080	6	9,913	9
25	10,201	-5	10,015	-5	10,227	-3	10,074	-5	9,922	11
26	10,196	-4	10,010	1	10,224	5	10,069	4	9,933	11
27	10,191	-3	10,009	6	10,219	7	10,065	3	9,944	12
28	10,188	-2	10,003	5	10,212	9	10,062	1	9,956	14
29	10,186	-1	9,998	6	10,203	11	10,061	-1	9,970	14
30	10,185	-1	9,992	-5	10,192	-11	10,060	+1	9,984	15
31	10,184	+1	9,987	5	10,181	13	10,061	1	9,999	16
32	10,185	+2	9,982	3	10,168	13	10,062	3	10,015	17
33	10,187	2	9,979	3	10,155	12	10,065	4	10,032	18
34	10,187	2	9,976	1	10,143	11	10,069	5	10,050	19
35	10,190	3	9,975	0	10,132	-12	10,074	7	10,069	19
36	10,193	5	9,975	+2	10,120	10	10,081	7	10,088	20
37	10,198	6	9,977	3	10,110	10	10,088	9	10,108	19
38	10,204	6	9,980	5	10,100	8	10,097	10	10,127	18
39	10,210	6	9,985	7	10,092	7	10,107	11	10,145	17
40	10,216	8	9,992	7	10,085	-5	10,118	13	10,162	17
41	10,224	9	9,999	9	10,080	4	10,131	13	10,179	16
42	10,233	10	10,008	10	10,076	2	10,144	15	10,195	14
43	10,243	10	10,018	11	10,074	1	10,159	17	10,209	14
44	10,253	12	10,029	-13	10,073	0	10,176	17	10,223	13

not Adopted.

Showing the adjusted number of females (k_x) to 10,000 males living at each age, in each of the Provinces specified, also the rise or fall in the adjusted numbers (Δ) from age to age throughout life—contd.

Age x	BENGAL.		BOMBAY.		BURMA.		MADRAS.		UNITED PROVINCES.	
	k_x	Δ	k_x	Δ	k_x	Δ	k_x	Δ	k_x	Δ
45	10,265	12	10,042	14	10,073	+1	10,193	19	10,236	13
46	10,277	14	10,056	15	10,074	3	10,212	20	10,249	13
47	10,291	15	10,071	16	10,077	4	10,232	21	10,262	13
48	10,306	16	10,087	17	10,081	5	10,253	23	10,275	13
49	10,322	18	10,104	18	10,086	7	10,276	24	10,288	13
50	10,340	+18	10,122	+18	10,093	+7	10,300	+26	10,301	+13
51	10,353	21	10,140	20	10,100	10	10,326	27	10,314	14
52	10,379	21	10,160	20	10,110	10	10,353	28	10,328	14
53	10,400	23	10,180	21	10,120	11	10,381	30	10,342	15
54	10,423	23	10,201	22	10,131	13	10,411	31	10,357	15
55	10,446	24	10,223	22	10,144	13	10,442	32	10,372	16
56	10,470	23	10,245	24	10,157	14	10,474	34	10,388	16
57	10,493	25	10,269	25	10,171	15	10,508	37	10,404	17
58	10,518	24	10,294	25	10,186	16	10,545	36	10,421	19
59	10,542	24	10,319	27	10,202	16	10,581	36	10,440	19
60	10,566	24	10,346	27	10,218	16	10,617	35	10,459	20
61	10,590	24	10,373	28	10,234	16	10,652	35	10,479	20
62	10,614	23	10,401	27	10,250	16	10,687	34	10,499	21
63	10,637	24	10,428	27	10,266	17	10,721	34	10,520	22
64	10,661	24	10,455	26	10,283	17	10,755	34	10,542	21
65	10,685	23	10,481	27	10,300	18	10,789	33	10,563	22
66	10,708	22	10,508	25	10,318	17	10,822	32	10,585	22
67	10,730	22	10,533	25	10,335	18	10,854	33	10,607	22
68	10,752	21	10,558	26	10,353	18	10,887	31	10,629	22
69	10,773	21	10,584	24	10,371	18	10,918	31	10,651	21
70	10,794	21	10,608	25	10,389	19	10,949	31	10,672	22
71	10,815	20	10,633	25	10,408	18	10,980	30	10,694	22
72	10,835	21	10,658	24	10,426	17	11,010	30	10,716	22
73	10,856	20	10,682	23	10,443	18	11,040	29	10,738	22
74	10,876	19	10,705	23	10,461	17	11,069	28	10,760	21
75	10,895	20	10,728	21	10,478	17	11,097	28	10,781	21
76	10,915	19	10,749	21	10,495	17	11,125	28	10,802	20
77	10,934	19	10,770	21	10,512	17	11,153	27	10,822	20
78	10,953	18	10,791	20	10,529	17	11,180	27	10,842	19
79	10,971	18	10,811	19	10,546	16	11,207	26	10,861	18
80	10,989	17	10,830	19	10,562	16	11,233	25	10,879	18
81	11,006	17	10,849	17	10,578	15	11,258	25	10,897	17
82	11,023	16	10,866	17	10,593	15	11,283	24	10,914	16
83	11,039	16	10,883	15	10,608	14	11,307	24	10,930	16
84	11,055	16	10,898	15	10,622	14	11,331	23	10,946	16
85	11,071	16	10,913	13	10,636	14	11,354	23	10,962	15
86	11,087	16	10,926	13	10,650	12	11,377	22	10,977	15
87	11,103	15	10,939	12	10,662	12	11,399	22	10,992	14
88	11,118	14	10,951	12	10,674	11	11,421	21	11,006	14
89	11,132	14	10,963	12	10,685	10	11,442	20	11,020	13
90	11,146	14	10,975	11	10,695	11	11,462	..	11,033	12
91	11,160	12	10,986	11	10,706	10	..	..	11,045	12
92	11,172	13	10,997	11	10,716	10	..	..	11,057	11
93	11,185	12	11,008	11	10,726	9	..	..	11,068	10
94	11,197	11	11,019	8	10,735	10	..	..	11,078	11
95	11,208	..	11,027	10	10,745	10	..	..	11,089	..
96	..	..	11,037	..	10,755	10	..	..	..	..
97	..	..	..	..	10,765	10	..	..	..	..
98	..	..	..	..	10,775	10	..	..	..	..
99	..	..	..	..	10,785	..	..	..	..	..

each Province, which varied in the decennium ending 1911 from 902 in the Punjab (including the North-West Frontier Province) to 958 in Madras, and

after making some allowance for unregistered births, and having regard to the ratios indicated in the successive age-groups in each Province, I was able to draw smooth curves representing, from birth to the end of life, the assumed ratio of female to male lives, and these graduated ratios, given in Table VII above for all Provinces (except the Punjab) being applied to the adjusted numbers living at each age for male lives, in each Province, figures were deduced for female lives, which are given for the several Provinces in the Tables appended to this Report, and in which the anomalies arising from defective and inaccurate female data may be presumed to be to some extent eliminated. It need hardly be added that the method followed can only be regarded as a rough approximation to the truth, and that the resulting mortality Tables for female lives for each Province cannot be considered as anything like so trustworthy as those given for male lives.

236. It will be observed from Table VII that the ratios of female to male lives, differ somewhat materially in the several Provinces tabulated. The difference between the ratios have been taken out at successive ages, and it will be noted that, where these differences are positive in sign, the female mortality is superior to the male mortality, whilst, where the difference are negative in sign, the female mortality is inferior to that of male lives. In the following Table, the groups of ages are shown, in each Province, in which the estimated female mortality is greater than, equal to, or less than, the male mortality:—

TABLE VIII.

Comparison of estimated Female and Male Mortality.

Provinces.	MORTALITY OF FEMALE LIVES.		
	Less than	Equal to	More than
	that of male lives in the following Age-groups:—		
Bengal	0—9, 33—end	Ages 10 and 32	11—31
Bombay	0—16, 37—end	Ages 17 and 36	18—35
Burma	0—23, 46—end	Age 45	24—44
Madras	0—6, 31—end	..	7—30
United Provinces	0—8, 18—end	..	9—17

Having regard to the method by which these ratios were deduced and graduated, too much weight must not be given to these indications in particular Provinces or age-groups, but the general trend over the whole, as indicating a superior mortality for female, as compared with male, lives in the early years, and after middle life, with an inferior mortality in the intermediate years, appears to be well marked, and unmistakable. The ratios deduced for the United Provinces are somewhat abnormal, as indicating an inferior female mortality from the early age of nine years, with a superior female mortality from age 18 throughout the remainder of life.

237. As regards the Punjab, I made experimental calculations, with a view to deducing the ratio of the female to the male lives, and thence a Table of mortality for female lives at all ages. I found, however, that there were such grave irregularities in the ratios between male and female lives, that it was practically impossible to deduce a female mortality table which could be regarded as even approximately representing the facts, the progression of the rate of mortality, in an experimental table, deduced for female lives, being unduly rapid up to about age 12, with an abnormal retardation at the following ages up to about age 25. These irregularities, no doubt, arise partly from material defects in the data supplied as to female lives, and are also no doubt affected by similar defects of less marked character in the figures for male lives, as well as by the heavy visitations to which lives of both sexes in the Punjab has been exposed in the decennium. I was ultimately driven, reluctantly, to the conclusion that no useful purpose could be served by publishing the mortality table for female lives in the Punjab, and have

thus had to follow, in this respect, the course adopted by Mr. Hardy in his report on the 1901 Census.

238. In Tables E to P (pages 177 to 187) the resulting mortality tables are given for each sex and for each province, other than the Punjab (Female lives) and in Tables Q and R the figures for all India, males and females, are deduced by weighting the numbers living at each age in each province with the total population of that province, male or female. Tables E to R include (1) the numbers living at age x , (2) the numbers dying between age x and $(x + 1)$, (3) the mortality per cent. at each age, deduced from the numbers living and dying as above, (4) the number living between ages x and $(x + 1)$, (5) the numbers living above age x , deduced by summation of the previous column from the oldest age, and (6) the complete expectation of life, or mean after-life-time at age x , deduced by dividing the numbers in column (5) by those in column (1), regard being had, at the oldest ages, to the fractional part of the figures omitted from column (1). As regards the figures given in column (4), namely the numbers living between ages x and $(x + 1)$, the numbers were obtained for ages 15 and over, with close accuracy, by taking the mean values of those in column (1), but for earlier ages, and especially in the infantile period, a material error would be introduced by adopting the mean values, and the figures given at ages 0 to 12 were deduced from the modifications of Mr. Hardy's mathematical expression, as given in the Appendix for each Province.

239. I desire strongly to endorse Mr. Hardy's recommendation, contained in paragraph 49 of his report on the 1901 Census, as to the desirability, in view of the defects which are still evident in the registration of births and deaths in India generally, that efforts should be concentrated upon limited representative areas in each of the main Provinces, with a view to securing more complete data, in respect of the birth and death rates, and the age-distribution of the deaths. I would refer in this connection to the note, advocating this course, prepared by Mr. E. A. Gait, the Census Commissioner for India, and dated 24th May 1911, and would express the hope that this important question may be considered, and that the course suggested may be approved by the Government.

240. If the suggestion cannot be adopted in its entirety, it is most desirable that a closer supervision should be made of registrations of births, and of the deaths at ages below 15, in representative areas in each Province. The only trustworthy figures relative to births, and deaths at these early ages, have been obtainable from the reports on the Proclaimed Clans statistics in the United Provinces, and the value of these in the deduction of complete life tables, can hardly be over-estimated. The record and investigation of these statistics apparently ceased in 1904, and, as explained earlier in the present report and in Mr. Hardy's 1901 report, the data furnished between 1891 and 1904 were so limited as to age as to be practically useless for the purposes desired. It is clear that results, based on statistics referring to the period 1876-1890, could not properly be employed in any future investigation of Census Returns; and it is therefore most desirable, and indeed essential, if complete life tables are to be deduced in future, that some effort should be made to secure trustworthy data as to the births in the several Provinces, and the deaths at the ages of infancy and childhood.

241. As regards the records of the population by age, it would, of course, be far preferable to have these published in respect of every year of life, instead of in 13 quinary groups from 5 to 69 inclusive. This course, if feasible, would obviate the necessity for the separate preparation of the specimen schedules, showing the age-distribution of a selected body of each sex in each province. As an alternative course, and if the Returns at individual ages are thought to be impracticable (as has been found up to the present in the United Kingdom, notwithstanding the repeated and urgent representations of statisticians and actuaries as to their desirability) it would be a great improvement if the quinary groups were so arranged that the multiples of five were in the centre, instead of at the beginning, of each group. This would very largely obviate the necessity of transfers from one age-group to another, in respect of the

Examination of the Relative Mortality of Female Lives, as compared with Male Lives.

Table of Mortality for each province (Male and Female Lives, Tables E to R).

Suggestions and Recommendations (1) Supervision of Registrations in Representative Areas.

Age of Infancy and Childhood.

(2) Records at Individual Ages, or in Different Quinary Groups.

excess numbers undoubtedly returned at the ages which are multiples of five. I am aware that the Censuses in the United Kingdom, and in other European countries, are returned in the same groups as the Indian Census; and that a different arrangement of the Indian figures might be deemed objectionable, from the point of view of comparative data, but, as the manifest defects of the present figures would render any comparisons quite useless, this objection does not appear to me to be a valid one.

(3) Records of Migrants according to age.

242. I would also suggest that the full particulars, returned in the volume of Census Tables, as to the migrant population, should be supplemented, at future Censuses, by information as to the age-groups in which the emigrants and immigrants are respectively included. This would largely add to the value of the figures given, and would obviate the necessity of deducing an assumed age-distribution for the migrant population by approximate calculations.

Comparative Expectations of Life.

243. In Tables IX and X, I give the adjusted expectations of life for male and female lives respectively in each province, and in all India, deduced from Tables E to R, and from the corresponding Tables for previous decenniums; and I have added the expectations of life deduced for English male and female lives in 1901 and 1911, the former being taken from English Life Table No. 6, and the latter from Life Tables computed, on the basis of Census figures of 1911, and the relative births and deaths, by the Chief Actuary to the National Health Insurance Joint Committee. These 1911 Life Tables are not published for ages younger than 15, and the expectations, in the appended Tables, at birth, and at age 10, have been based, up to age 15, on the mortality shown by the English Life Table No. 6. In comparing the values of the expectation of life now deduced with those estimated in 1891 and 1901, regard must be

TABLE IX (MALES).

Showing comparative expectation of life at decennial ages, as deduced from the results of the 1891, 1901, and 1911 censuses respectively in the several Provinces specified, and over the combined area, with corresponding values for England.

Age.	BENGAL PRESIDENCY.			BOMBAY PRESIDENCY.			MADRAS PRESIDENCY.			UNITED PROVINCES.		
	1891.	1901.	1911.	1891.	1901.	1911.	1891.	1901.	1911.	1891.	1901.	1911.
0	22.78	21.57	21.47	26.12	22.77	22.52	26.92	26.21	25.92	24.45	25.30	21.21
10	33.85	32.95	32.54	37.20	34.62	33.33	38.70	36.93	37.78	34.10	35.26	31.44
20	27.77	27.50	27.10	30.87	28.39	26.43	32.55	30.43	31.60	27.75	28.43	25.27
30	22.51	22.64	22.15	24.67	22.27	21.32	26.57	24.24	25.35	22.35	22.01	20.89
40	17.98	18.28	17.56	18.94	16.90	17.23	21.06	18.60	20.06	17.74	16.76	17.18
50	13.83	13.93	13.39	13.88	12.48	13.51	15.91	14.05	15.74	13.56	12.64	13.47
60	9.89	9.52	9.27	9.59	8.73	9.94	11.06	10.10	11.70	9.63	8.92	9.84
70	6.35	5.61	5.40	6.05	5.38	6.55	6.94	6.27	7.68	6.15	5.50	6.50
80	3.59	2.86	2.49	3.39	2.81	3.48	3.85	3.35	3.98	3.43	2.96	3.42
90	1.69	1.07	.95	1.65	1.07	1.41	1.82	1.56	1.60	1.60	1.23	1.11

Age.	PUNJAB.			BURMA.			ALL INDIA.			ENGLAND.	
	1891.	1901.	1911.	1891.	1901.	1911.	1891.	1901.	1911.	1901.	1911.
0	26.58	23.18	21.23	..	30.29	31.48	24.59	23.63	22.59	44.07	46.04*
10	38.07	35.45	31.38	..	39.93	39.88	35.46	34.73	33.36	49.65	52.35*
20	31.76	29.59	26.12	..	33.28	32.82	29.24	28.59	27.46	41.04	43.67
30	25.60	24.54	21.60	..	27.68	27.30	23.66	22.90	22.45	33.06	35.29
40	20.22	19.99	17.55	..	22.58	22.04	18.75	17.91	18.01	25.65	27.27
50	15.56	15.43	14.15	..	17.45	16.51	14.28	13.59	13.97	18.89	19.85
60	11.41	10.79	10.63	..	12.18	11.00	10.12	9.53	10.00	12.90	13.33
70	7.60	6.39	6.53	..	7.37	6.66	6.48	5.80	6.19	8.02	8.25
80	4.48	3.28	3.11	..	3.84	3.61	3.65	3.07	3.06	4.40	4.64
90	2.26	1.38	1.13	..	1.75	1.77	1.69	1.23	1.15	2.32	2.27

* Estimated values.

given to the fact that the decennium ending 1891 was free from famine or severe visitations, whilst the figures for 1901 were deduced so as largely to eliminate exceptional causes of mortality. The period 1901-1911, having been characterized by severe attacks of plague and famine in certain areas, may be considered, generally speaking, as representing an inferior vitality as compared with that shown by either of the previous tables referred to.

244. For male lives, the expectations of life in Bengal, Madras, and the Punjab are lower than those estimated in 1891 and 1901, at practically all ages, and in Burma are higher at birth, but lower at all older ages, than those of 1901. In Bombay, there is an inferior vitality in the last decennium as compared with previous periods at ages 0 to 30, and a superior vitality at ages 60 to the end of life, whilst at ages 40 and 50, the expectations of life lie between those of 1891 and 1901. In the United Provinces, the expectations at ages 0-30 in the last decennium are below those of the previous periods, whilst at ages 40 and 50, and 80 and 90 they lie between those of 1891 and 1901, and at 60 and 70 are higher than those of previous periods.

Male Lives.
Table IX.

TABLE X (FEMALES).

Showing comparative expectation of life at decennial ages, as deduced from the results of the 1891, 1901, and 1911 censuses respectively, in the several Provinces specified, and over the combined area, with corresponding values for England.

Age.	BENGAL PRESIDENCY.			BOMBAY PRESIDENCY.			MADRAS PRESIDENCY.			UNITED PROVINCES.		
	1891.	1901.	1911.	1891.	1901.	1911.	1891.	1901.	1911.	1891.	1901.	1911.
0	23.73	22.51	21.58	27.07	24.05	22.86	27.99	27.13	27.65	25.25	23.93	21.50
10	32.76	32.03	32.44	36.15	33.69	33.50	37.78	36.27	37.62	32.97	34.90	31.94
20	27.76	27.55	27.20	30.92	28.52	26.54	32.78	30.65	32.02	27.71	28.89	25.88
30	23.52	23.86	22.45	25.69	22.98	21.57	27.90	25.06	26.01	23.31	23.33	21.42
40	19.43	19.99	17.91	20.31	17.78	17.60	22.78	19.56	20.73	19.15	18.38	17.51
50	15.16	15.14	13.67	15.07	13.37	13.81	17.41	15.03	16.28	14.85	13.82	13.69
60	10.65	10.18	9.40	10.24	9.30	10.13	11.89	10.86	12.00	10.36	9.52	9.99
70	6.68	5.87	5.43	6.33	5.58	6.62	7.28	6.60	7.79	6.45	5.74	6.56
80	3.70	2.95	2.48	3.47	2.92	3.49	3.97	3.51	4.00	3.54	3.02	3.43
90	1.59	1.31	.95	1.59	1.20	1.42	1.85	1.77	1.50	1.65	1.50	1.06

Age.	BURMA.			ALL INDIA.			ENGLAND.	
	1891.	1901.	1911.	1891.	1901.	1911.	1901.	1911.
0	..	32.21	32.61	25.54	23.96	23.31	47.70	50.02*
10	..	38.92	40.22	34.40	33.86	33.74	51.98	55.02*
20	..	32.98	32.67	29.28	28.64	27.96	43.45	46.36
30	..	28.06	27.21	24.69	23.82	22.99	35.43	37.84
40	..	24.62	22.24	20.20	19.12	18.49	27.81	29.65
50	..	19.00	16.75	15.59	14.50	14.28	20.63	21.87
60	..	13.16	11.15	10.87	10.02	10.11	14.08	14.81
70	..	7.77	6.72	6.80	5.98	6.22	8.74	9.13
80	..	3.96	3.63	3.76	3.12	3.06	4.84	5.10
90	..	1.83	1.77	1.75	1.64	1.10	2.68	2.55

* Estimated values.

245. For female lives, the expectations in the last decennium in Bengal are below those of previous periods, at practically all ages, and in Burma are lower than those of 1901, at ages 20 and upwards, but higher at birth, and at age 10; whilst in the United Provinces there are lower expectations up to age 50, and those at higher age lie substantially between the values of 1891 and 1901. In Bombay, the expectations are lower than in previous periods, up to age 40, and at practically all higher ages lie between the values of 1891 and 1901. In Madras the expectations lie between those of 1891 and 1901, up to age 50, and are higher than either at practically all older ages.

Female Lives.
Table X.

All India and
England.
(Males and
Females.)
Tables IX and X.

246. The estimated expectations for male and also for female lives, for all India, lie below those of 1891 and 1901 at all ages, and are, as might be anticipated, materially below those deduced from English lives, both in 1901 and 1911, at all ages, the Indian expectation at birth being 22·59 years for males, and 23·31 for females, and the English in 1911, 46·04 years for males, and 50·02 for females, the differences diminishing at higher ages, but being quite marked throughout life. The expectations for female lives in all India are only slightly higher than for male lives, at all ages, the excess being 0·72 years at birth, diminishing to 0·11 at age 60; whilst in England, the superior expectation of female lives is 3·98 years at birth, and 1·43 years at age 60.

Mortality of
Subordinate
Government
Employés.

247. The separate investigation upon which I am engaged, under instructions from the India Office, as to the mortality experience of about 50,000 persons in subordinate Government employ in India, recorded during a period of 15 years, is only at the present time in the early stages of sorting, with a view to tabulating, and no results are therefore available for the purposes of comparison with those deduced in this Report and in previous Reports in respect of the population of India generally. It is probable, however, that no direct comparison between the results, if available, would be of very much service, as it is probable that the 50,000 lives referred to represent on the whole a select class of literate persons whose mortality experience would differ quite materially from that of the general Indian population. It is possible, however, that the cards supplied in respect of these 50,000 lives would give useful and trustworthy information as to age-distribution, which might form a useful basis for correcting the manifest errors of the Census Returns; but the age-distribution of these lives has not yet been taken out, and in any case it could throw no light upon the ages during the important period of infancy and childhood.

TABLE XI.

MALE LIVES.

Showing the number of registered deaths at all ages, and the estimated total number of deaths, also the registered death rate and the estimated birth and death rates in each Province.

Province.	Average population under Registration 1901 Census Males.	Average population under Registration 1911 Census Males.	Estimated numbers in last column aged 10 and over, being survivors of numbers in column (2).	Estimated net immigrants (+) or emigrants (—) during decennium.	Deaths in 10 years out of numbers in column (2) adjusted for migration (2) + (5) — (4).	Registered deaths aged 5 years and upwards 1901-11.	Registered deaths at all ages 1901-11.	Estimated deaths at all ages (6) × (8).	Death rate per 1,000 on mean population (9) ÷ (2) + (3).	Registered death rate per 1,000 1901-11 (8) ÷ (2).	Estimated birth rate per 1,000 1901-11.
1	2	3	4	5	6	7	8	9	10	11	12
Bengal	40,273	43,199	30,068	143	10,348	8,705	14,060	16,714	40·0	34·9	46·7
Bombay	9,533	10,215	7,404	149	2,298	2,144	3,304	3,541	35·8	34·6	41·0
Burma	4,408	5,054	3,645	166	929	671	1,118	1,548	32·7	25·4	43·9
Madras	18,851	20,383	14,692	—141	4,018	2,665	4,343	6,545	33·4	23·0	41·9
Punjab	12,085	12,158	8,865	11	3,181	2,884	4,752	6,241	43·3	39·5	44·3
United Provinces .	24,617	24,642	18,211	—104	6,302	5,831	9,580	11,325	46·0	38·9	46·5

NOTE.—In columns (2) to (9) inclusive, the figures have been divided throughout by 1,000.

Estimated Birth
and Death rates in
each Province.
Table XI.

248. In Table XI, I have deduced estimated values of the mean birth and death rates in the areas under registration in each Province during the decennium, adopting similar methods to those employed by Mr. Hardy in Table IV included in his Report of 1901, but specifying separately the allowance for migration in column (5), and thus obtaining, in column (6), corrected figures for the deaths in the decennium amongst those in existence in 1901. It will be seen that the defects in registration of deaths, indicated by a comparison of columns (8) and (9), or columns (10) and (11) are much reduced, as compared with the figures deduced by Mr. Hardy in 1901, in columns (7) to (10) of his Table IV. The death and birth rates deduced in columns (10) and (12) of my Table XI can only be regarded as approximate. From a comparison of the deaths at grouped ages with those brought out by the rates of mortality

given in Tables E to R, it would appear, either that the rates of infantile mortality are decidedly lower than has been estimated, or, as seems to me more probable, that the incompleteness of registration becomes more marked in proportion as the youngest ages are approached. It further appears that the ages at death are mis-stated, in precisely the same way as the ages in the Census Returns; thus, a number of deaths have obviously been transferred from age-group 1—5 to age-group 5—10, and the same tendency is noticeable, though to a smaller extent, as regards age-groups 5—10 and 10—15. The registered deaths at ages 5 and upwards in column (7) are therefore doubly over-stated, as compared with the total deaths in column (8) firstly as being more completely registered, and secondly, as including certain deaths of persons at younger ages; but on the other hand, a certain addition should be made to the figures in column (7) in order to make them comparable with those in column (8), as the latter include deaths at infantile ages at the beginning of the decennium, which, owing to the heavy rates of mortality at these ages, outweigh the deaths at ages over 5, omitted at the end of the period. I find that, making such assumptions as appear reasonable in these respects, the neglect of this adjustment practically neutralizes the effect of the over-statement above referred to, and the rates in column (10) and (12) may be regarded as fair approximations, though, they are, if anything, somewhat below the truth.

TABLE XII.

Relative rates of birth and mortality for the period 1881-1911.

Province.	BIRTH RATES.			MORTALITY RATES.					
				ALL AGES.			OVER 5 YEARS OF AGE.		
	1881-91.	1891-01.	1901-11.	1881-91.	1891-01.	1901-11.	1881-91.	1891-01.	1901-11.
Bengal	52·9	43·9	46·7	45·9	38·9	40·0	28·8	29·6	29·4
Bombay	50·3	43·9	41·0	36·4	45·9	35·8	21·2	33·2	27·1
Burma	..	..	42·9	..	..	32·7	..	..	23·1
Madras	51·3	44·8	41·9	38·0	38·1	33·4	20·5	27·2	24·0
Punjab	46·8	47·1	44·3	37·0	40·3	43·3	25·3	25·1	30·4
United Provinces .	45·1	44·7	46·5	38·6	43·4	46·0	24·7	27·7	29·4

249. In Table XII, the mean estimated birth and death rates, deduced as above, are compared with those deduced by Mr. Hardy over the two previous decenniums.* It will be seen that the birth rates are for Bombay, Madras, and the Punjab, below those of the previous periods, whilst in Bengal the rate for 1901—1911 lies between those for 1881—1891 and 1891—1901, and in the United Provinces exceeds the estimated rates for both previous periods. The mean death rates are given for all ages, and in respect of persons in existence at the date of the 1901 Census, the latter being approximately the rate in respect of deaths at ages 5 and over. The death rates at all ages for the period 1901—1911 are reduced as compared with previous periods in Bombay and Madras, in

Comparison of
Birth and Death
Rates with
previous periods.

* In a paper subsequently read before the Institute of Actuaries Mr. Ackland gave an alternative estimate of the birth and death rates in the decade 1901-11 as noted below:—

Province.	Estimated birth-rate per mille.	Estimated death-rate per mille.
Bengal	56·0	48·7
Bombay	50·8	45·6
Burma	42·5	31·4
Madras	47·2	38·7
Punjab	52·9	47·2
United Provinces .	47·7	47·1
Combined Provinces .	51·3	43·1

The death-rates are here estimated on the basis of the number of deaths which would occur at each year of life according to the mortality shown in the life tables E to R (pages 177-189). The birth-rates are based upon the movement of the whole population as shown by the Census returns of 1901 and 1911, after allowing for migration, and the estimated deaths calculated as above. Mr. Ackland thinks that on the whole these alternative estimates are probably nearer the truth than those given in his Table XII above (*Journal of the Institute of Actuaries*, July 1913, page 352).

Bengal lie between the death-rates for 1881—1891 and 1891—1901, and in the Punjab and the United Provinces show higher rates than in the previous period, arising no doubt from the severe visitations of famine and disease in those two areas.

250. It will be observed that, throughout my investigation, the methods followed have not departed, in any very material respects, from those adopted by Mr. Hardy, although the figures submitted to me have throughout been subject to an independent scrutiny and treatment. Having regard to Mr. Hardy's wide and exceptional experience in matters relating to Indian mortality, and to his unrivalled ability in all questions involving the adjustment and graduation of life tables, it is not perhaps surprising that I have not seen my way to improve upon these methods, or rather to vary them in directions which might or might not be in the nature of improvements. The nature of the investigation was also such that, having regard to the available data, and especially to the known defects in the Registration statistics, little or no choice was left as to the fundamental methods to be followed throughout the investigation. It seemed also most desirable that the methods adopted on the present occasion should not, except where absolutely necessary, depart materially from those adopted by Mr. Hardy, in order that the tabular results might conveniently be compared, and for this reason I have also drawn up the Tables E to R appended in a form identical with the corresponding tables included by Mr. Hardy in his Reports.

251. I have been in constant correspondence, during the course of this investigation, with the Hon'ble Mr. E. A. Gait, the Census Commissioner for India, who has supplied me with all necessary data, and has most courteously and fully dealt with all points as to which information or explanations were desired. Mr. Gait's intimate acquaintance with the questions involved, and with their treatment in similar investigations made in the past, has been of the greatest assistance to me during the whole of my investigation.

THOMAS G. ACKLAND.

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Fellow of the Institute of Actuaries.

Hon. Fellow of the Faculty of Actuaries.

The 31st October 1912.

TABLE A.

Number of Persons living at each age, out of a total Population of 100,000, according to specimen schedules prepared in each Province, and for each sex, for the purpose of this investigation.

TABLE B.

Population enumerated at each age out of a total population of 100,000 of each sex, in each Province, obtained by distributing the numbers actually enumerated in each quinary age group in proportion to the numbers in Table A.

Ages.	BENGAL		BOMBAY		BURMA (BUDDHISTS)		MADRAS		UNITED PROVINCES		PUNJAB	
	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
0	3,065	3,245	3,300	3,507	2,085	2,187	2,029	2,579	3,282	3,428	4,018	4,820
1	1,586	1,696	1,837	2,054	2,452	2,598	1,724	2,068	1,575	1,733	1,788	1,908
2	2,901	3,160	2,838	2,949	2,957	2,949	2,858	2,185	2,453	2,980	2,404	2,404
3	3,072	3,487	3,186	3,295	3,241	3,241	3,241	3,177	2,322	2,657	2,502	2,921
4	2,857	2,998	2,905	3,148	2,852	2,795	2,804	2,734	2,256	2,417	2,525	2,890
5	3,680	3,747	3,338	3,051	2,909	2,941	3,106	2,993	3,255	3,241	2,995	3,203
6	3,033	2,559	2,582	2,582	3,033	2,961	2,884	2,884	2,884	2,884	2,884	2,884
7	3,191	2,311	2,378	2,378	2,503	2,613	2,400	2,423	2,604	2,781	2,826	3,142
8	3,345	3,363	2,857	2,911	2,904	2,876	3,007	3,193	2,837	3,123	2,994	3,142
9	1,933	2,112	1,549	1,754	2,207	2,049	1,854	1,846	1,815	1,866	2,085	2,096
10	4,142	3,105	2,709	3,601	3,601	3,403	4,000	3,810	3,866	3,288	3,116	2,922
11	1,324	1,379	1,176	1,207	1,308	1,137	1,147	1,145	1,572	1,444	1,506	1,449
12	3,782	2,740	2,733	2,771	2,771	2,492	3,942	3,145	3,829	3,007	2,890	2,890
13	1,048	1,021	1,239	1,081	2,246	2,054	1,398	1,240	1,127	1,023	1,325	1,273
14	1,679	1,643	1,492	1,426	1,847	1,692	1,723	1,240	1,127	1,023	1,325	1,273
15	1,994	1,902	2,705	2,532	2,233	2,245	2,160	1,801	1,848	1,473	1,577	1,774
16	1,913	2,109	1,553	1,692	1,718	1,777	2,519	2,331	2,381	2,239	1,868	1,868
17	983	1,079	994	1,089	1,089	1,089	773	829	2,478	2,288	2,182	2,182
18	2,717	2,834	2,106	1,984	1,876	1,876	2,148	2,595	2,487	2,235	2,491	2,491
19	771	803	743	887	1,527	1,600	717	725	629	550	759	590
20	3,179	4,125	4,704	4,743	2,906	3,423	3,912	5,129	4,235	4,887	4,765	4,489
21	641	588	506	506	1,093	1,137	586	720	615	566	489	489
22	2,073	2,239	2,092	1,967	1,403	1,459	1,735	1,793	2,040	1,980	2,208	2,154
23	705	738	665	848	1,401	1,469	713	678	472	524	655	551
24	975	1,052	844	1,057	1,028	1,123	1,228	1,162	1,313	1,552	998	1,092
25	4,732	5,040	5,782	5,613	2,040	3,134	4,118	4,404	5,112	5,049	4,765	4,887
26	1,023	1,003	1,136	996	1,247	1,236	1,272	1,292	1,292	1,292	1,292	1,292
27	925	898	787	826	1,265	1,226	675	711	896	904	1,244	1,266
28	1,970	1,569	1,521	1,538	1,251	1,815	1,394	1,384	1,844	1,844	1,844	1,844
29	444	549	370	452	900	1,006	468	471	391	423	383	283
30	5,101	5,167	6,278	6,444	3,714	3,426	4,964	5,818	5,595	6,089	4,715	5,683
31	321	388	282	304	816	818	421	326	346	346	192	229
32	1,822	1,503	1,351	1,237	1,109	1,176	1,058	1,058	1,058	1,058	1,058	1,058
33	335	335	335	335	335	335	335	335	335	335	335	335
34	472	407	325	444	781	817	592	527	448	488	614	449
35	3,888	3,176	4,708	4,075	2,535	2,145	3,197	3,220	3,277	3,065	3,587	3,592
36	1,028	899	648	587	993	993	993	993	993	993	993	993
37	416	397	304	296	1,118	988	990	702	3,277	3,065	3,587	3,592
38	1,025	822	644	648	1,065	1,065	856	692	543	543	543	543
39	277	313	249	319	843	792	401	304	282	344	179	186
40	4,430	4,206	5,226	5,124	2,686	2,615	4,525	4,985	5,512	5,738	4,852	5,535
41	217	248	160	207	600	565	395	312	282	282	159	161
42	747	623	732	660	993	897	749	715	639	549	479	479
43	160	173	152	269	993	897	749	715	639	549	479	479
44	209	202	217	877	622	631	895	291	121	128	148	91
45	2,570	2,132	2,955	2,632	1,735	1,583	2,382	2,152	2,717	2,485	2,946	2,717
46	234	252	221	266	674	602	275	418	275	275	275	275
47	211	201	206	177	661	582	275	231	149	194	186	92
48	540	497	401	300	604	612	588	510	408	511	362	365
49	152	153	162	145	499	303	302	229	199	210	104	82
50	3,015	3,063	3,628	3,599	1,970	2,098	3,302	3,756	4,098	4,835	3,931	4,091
51	118	136	140	196	359	354	302	162	160	145	131	107
52	349	358	323	333	578	417	339	344	321	343	216	216
53	88	94	128	195	448	384	235	128	84	61	84	43
54	113	138	122	200	373	384	282	156	154	162	89	89
55	1,108	996	1,283	1,127	973	967	1,186	1,078	1,059	978	1,390	1,116
56	190	218	113	117	511	459	411	299	274	271	199	119
57	111	114	70	68	364	390	163	133	80	82	73	60
58	209	242	205	153	349	362	306	266	199	201	120	116
59	60	86	78	90	210	238	119	109	77	87	68	50
60	1,957	2,368	1,919	2,474	1,386	1,662	2,276	2,446	2,910	1,913	2,567	2,567
61	63	112	140	140	318	279	143	147	87	87	68	50
62	150	107	178	192	451	323	297	230	142	155	112	107
63	33	43	117	133	385	298	127	104	28	31	20	28
64	44	72	84	143	251	218	160	109	49	72	42	28
65	440	556	502	558	615	623	518	485	465	465	465	465
66	33	40	61	33	101	141	127	117	117	117	117	117
67	29	37	33	25	273	267	207	180	180	180	180	180
68	60	89	53	33	189	154	120	100	84	84	84	84
69	60	89	53	33	189	154	120	100	84	84	84	84
70	610	775	400	507	681	1,012	400	840	670	861	805	1,115
71	24	20	12	7	97	106	23	44	18	19	19	19
72	65	43	33	33	144	139	64	69	48	48	48	48
73	14	10	10	10	122	110	20	20	41	41	41	41
74	12	10	10	10	55	63	01	01	52	52	52	52
75	102	178	183	214	208	244	146	168	93	108	114	185
76	11	14	7	8	63	72	72	108	11	11	11	11
77	13	18	7	5	58	41	17	14	9	9	9	9
78	24	27	9	31	62	70	67	45	19	19	19	19
79	7	9	5	2	30	36	129	29	29	29	29	29
80	296	367	243	195	218	301	212	222	388	474	27	27
81	11	11	3	3	19	18	13	21	11	11	11	11
82	17	17	3	3	10	10	10	10	10	10	10	10
83	4	5	3	4	23	23	23	23	23	23	23	23
84	5	6	2	2	8	10	10	10	10	10	10	10
85-89	89	57	58	50	64	64	64	64	64	64	64	64
90-94	70	65	65	62	84	84	84	84	84	84	84	84
95-99	26	19	19	11	51	58	58	58	58	58	58	58
100 & over.	31	30	10	21	21	27	27	27	27	27	27	27

TABLE C.

Showing age-distribution of 100,000 persons of each sex for the censuses 1901-1911.

Province.	Ages.	MALES.				FEMALES.			
		1901	1911	Mean 1901-1911	Graduated numbers.	1901	1911	Mean 1901-1911	Graduated numbers.
Bengal.	0-4	15,103	15,385	15,244	17,357	14,436	14,459	15,448	17,321
	5-9	14,271	15,011	14,641	15,249	15,253	14,433	14,553	15,285
	10-14	11,592	10,819	11,205	11,701	9,537	9,006	9,271	11,780
	15-19	9,625	9,467	9,496	10,372	10,402	10,406	10,440	10,361
	20-24	8,084	8,202	8,143	9,104	9,187	9,431	9,309	9,055
	25-29	9,384	9,591	9,463	9,509	9,702	9,522	9,612	9,743
	30-34	7,900	7,301	7,150	6,789	6,688	6,712	6,700	6,723
	35-39	7,175	7,146	7,161	6,547	6,516	6,279	6,395	6,700
	40-44	5,074	4,851	4,962	4,782	4,783	4,441	4,612	4,761
	45-49	4,120	3,982	4,041	3,899	3,925	3,756	3,840	3,904
Bombay.	0-4	15,103	15,385	15,244	17,357	14,436	14,459	15,448	17,321
	5-9	14,271	15,011	14,641	15,249	15,253	14,433	14,553	15,285
	10-14	11,592	10,819	11,205	11,701	9,537	9,006	9,271	11,780
	15-19	9,625	9,467	9,496	10,372	10,402	10,406	10,440	10,361
	20-24	8,084	8,202	8,143	9,104	9,187	9,431	9,309	9,055
	25-29	9,384	9,591	9,463	9,509	9,702	9,522	9,612	9,743
	30-34	7,900	7,301	7,150	6,789	6,688	6,712	6,700	6,723
	35-39	7,175	7,146	7,161	6,547	6,516	6,279	6,395	6,700
	40-44	5,074	4,851	4,962	4,782	4,783	4,441	4,612	4,761
	45-49	4,120	3,982	4,041	3,899	3,925	3,756	3,840	3,904
Burma.	0-4	15,103	15,385	15,244	17,357	14,436	14,459	15,448	17,321
	5-9	14,271	15,011	14,641	15,249	15,253	14,433	14,553	15,285
	10-14	11,592	10,819	11,205	11,701	9,537	9,006	9,271	11,780
	15-19	9,625	9,467	9,496	10,372	10,402	10,406	10,440	10,361
	20-24	8,084	8,202	8,143	9,104	9,187	9,431	9,309	9,055
	25-29	9,384	9,591	9,463	9,509	9,702	9,522	9,612	9,743
	30-34	7,900	7,301	7,150	6,789	6,688	6,712	6,700	6,723
	35-39	7,175	7,146	7,161	6,547	6,516	6,279	6,395	6,700
	40-44	5,074	4,851	4,962	4,782	4,783	4,441	4,612	4,761
	45-49	4,120	3,982	4,041	3,899	3,925	3,756	3,840	3,904
Madras.	0-4	15,103	15,385	15,244	17,357	14,436	14,459	15,448	17,321
	5-9	14,271	15,011	14,641	15,249	15,253	14,433	14,553	15,285
	10-14	11,592	10,819	11,205	11,701	9,537	9,006	9,271	11,780
	15-19	9,625	9,467	9,496	10,372	10,402	10,406	10,440	10,361
	20-24	8,084	8,202	8,143	9,104	9,187	9,431	9,309	9,055
	25-29	9,384	9,591	9,463	9,509	9,702	9,522	9,612	9,743
	30-34	7,900	7,301	7,150	6,789	6,688	6,712	6,700	6,723
	35-39	7,175	7,146	7,161	6,547	6,516	6,279	6,395	6,700
	40-44	5,074	4,851	4,962	4,782	4,783	4,441	4,612	4,761
	45-49	4,120	3,982	4,041	3,899	3,925	3,756	3,840	3,904
United Provinces of Agra and Oudh.	0-4	15,103	15,385	15,244	17,357	14,436	14,459	15,448	17,321
	5-9	14,271	15,011	14,641	15,249	15,253	14,433	14,553	15,285
	10-14	11,592	10,819	11,205	11,701	9,537	9,006	9,271	11,780
	15-19	9,625	9,467	9,496	10,372	10,402	10,406	10,440	10,361
	20-24	8,084	8,202	8,143	9,104	9,187	9,431	9,309	9,055
	25-29	9,384	9,591	9,463	9,509	9,702	9,522	9,612	9,743
	30-34	7,900	7,301	7,150	6,789	6,688	6,712	6,700	6,723
	35-39	7,175	7,146	7,161	6,547	6,516	6,279	6,395	6,700
	40-44	5,074	4,851	4,962	4,782	4,783	4,441	4,612	4,761
	45-49	4,120	3,982	4,041	3,899	3,925	3,756	3,840	3,904
Punjab.	0-4	15,103	15,385	15,244	17,357	14,436	14,459	15,448	17,321
	5-9	14,271	15,011	14,641	15,249	15,253	14,433	14,553	15,285
	10-14	11,592	10,819	11,205	11,701	9,537	9,006	9,271	11,780
	15-19	9,625	9,467	9,496	10,372	10,402	10,406	10,440	10,361
	20-24	8,084	8,202	8,143	9,104	9,187	9,431	9,309	9,055
	25-29	9,384	9,591	9,463	9,509	9,702	9,522	9,612	9,743
	30-34	7,900	7,301	7,150	6,789	6,688	6,712	6,700	6,723
	35-39	7,175	7,146	7,161	6,547	6,516	6,279	6,395	6,700
	40-44	5,074	4,851	4,962	4,782	4,783	4,441	4,612	4,761
	45-49	4,120	3,982	4,041	3,899	3,925	3,756	3,840	3,904
TOTAL	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	

TABLE D.

Graduated numbers living between ages x and $(x + 1)$, out of a total population of 100,000 of each sex in the following provinces.

Age X.	BENGAL.		BOMBAY.		BURMA.		MADRAS.		UNITED PROVINCES.		PUNJAB.	
	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
0	4,281	4,262	4,034	3,980	3,568	3,456	3,651	3,442	3,588	3,535	3,689	3,689
1	3,676	3,665	3,470	3,409	3,009	2,918	3,108	2,985	3,114	3,074	3,203	3,203
2	3,343	3,337	3,133	3,065	2,696	2,630	2,808	2,696	2,831	2,775	2,947	2,947
3	3,112	3,110	2,903	2,827	2,387	2,320	2,496	2,387	2,520	2,464	2,636	2,636
4	2,945	2,947	2,738	2,662	2,216	2,150	2,326	2,216	2,350	2,294	2,466	2,466
5	2,819	2,824	2,606	2,530	2,090	2,024	2,196	2,090	2,224	2,168	2,340	2,340
6	2,720	2,726	2,506	2,430	2,000	1,934	2,106	2,000	2,134	2,078	2,250	2,250
7	2,638	2,645	2,424	2,348	1,914	1,848	2,020	1,914	2,048	1,992	2,164	2,164
8	2,567	2,576	2,352	2,276	1,824	1,758	1,934	1,824	1,958	1,902	2,074	2,074
9	2,505	2,514	2,290	2,214	1,734	1,668	1,840	1,734	1,868	1,812	1,984	1,984
10	2,449	2,456	2,234	2,158	1,644	1,578	1,750	1,644	1,778	1,722	1,894	1,894
11	2,394	2,402	2,178	2,102	1,554	1,488	1,660	1,554	1,688	1,632	1,804	1,804
12	2,340	2,348	2,124	2,048	1,464	1,398	1,570	1,464	1,598	1,542	1,714	1,714
13	2,286	2,294	2,070	1,994	1,374	1,308	1,480	1,374	1,508	1,452	1,624	1,624
14	2,232	2,240	2,016	1,940	1,284	1,218	1,390	1,284	1,418	1,362	1,534	1,534
15	2,179	2,187	1,962	1,886	1,194	1,128	1,300	1,194	1,328	1,272	1,444	1,444
16	2,126	2,134	1,908	1,832	1,104	1,038	1,210	1,104	1,242	1,186	1,362	1,362
17	2,072	2,080	1,854	1,778	1,014	948	1,120	1,014	1,152	1,096	1,272	1,272
18	2,018	2,026	1,800	1,724	924	858	1,030	924	1,062	1,006	1,182	1,182
19	1,965	1,973	1,746	1,670	834	768	940	834	978	922	1,104	1,104
20	1,911	1,919	1,692	1,616	744	678	850	744	888	832	1,014	1,014
21	1,857	1,865	1,638	1,562	654	588	760	654	798	742	924	924
22	1,803	1,811	1,584	1,508	564	498	670	564	708	652	834	834
23	1,749	1,757	1,530	1,454	474	408	580	474	618	562	744	744
24	1,695	1,703	1,476	1,400	384	318	490	384	528	472	654	654
25	1,641	1,649	1,422	1,346	294	228	400	294	438	382	564	564
26	1,587	1,595	1,368	1,292	204	138	310	204	348	292	474	474
27	1,533	1,541	1,314	1,238	114	48	220	114	258	202	384	384
28	1,479	1,487	1,260	1,184	24	18	130	24	162	106	294	294
29	1,425	1,433	1,206	1,130			40		72	16	204	204
30	1,371	1,379	1,152	1,076							114	114
31	1,317	1,325	1,098	1,022								
32	1,263	1,271	1,044	968								
33	1,209	1,217	990	914								
34	1,155	1,163	936	860								
35	1,101	1,109	882	806								
36	1,047	1,055	828	752								
37	993	1,001	774	698								
38	939	947	720	644								
39	885	893	666	590								
40	831	839	612	536								
41	777	785	558	482								
42	723	731	504	428								
43	669	677	450	374								
44	615	623	396	320								
45	561	569	342	266								
46	507	515	288	212								
47	453	461	234	158								
48	399	407	180	104								
49	345	353	126	50								
50	291	299	72	2								
51	237	245	18									
52	183	191	4									
53	129	137										
54	75	83										
55	21	29										
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TABLE E.
LIFE TABLE, BENGAL PRESIDENCY.

Males.

Males.						
Age.	Living at age x .	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x .	Mean after life-time at age x .
1	2	3	4	5	6	7
0	100,000	20,802	20.80	79,198	2,146,003	21.47
1	79,133	18,802	23.76	60,331	2,070,209	20.52
2	60,468	16,802	27.78	43,666	2,003,659	20.57
3	50,088	14,020	33.98	36,068	1,942,521	20.88
4	56,068	11,158	38.5	54,932	1,885,081	33.62
5	53,910	1,602	2.97	55,072	1,830,099	33.95
6						33.97
7	52,808	1,242	2.37	51,064	1,777,027	33.79
8	51,066	1,008	1.98	50,546	1,725,368	33.46
9	50,058	855	1.71	49,620	1,674,817	33.08
10	49,202	758	1.53	48,816	1,625,197	32.64
11	48,444	693	1.42	48,094	1,576,381	
12						33.01
13	47,751	648	1.36	47,424	1,528,287	31.44
14	47,103	646	1.37	46,788	1,480,863	30.87
15	46,457	649	1.40	46,132	1,434,075	30.30
16	45,808	663	1.45	45,476	1,387,943	29.74
17	45,145	682	1.51	44,804		
18						29.19
19	44,463	705	1.58	44,110	1,297,663	28.65
20	43,758	727	1.66	43,394	1,253,553	28.12
21	43,031	745	1.73	42,658	1,210,159	27.61
22	42,286	753	1.78	41,910	1,167,501	27.10
23	41,538	758	1.82	41,154	1,125,591	
24						26.60
25	40,775	763	1.87	40,394	1,084,437	26.09
26	40,012	766	1.91	39,629	1,044,043	25.59
27	39,246	768	1.96	38,862	1,004,414	25.09
28	38,478	772	2.01	38,093	965,562	24.60
29	37,706	775	2.06	37,318		
30					890,142	24.10
31			2.11	36,542	853,660	23.61
32	36,931	778	2.16	35,762	817,838	23.12
33	36,153	782	2.22	34,979	782,850	22.63
34	35,371	784	2.28	34,193	748,666	22.15
35	34,587	788	2.34	33,408		
36	33,799	792			715,263	21.67
37			2.41	32,608	682,635	21.19
38	33,007	797	2.49	31,810	650,845	20.72
39	32,210	801	2.57	31,066	619,830	20.25
40	31,409	806	2.65	30,197	589,642	19.79
41	30,603	811	2.74	29,384		
42	29,792	815			560,258	19.34
43			2.83	28,567	531,691	18.88
44			2.93	27,745	503,946	18.44
45	28,977	820	3.03	26,918	477,028	18.00
46	28,157	824	3.13	26,089	450,939	17.56
47	27,333	829	3.24	25,258		
48	26,504	830	3.34	24,428	425,681	17.13
49	25,674	831	3.45	23,599	401,255	16.71
50			3.56	22,772	377,654	16.29
51	24,843	830	3.67	21,950	354,882	15.87
52	24,013	828	3.77	21,135	332,963	15.46
53	23,185	825			311,797	15.04
54	22,360	819	3.87	20,328	291,489	14.63
55	21,541	812	3.98	19,529	271,940	14.21
56			4.08	18,739	253,201	13.80
57	20,729	803	4.10	17,958	235,248	13.39
58	19,926	794	4.23	17,186		
59	19,132	785	4.38	16,421	218,057	12.98
60	18,346	776	4.52	15,666	201,686	12.57
61	17,570	769	4.67	14,924	185,970	12.16
62			4.81	14,190	171,046	11.75
63	16,801	760	4.96	13,479	156,850	11.34
64	16,041	749	5.14	12,774	149,371	10.92
65	15,292	735	5.33	12,081	139,597	10.51
66	14,557	723	5.53	11,399	118,516	10.10
67	13,834	710	5.76	10,728	107,117	9.68
68	13,124	699	6.00	10,069	96,359	9.27
69	12,425	688	6.62	9,420	86,320	8.86
70	11,737	676	6.97	8,780	76,900	8.45
71	11,061	665	7.37	8,151	68,120	8.05
72	10,396	654	7.81	7,533	59,969	7.65
73			8.31	6,927	52,436	7.28
74	9,742	645	8.86	6,333	45,509	6.87
75	9,097	634	9.43	5,753	39,176	6.49
76	8,463	624	10.17	5,189	33,423	6.11
77	7,839	612	10.94	4,642	28,234	5.75
78	7,227	600	11.60	4,115	23,592	5.40
79	6,627	588	12.76	3,611	19,477	5.05
80	6,039	572	13.84	3,132	15,866	4.71
81	5,467	556	15.06	2,682	12,784	4.39
82	4,911	538	16.37	2,262	10,052	4.08
83	4,373	516	17.86	1,876	7,790	3.78
84	3,857	492	19.53	1,527	5,914	3.49
85	3,365	466	21.30	1,216	4,387	3.22
86	2,899	435	23.46	945	3,171	2.96
87	2,464	404	25.77	714	2,225	2.71
88	2,060	368	28.32	523	1,512	2.49
89	1,692	330	31.12	368	990	2.27
90	1,362	291	34.18	249	622	2.07
91	1,071	252	37.49	161	373	1.88
92	819	211	41.04	98	212	1.71
93	608	172	44.82	56	114	1.56
94						
95	433	136		30	63	1.41
96	309	102		16	28	1.23
97	193	74		7	12	1.17
98	124	51		3	6	1.06
99	73	33		2	2	.99
100	40	19				
101	21	11				
102	10	6				
103	4	2				
104	2	1				
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TABLE F.
LIFE TABLE, BENGAL PRESIDENCY.
Females.

Age.	Living at age x.	Dying between ages x and x + 1.	Mortality per cent.	Living between ages x and x + 1.	Living above age x.	Mean after life-time at age x.
1	2	3	4	5	6	7
0	100,000	20,759	20.76	79,241	2,157,549	21.59
1	79,241	6,594	8.32	72,647	2,080,803	20.82
2	72,647	4,319	5.93	68,328	2,014,111	21.05
3	68,328	2,971	4.35	65,357	1,952,763	21.28
4	65,357	2,116	3.24	63,241	1,895,007	21.51
5	63,241	1,571	2.49	61,670	1,839,764	21.74
6	61,670	1,221	1.98	60,449	1,786,344	21.97
7	60,449	998	1.65	59,451	1,734,306	22.20
8	59,451	853	1.43	58,598	1,683,371	22.43
9	58,598	762	1.30	57,836	1,633,355	22.66
10	57,836	706	1.22	57,130	1,584,144	22.89
11	57,130	674	1.18	56,456	1,535,664	23.12
12	56,456	676	1.20	55,780	1,487,873	23.35
13	55,780	682	1.22	55,098	1,440,755	23.58
14	55,098	700	1.25	54,398	1,394,316	23.81
15	54,398	721	1.32	53,677	1,348,568	24.04
16	53,677	748	1.39	52,929	1,303,530	24.27
17	52,929	772	1.46	52,157	1,259,227	24.50
18	52,157	789	1.51	51,368	1,215,684	24.73
19	51,368	796	1.55	50,572	1,172,922	24.96
20	50,572	798	1.58	49,774	1,130,952	25.19
21	49,774	798	1.60	48,976	1,089,779	25.42
22	48,976	795	1.62	48,181	1,049,404	25.65
23	48,181	795	1.65	47,386	1,009,226	25.88
24	47,386	793	1.67	46,593	971,044	26.11
25	46,593	793	1.70	45,799	933,056	26.34
26	45,799	793	1.73	45,006	895,860	26.57
27	45,006	792	1.76	44,214	859,458	26.80
28	44,214	792	1.79	43,422	823,848	27.03
29	43,422	793	1.83	42,629	789,030	27.26
30	42,629	793	1.86	41,836	754,982	27.49
31	41,836	794	1.90	41,042	721,722	27.72
32	41,042	794	1.93	40,248	689,333	27.95
33	40,248	797	1.96	39,451	657,691	28.18
34	39,451	799	2.01	38,652	626,849	28.41
35	38,652	801	2.07	37,853	596,805	28.64
36	37,853	804	2.13	37,054	567,561	28.87
37	37,054	806	2.18	36,255	539,179	29.10
38	36,255	809	2.23	35,456	511,482	29.33
39	35,456	811	2.29	34,657	484,652	29.56
40	34,657	810	2.34	33,858	458,632	29.79
41	33,858	808	2.39	33,059	433,423	30.02
42	33,059	806	2.44	32,260	409,023	30.25
43	32,260	802	2.49	31,461	385,430	30.48
44	31,461	798	2.53	30,662	362,641	30.71
45	30,662	789	2.58	29,863	340,651	30.94
46	29,863	779	2.64	29,064	319,453	31.17
47	29,064	770	2.69	28,265	299,039	31.40
48	28,265	761	2.73	27,466	279,460	31.63
49	27,466	754	2.78	26,667	260,526	31.86
50	26,667	745	2.83	25,868	242,410	32.09
51	25,868	737	2.89	25,069	225,044	32.32
52	25,069	729	2.94	24,270	208,418	32.55
53	24,270	715	2.99	23,471	192,524	32.78
54	23,471	704	3.04	22,672	177,350	33.01
55	22,672	695	3.09	21,873	162,886	33.24
56	21,873	685	3.15	21,074	149,122	33.47
57	21,074	677	3.21	20,275	136,048	33.70
58	20,275	668	3.29	19,476	123,654	33.93
59	19,476	660	3.39	18,677	111,933	34.16
60	18,677	653	3.50	17,878	100,876	34.39
61	17,878	645	3.61	17,079	90,476	34.62
62	17,079	638	3.73	16,280	80,724	34.85
63	16,280	630	3.87	15,481	71,614	35.08
64	15,481	621	4.01	14,682	63,138	35.31
65	14,682	611	4.16	13,883	55,288	35.54
66	13,883	601	4.33	13,084	48,054	35.77
67	13,084	588	4.50	12,285	41,456	36.00
68	12,285	574	4.68	11,486	35,392	36.23
69	11,486	556	4.85	10,687	29,939	36.46
70	10,687	526	4.93	9,888	25,051	36.69
71	9,888	514	5.20	9,089	20,709	36.92
72	9,089	486	5.35	8,290	16,802	37.15
73	8,290	458	5.53	7,491	13,575	37.38
74	7,491	424	5.65	6,692	10,730	37.61
75	6,692	388	5.80	5,893	8,325	37.84
76	5,893	350	5.94	5,094	6,328	38.07
77	5,094	309	6.07	4,295	4,699	38.30
78	4,295	267	6.22	3,496	3,399	38.53
79	3,496	225	6.43	2,697	2,387	38.76
80	2,697	184	6.82	1,898	1,621	38.99
81	1,898	147	7.75	1,099	596	39.22
82	1,099	110	10.01	989	296	39.45
83	989	79	13.08	910	100	39.68
84	910	55	17.40	855	37	39.91
85	855	35	40.96	820	10	40.14
86	820	21	25.72	799	6	40.37
87	799	12	15.02	787	4	40.60
88	787	6	0.76	781	2	40.83
89	781	2	0.26	779	1	41.06
90	779	1	0.13	778	1	41.29
91	778	1	0.13	777	1	41.52
92	777	1	0.13	776	1	41.75

TABLE G.
LIFE TABLE, BOMBAY PRESIDENCY.
Males.

Age.	Living at age x.	Dying between ages x and x + 1.	Mortality per cent.	Living between ages x and x + 1.	Living above age x.	Mean after life-time at age x.
1	2	3	4	5	6	7
0	100,000	29,687	29.69	70,312	2,252,433	22.52
1	70,313	6,495	9.24	63,818	2,175,651	22.75
2	63,818	4,206	6.59	59,612	2,108,839	23.04
3	59,613	2,845	4.77	56,768	2,047,294	23.44
4	56,768	1,983	3.49	54,785	1,989,161	23.94
5	54,785	1,427	2.60	53,358	1,933,441	24.59
6	53,358	1,067	2.00	52,291	1,879,406	25.22
7	52,291	833	1.59	51,458	1,826,805	25.93
8	51,458	681	1.32	50,777	1,774,746	26.69
9	50,777	583	1.15	49,939	1,723,659	27.49
10	50,194	518	1.03	49,437	1,673,169	28.33
11	49,676	473	.95	48,976	1,623,229	29.21
12	49,203	448	.91	48,536	1,573,792	29.99
13	48,765	437	.90	48,099	1,524,816	30.81
14	48,318	438	.91	47,652	1,476,280	31.65
15	47,880	455	.95	47,184	1,428,181	32.53
16	47,425	482	1.02	46,682	1,380,529	33.44
17	46,943	522	1.11	46,134	1,333,345	34.39
18	46,421	573	1.23	45,532	1,286,663	35.38
19	45,848	632	1.38	44,870	1,240,529	36.40
20	45,216	692	1.53	44,153	1,194,997	37.44
21	44,524	742	1.66	43,391	1,150,127	38.51
22	43,782	782	1.79	42,590	1,105,974	39.60
23	43,000	820	1.91	41,754	1,062,583	40.71
24	42,180	851	2.02	40,890	1,019,903	41.84
25	41,329	878	2.12	40,000	978,239	43.00
26	40,451	903	2.23	39,096	937,349	44.17
27	39,548	925	2.34	38,153	897,340	45.36
28	38,623	940	2.44	37,205	858,263	46.57
29	37,683	956	2.54	36,244	820,110	47.80
30	36,727	966	2.63	35,274	782,905	49.05
31	35,761	974	2.72	34,297	746,661	50.32
32	34,787	980	2.82	33,316	711,387	51.61
33	33,807	983	2.91	32,332	677,090	52.91
34	32,824	984	3.00	31,346	643,774	54.23
35	31,840	985	3.09	30,364	611,442	55.57
36	30,855	981	3.18	29,384	580,084	56.93
37	29,874	979	3.28	28,409	549,730	58.31
38	28,895	972	3.37	27,440	520,346	59.71
39	27,923	966	3.46	26,478	491,937	61.13
40	26,957	958	3.56	25,524	464,497	62.57
41	25,999	950	3.65	24,579	438,019	64.03
42	25,040	940	3.75	23,644	412,495	65.51
43	24,100	929	3.85	22,721	387,913	67.01
44	23,180	918	3.96	21,810	364,272	68.53
45	22,262	905	4.06	20,910	341,551	69.99
46	21,357	893	4.18	20,025	319,741	71.47
47	20,464	878	4.29	19,154	298,831	72.97
48	19,596	865	4.42	18,296	278,869	74.49
49	18,721	850	4.54	17,454	259,852	76.03
50	17,871	833	4.67	16,626	241,356	77.59
51	17,030	819	4.81	15,815	223,002	79.16
52	16,217	804	4.96	15,020	207,276	80.75
53	15,412	787	5.11	14,241	192,441	82.35
54	14,626	770	5.27	13,479	178,441	83.97
55	13,856	754	5.44	12,734	165,200	85.61
56	13,102	736	5.62	12,007	152,721	87.27
57	12,364	718	5.81	11,298	140,987	88.95
58	11,648	700	6.01	10,607	129,980	90.64
59	10,945	682	6.23	9,934	119,682	92.35
60	10,266	664	6.46	9,268	109,975	94.07
61	9,602	644	6.71	8,624	100,741	95.81
62	8,953	624	6.97	8,002	92,000	97.56
63	8,324	605	7.26	7,407	83,746	99.32
64	7,729	584	7.56	6,833	75,983	101.10
65	7,145	564	7.89	6,279	68,746	102.89
66	6,581	543	8.24	5,744	62,000	104.70
67	6,038	521	8.63	5,228	55,746	106.53
68	5,517	499	9.05	4,730	50,000	108.38
69	5,018	477	9.51	4,241	44,746	110.24
70	4,541	454	10.01	3,771	40,000	112.12
71	4,087	432	10.56	3,321	35,746	114.01
72	3,655	408	11.17	2,890	32,000	115.91
73	3,247	385	11.84	2,485	28,746	117.82
74	2,862	361	12.61	2,104	25,983	119.74
75	2,501	336	13.46	1,748	23,746	121.67
76	2,165	313	14.43	1,415	21,983	123.61
77	1,852	287	15.51	1,128	20,746	125.56
78	1,565	262	16.75	863	19,500	127.52
79	1,303	237	18.19	626	18,254	129.49
80	1,066	210	19.74	416	17,000	131.47
81	856	185	21.54	231	15,746	133.45
82	671	158	23.57	74	14,500	135.44
83	513	132	25.85	42	13,254	137.43
84	381	108	28.38	22	12,000	139.42
85	278	85	31.10	10	10,746	141.41
86	188	65	34.21	5	9,500	143.40
87	123	46	37.51	2	8,254	145.39
88	77	32	41.04	1	7,000	147.38
89	45	20	44.79	0	5,746	149.37
90	25	12	48.72	0	4,500	151.36
91	13	7	52.70	0	3,254	153.35
92	6	3	56.96	0	2,000	155.34
93	3	2	61.17	0	1,746	157.33
94	1	1	65.26	0	1,500	159.32
95	0	0	69.48	0	1,254	161.31
96	0	0	73.81	0	1,000	163.30
97	0	0	78.24	0	754	165.29
98	0	0	82.76	0	500	167.28
99	0	0	87.37	0	254	169.27

TABLE H.
LIFE TABLE, BOMBAY PRESIDENCY.

Females.

Age.	Living at age x.	Dying between ages x and x+1.	Mortality per cent.	Living between ages x and x+1.	Living above age x.	Mean after life-time at age x.
1	2	3	4	5	6	7
0	100,000	29,576	29.58	70,424	2,234,316	22.86
1	70,424	6,409	9.10	64,015	2,209,478	31.37
2	64,015	4,131	6.45	59,884	2,142,511	33.47
3	59,884	2,778	4.64	57,106	2,080,701	34.75
4	57,106	1,920	3.36	55,186	2,022,293	35.41
5	55,186	1,399	2.48	53,787	1,966,203	35.63
6	53,787	1,011	1.88	52,776	1,911,737	35.52
7	52,776	785	1.49	51,991	1,858,448	35.19
8	51,991	637	1.22	51,354	1,809,049	34.72
9	51,354	540	1.06	50,814	1,764,856	34.14
10	50,814	480	.96	50,334	1,723,251	33.50
11	50,334	451	.90	49,883	1,682,659	32.82
12	49,883	431	.86	49,452	1,642,534	32.11
13	49,452	427	.86	49,025	1,602,848	31.39
14	49,025	435	.89	48,590	1,563,592	30.66
15	48,590	455	.94	48,135	1,524,766	29.93
16	48,135	489	1.02	47,646	1,486,330	29.21
17	47,646	534	1.12	47,112	1,448,278	28.50
18	47,112	586	1.24	46,526	1,410,581	27.82
19	46,526	652	1.40	45,874	1,373,244	27.16
20	45,874	714	1.56	45,160	1,336,293	26.54
21	45,160	768	1.70	44,392	1,299,691	25.95
22	44,392	810	1.82	43,582	1,263,400	25.39
23	43,582	849	1.95	42,733	1,227,448	24.85
24	42,733	881	2.06	41,852	1,191,809	24.34
25	41,852	911	2.18	40,941	1,156,468	23.84
26	40,941	926	2.26	40,015	1,121,433	23.36
27	40,015	937	2.34	39,078	1,086,704	22.89
28	39,078	974	2.49	38,104	1,052,320	22.44
29	38,104	986	2.59	37,118	1,018,271	22.00
30	37,118	994	2.68	36,124	984,557	21.57
31	36,124	1,000	2.77	35,124	951,186	21.15
32	35,124	1,003	2.86	34,121	918,061	20.74
33	34,121	1,001	2.94	33,120	885,186	20.34
34	33,120	996	3.01	32,124	852,557	19.94
35	32,124	993	3.09	31,131	820,186	19.54
36	31,131	984	3.16	30,147	788,000	19.15
37	30,147	977	3.24	29,170	756,111	18.76
38	29,170	967	3.33	28,203	724,520	18.37
39	28,203	959	3.40	27,244	693,227	17.98
40	27,244	949	3.48	26,295	662,242	17.60
41	26,295	938	3.57	25,357	631,567	17.21
42	25,357	926	3.66	24,431	601,192	16.83
43	24,431	914	3.74	23,517	571,117	16.45
44	23,517	903	3.84	22,614	541,342	16.07
45	22,614	888	3.93	21,726	511,867	15.69
46	21,726	877	4.04	20,849	482,692	15.31
47	20,849	862	4.14	20,000	453,817	14.94
48	19,977	850	4.25	19,150	425,242	14.56
49	19,150	837	4.37	18,313	396,967	14.19
50	18,313	822	4.50	17,491	368,992	13.81
51	17,491	809	4.63	16,682	341,317	13.44
52	16,682	794	4.77	15,888	314,942	13.07
53	15,888	779	4.91	15,109	288,867	12.70
54	15,109	764	5.06	14,345	263,092	12.33
55	14,345	749	5.23	13,596	237,617	11.96
56	13,596	732	5.40	12,864	212,442	11.60
57	12,864	717	5.58	12,147	187,567	11.23
58	12,147	701	5.78	11,446	162,992	10.86
59	11,446	684	5.99	10,762	138,717	10.49
60	10,762	668	6.21	10,094	114,742	10.13
61	10,094	650	6.46	9,444	91,067	9.77
62	9,444	634	6.73	8,810	67,592	9.40
63	8,810	617	7.02	8,193	44,317	9.05
64	8,193	598	7.33	7,595	21,242	8.69
65	7,595	580	7.66	7,015	0	8.34
66	6,992	561	8.02	6,454	0	7.99
67	6,454	541	8.41	5,913	0	7.64
68	5,913	520	8.84	5,393	0	7.30
69	5,393	499	9.25	4,894	0	6.96
70	4,894	478	9.80	4,416	0	6.62
71	4,393	454	10.35	3,962	0	6.29
72	3,999	432	10.97	3,567	0	5.95
73	3,507	409	11.65	3,158	0	5.62
74	3,098	385	12.43	2,773	0	5.30
75	2,713	361	13.29	2,352	0	4.98
76	2,332	335	14.26	1,997	0	4.67
77	2,017	310	15.35	1,687	0	4.36
78	1,707	283	16.59	1,404	0	4.07
79	1,424	256	18.00	1,148	0	3.77
80	1,168	229	19.60	919	0	3.49
81	939	201	21.42	718	0	3.22
82	738	173	23.40	545	0	2.96
83	565	146	25.74	419	0	2.72
84	419	118	28.28	301	0	2.49
85	301	94	31.08	207	0	2.27
86	207	70	34.12	137	0	2.07
87	137	52	37.94	85	0	1.89
88	85	35	40.98	50	0	1.71
89	50	22	44.78	28	0	1.56
90	28	14	48.67	14	0	1.42
91	14	7	52.74	7	0	1.28
92	7	4	56.92	3	0	1.16
93	3	2	61.13	1	0	1.00
94	1	1	65.33	0	0	0.86
95	0	0	69.45	0	0	0.72

TABLE J.
LIFE TABLE, BURMA.

Males.

Age.	Living at age x.	Dying between ages x and x+1.	Mortality per cent.	Living between ages x and x+1.	Living above age x.	Mean after life-time at age x.
1	2	3	4	5	6	7
0	100,000	22,340	22.34	82,549	3,148,034	31.48
1	77,660	4,946	6.37	74,006	3,005,485	30.47
2	72,714	3,229	4.44	70,994	2,901,479	31.14
3	69,485	2,209	3.18	68,315	2,820,485	32.03
4	67,276	1,562	2.32	66,452	2,852,170	32.40
5	65,714	1,146	1.74	65,115	2,785,718	32.39
6	64,568	875	1.36	64,113	2,720,603	32.14
7	63,693	699	1.10	63,332	2,656,490	31.71
8	62,994	586	.93	62,693	2,593,158	31.17
9	62,408	512	.82	62,147	2,530,465	30.55
10	61,896	464	.75	61,661	2,468,318	30.88
11	61,432	430	.70	61,215	2,406,657	30.18
12	61,002	419	.69	60,794	2,345,442	30.45
13	60,583	420	.69	60,373	2,284,648	30.71
14	60,163	436	.72	59,945	2,224,275	30.97
15	59,727	460	.77	59,497	2,164,330	30.24
16	59,287	492	.83	59,021	2,104,833	30.51
17	58,775	534	.91	58,508	2,045,812	30.81
18	58,241	575	.99	57,954	1,987,304	31.12
19	57,686	621	1.08	57,356	1,929,350	31.46
20	57,045	658	1.15	56,716	1,871,994	31.82
21	56,387	697	1.24	56,038	1,815,278	32.19
22	55,690	731	1.31	55,324	1,759,240	31.59
23	54,959	764	1.39	54,577	1,703,916	31.00
24	54,195	800	1.48	53,795	1,649,339	30.43
25	53,395	830	1.55	52,980	1,595,544	29.88
26	52,565	854	1.63	52,138	1,542,564	29.35
27	51,711	872	1.68	51,275	1,490,426	28.82
28	50,839	883	1.74	50,398	1,439,151	28.31
29	49,956	891	1.78	49,510	1,388,753	27.80
30	49,065	891	1.82	48,620	1,339,243	27.30
31	48,174	889	1.84	47,730	1,290,623	26.79
32	47,285	883	1.87	46,844	1,242,893	26.29
33	46,402	872	1.88	45,960	1,195,949	25.78
34	45,530	862	1.89	45,099	1,150,083	25.26
35	44,668	852	1.91	44,242	1,104,984	24.74
36	43,816	844	1.92	43,394	1,060,742	24.21
37	42,972	835	1.94	42,554	1,017,345	23.67
38	42,137	829	1.97	41,722	974,794	23.13
39	41,308	827	2.00	40,894	933,072	22.59
40	40,481	825	2.04	40,068	892,178	22.04
41	39,656	826	2.08	39,243	852,110	21.49
42	38,830	829	2.13	38,416	812,867	20.93
43	38,001	832	2.19	37,585	774,451	20.38
44	37,169	838	2.25	36,750	736,866	19.82
45	36,331	843	2.32	35,910	700,116	19.27
46	35,488	850	2.40	35,063	664,206	18.72
47	34,638	856	2.47	34,210	629,143	18.16
48	33,782	863	2.56	33,350	594,933	17.61
49	32,919	870	2.64	32,484	561,583	17.06
50	32,049	875	2.73	31,612	529,099	16.51
51	31,174	882	2.83	30,733	497,487	15.96
52	30,292	886	2.93	29,849	466,754	15.41
53	29,406	892	3.03	28,960	436,905	14.86
54	28,514	896	3.14	28,068	407,945	14.31
55	27,618	898	3.25	27,169	379,879	13.76
56	26,720	902	3.38	26,269	352,718	13.20
57	25,818	911	3.53	25,362	326,441	12.64
58	24,907	930	3.74	24,442	301,079	12.09
59	23,977	972	4.05	23,491	276,637	11.54
60	23,005	1,037	4.51	22,486	253,146	11.00
61	21,968	1,083	4.93	21,426	230,660	10.50
62	20,886	1,118	5.34	20,327	209,231	10.02
63	19,760	1,135	5.74	19,202	188,907	9.55
64	18,684	1,144	6.14	18,062	169,705	9.11
65	17,490	1,149	6.57	16,915	151,543	8.67
66	16,341	1,149	7.04	15,766	134,727	8.24
67	15,192	1,146	7.54	14,619	118,901	7.83
68	14,046	1,139	8.10	13,476	104,542	7.43
69	12,907	1,123	8.70	12,346	90,866	7.04
70	11,784	1,102	9.36	11,233	78,520	6.65
71	10,682	1,075	10.06	10,144	67,287	6.30
72	9,607	1,041	10.83	9,036	57,143	5.95
73	8,566	1,000	11.67	8,068	48,057	5.61
74	7,560	951	12.58	7,099	39,991	5.29
75	6,615	897	13.55	6,166	32,901	4.97
76	5,718	836	14.62	5,300	26,735	4.68
77	4,882	769	15.76	4,493	21,435	4.39
78	4,115	699	17.00	3,764	16,937	4.12
79	3,414	625	18.32	3,102	13,173	3.86
80	2,789	551	19.74	2,514	10,071	3.61
81	2,238	476	21.29	2,000	7,557	3.38
82	1,762	404	22.92	1,569	5,537	3.15
83	1,358	335	24.69	1,190	3,997	2.94
84	1,023	272	26.56	887	2,807	2.74
85	751	215	28.58	644	1,920	2.56
86	536	164	30.70	454	1,276	2.38
87	372	123	32.95	310	822	2.21
88	249	88	35.34	205	512	2.06
89	161	61	37.84	130	307	1.91
90	100	40	40.00	80	177	1.77
91	60	26	43.30	47	97	1.63
92	34	16	47.00	26	50	1.49
93	18	9	50.00	14	24	1.34
94	9	5	55.56	9	10	1.17
95	4	2	57.14	3	4	1.00
96	2	2	100.00	1	1	.50
97	..	..	..	..	..	..
98	..	..	..	..	..	..
99	..	..	..	..	..	..

TABLE K.
LIFE TABLE, BURMA.
Females.

Age.	Living at age x.	Dying between ages x and x+1.	Mortality per cent.	Living between ages x and x+1.	Living above age x.	Mean after life-time at age x.
1	2	3	4	5	6	7
0	100,000	22,071	22.07	82,083	3,261,165	32.61
1	77,929	4,707	6.04	74,394	3,178,462	40.70
2	73,222	3,002	4.10	71,616	3,104,088	42.39
3	70,220	1,938	2.83	69,161	3,032,472	43.19
4	68,232	1,351	1.98	67,514	2,963,311	43.43
5	66,881	948	1.42	66,551	2,895,707	43.90
6	65,938	691	1.05	65,570	2,829,416	42.91
7	65,242	534	.82	64,964	2,763,846	42.36
8	64,708	435	.67	64,183	2,698,882	41.71
9	64,273	372	.58	63,682	2,634,339	40.99
10	63,901	337	.53	63,729	2,570,317	40.22
11	63,564	318	.50	63,403	2,506,588	39.43
12	63,246	322	.51	63,086	2,443,185	38.63
13	62,923	338	.54	62,754	2,380,099	37.83
14	62,585	371	.59	62,400	2,317,345	37.03
15	62,214	410	.66	62,009	2,254,945	36.24
16	61,804	453	.73	61,578	2,192,936	35.43
17	61,351	507	.82	61,098	2,131,358	34.74
18	60,844	559	.92	60,564	2,070,260	34.03
19	60,285	614	1.02	59,978	2,009,606	33.34
20	59,671	666	1.12	59,338	1,949,718	32.67
21	59,005	717	1.22	58,646	1,890,380	32.04
22	58,288	757	1.30	57,910	1,831,734	31.43
23	57,531	804	1.40	57,129	1,773,824	30.83
24	56,727	847	1.49	56,304	1,716,695	30.26
25	55,880	885	1.58	55,438	1,660,391	29.71
26	54,995	922	1.68	54,534	1,604,953	29.18
27	54,079	948	1.75	53,599	1,550,419	28.67
28	53,125	968	1.82	52,641	1,496,820	28.18
29	52,157	984	1.89	51,665	1,444,179	27.69
30	51,173	987	1.93	50,680	1,392,514	27.21
31	50,186	987	1.96	49,692	1,341,834	26.74
32	49,199	978	1.99	48,710	1,292,142	26.26
33	48,221	966	2.00	47,738	1,243,432	25.79
34	47,255	950	2.01	46,780	1,195,694	25.30
35	46,305	935	2.02	45,838	1,148,914	24.81
36	45,370	920	2.03	44,910	1,103,076	24.31
37	44,450	906	2.04	43,997	1,058,166	23.81
38	43,544	891	2.05	43,098	1,014,169	23.29
39	42,653	882	2.07	42,212	971,071	22.77
40	41,771	873	2.09	41,344	928,859	22.24
41	40,898	866	2.12	40,465	887,525	21.70
42	40,032	863	2.16	39,600	847,060	21.16
43	39,169	864	2.20	38,737	807,480	20.61
44	38,305	863	2.25	37,874	768,723	20.07
45	37,442	864	2.31	37,010	730,849	19.52
46	36,578	866	2.37	36,145	693,839	18.97
47	35,712	869	2.43	35,278	657,694	18.42
48	34,843	872	2.50	34,407	622,416	17.86
49	33,971	875	2.58	33,534	588,009	17.31
50	33,090	880	2.66	32,656	554,475	16.75
51	32,216	883	2.74	31,774	521,819	16.20
52	31,333	886	2.83	30,890	490,045	15.64
53	30,447	893	2.92	30,002	459,155	15.08
54	29,557	896	3.02	29,110	429,153	14.52
55	28,664	899	3.12	28,216	400,043	13.96
56	27,768	899	3.24	27,318	371,827	13.39
57	26,869	910	3.39	26,414	344,509	12.82
58	25,969	931	3.59	25,494	318,095	12.25
59	25,028	978	3.90	24,539	292,601	11.69
60	24,050	1,048	4.36	23,526	268,062	11.15
61	23,062	1,100	4.78	22,452	244,336	10.63
62	22,062	1,136	5.19	21,394	222,084	10.14
63	20,966	1,161	5.59	20,186	200,730	9.67
64	19,865	1,173	5.98	19,018	180,394	9.21
65	18,732	1,181	6.41	17,842	161,546	8.75
66	17,581	1,186	6.88	16,658	143,704	8.33
67	16,405	1,167	7.35	15,472	127,046	7.91
68	15,207	1,181	7.94	14,288	111,574	7.50
69	13,997	1,170	8.54	13,112	97,286	7.10
70	12,757	1,152	9.20	11,951	84,174	6.72
71	11,517	1,127	9.91	10,812	72,223	6.35
72	10,248	1,095	10.68	9,700	61,411	6.00
73	9,013	1,055	11.62	8,605	51,711	5.65
74	8,008	1,006	12.43	7,605	43,085	5.32
75	7,092	952	13.41	6,653	35,490	5.00
76	6,140	888	14.48	5,666	28,874	4.70
77	5,252	821	15.62	4,842	23,178	4.41
78	4,431	747	16.86	4,068	18,336	4.14
79	3,684	670	18.20	3,349	14,378	3.88
80	3,014	592	19.62	2,718	10,920	3.63
81	2,422	513	21.17	2,166	8,211	3.39
82	1,909	435	22.81	1,692	6,045	3.17
83	1,474	363	24.60	1,292	4,353	2.95
84	1,111	294	26.47	964	3,061	2.76
85	817	233	28.49	700	2,097	2.57
86	584	178	30.62	495	1,397	2.39
87	406	134	32.88	339	902	2.22
88	272	96	35.28	224	563	2.06
89	176	66	37.78	143	339	1.91
90	116	45	40.43	88	196	1.77
91	65	28	43.25	51	108	1.64
92	37	17	46.29	28	57	1.52
93	20	10	49.58	13	29	1.39
94	10	5	53.16	8	14	1.27
95	5	3	57.04	4	6	1.12
96	2	1	61.20	2	3	.95
97	1	1	65.64	1	2	.87
98	..	..	..	..	..	..
99	..	..	..	..	..	..

TABLE L.
LIFE TABLE, MADRAS PRESIDENCY.
Males.

Age.	Living at age x.	Dying between ages x and x+1.	Mortality per cent.	Living between ages x and x+1.	Living above age x.	Mean after life-time at age x.
1	2	3	4	5	6	7
0	100,000	27,393	27.39	78,700	2,592,775	25.92
1	72,607	6,202	8.54	69,288	2,514,066	34.63
2	65,405	4,082	6.15	64,233	2,444,778	36.82
3	62,323	2,808	4.50	60,835	2,380,545	38.20
4	59,515	1,994	3.35	58,462	2,319,710	38.98
5	57,521	1,467	2.55	56,751	2,261,248	39.31
6	56,054	1,124	2.01	55,469	2,204,497	39.33
7	54,930	899	1.64	54,465	2,149,028	39.12
8	54,031	755	1.40	53,643	2,094,563	38.77
9	53,276	661	1.24	52,939	2,040,926	38.31
10	52,615	599	1.14	52,311	1,987,981	37.78
11	52,016	557	1.07	51,756	1,935,670	37.21
12	51,459	543	1.06	51,188	1,883,934	36.61
13	50,916	543	1.06	50,644	1,832,746	36.09
14	50,373	541	1.07	50,102	1,782,102	35.53
15	49,832	540	1.08	49,562	1,732,000	34.76
16	49,292	539	1.10	49,022	1,682,438	34.13
17	48,753	539	1.11	48,484	1,633,416	33.50
18	48,214	540	1.12	47,944	1,584,932	32.87
19	47,674	540	1.13	47,404	1,536,988	32.24
20	47,134	543	1.15	46,862	1,489,584	31.60
21	46,591	547	1.17	46,318	1,442,722	30.97
22	46,044	553	1.20	45,768	1,396,404	30.33
23	45,491	559	1.23	45,212	1,350,636	29.69
24	44,932	568	1.26	44,648	1,305,424	29.05
25	44,364	581	1.31	44,074	1,260,776	28.42
26	43,793	590	1.36	43,485	1,216,702	27.79
27	43,187	617	1.43	42,876	1,173,217	27.17
28	42,570	637	1.50	42,252	1,130,339	26.55
29	41,933	656	1.56	41,605	1,088,087	25.95
30	41,277	678	1.64	40,938	1,046,482	25.35
31	40,599	699	1.72	40,250	1,005,544	24.77
32	39,900	725	1.82	39,538	965,294	24.19
33	39,175	748	1.91	38,801	925,756	23.63
34	38,427	771	2.01	38,042	886,955	23.08
35	37,656	797	2.12	37,258	848,913	22.52
36	36,859	819	2.22	36,450	811,655	22.02
37	36,040	838	2.33	35,621	775,295	21.51
38	35,202	860	2.47	34,768	739,584	21.01
39	34,333	889	2.59	33,888	704,816	20.53
40	33,444	908	2.71	32,990	670,928	20.06
41	32,536	912	2.81	32,080	637,938	19.61
42	31,624	918	2.90	31,165	605,858	19.16
43	30,706	919	2.99	30,246	574,693	18.72
44	29,787	921	3.09	29,326	544,447	18.28
45	28,868	920	3.19	28,406	515,121	17.85
46	27,946	920	3.29	27,486	486,715	17.42
47	27,026	918	3.40	26,567	459,229	16.99
48	26,106	914	3.50	25,651	432,662	16.57
49	25,194	910	3.61	24,739	407,011	16.16
50	24,284	903	3.72	23,832	382,272	15.74
51	23,381	897	3.83	22,932	358,440	15.33
52	22,484	889	3.96	22,040	335,508	14.92
53	21,595	881	4.08	21,154	313,468	14.52
54	20,714	870	4.19	20,279	292,314	14.11
55	19,844	859	4.33	19,414	272,035	13.71
56	18,985	848	4.47	18,561	252,621	13.31
57	18,137	836	4.61	17,719	234,060	12.91
58	17,301	822	4.75	16,890	216,341	12.50
59	16,479	808	4.90	16,075	199,451	12.10
60	15,671	793	5.06	15,274	183,376	11.70
61	14,878	779	5.24	14,488	168,102	11.30
62	14,099	764	5.42	13,717	153,614	10.90
63	13,355	750	5.63	12,960	139,897	10.49
64	12,685	737	5.85	12,216	126,937	10.09
65	11,848	722	6.10	11,487	114,721	9.68
66	11,126	709	6.37	10,772	103,234	9.28
67	10,417	695	6.67	10,070	92,462	8.88
68	9,722	681	7.00	9,382	82,392	8.47
69	9,041	666	7.37	8,708	73,010	8.08
70	8,375	652	7.78	8,049	64,392	7.68
71	7,723	636	8.24	7,405	56,253	7.28
72	7,087	620	8.75	6,777	48,848	6.89
73	6,467	601	9.32	6,165	42,071	6.51
74	5,863	585	9.96	5,572	35,906	6.12
75	5,280	564	10.70	4,998	30,334	5.75
76	4,716	545	11.54	4,444	25,230	5.37
77	4,171	523	12.54	3,910	20,892	5.01
78	3,648	497	13.63	3,400	16,982	4.66
79	3,151	470	14.91	2,918	13,582	4.31
80	2,681	439	16.38	2,462	10,666	3.98
81	2,242	405	18.04	2,040	8,204	3.66
82	1,837	366	19.94	1,654	6,164	3.38
83	1,471	325	22.08	1,303	4,510	3.07
84	1,140	279	24.35	1,006	3,262	2.79
85	867	236	27.22	749	2,196	2.53
86	631	191	30.26	556	1,447	2.29
87	440	148	33.62	368	911	2.07
88	292	109	37.33	238	545	1.86
89	132	76	41.37	145	307	1.67
90	107	49	45.74	82	192	1.50
91	53	29	50.41	44	80	1.34
92	29	14	55.33	31	36	1.21
93	13	8	60.43	9	15	1.08
94	5	3	65.64	4	6	.96
95	2	1	70.83	2	2	.83
96	1	1	76.00	..	..	.62
97	..	..	..	..	..	..
98	..	..	..	..	..	..
99	..	..	..	..	..	..

TABLE M.
LIFE TABLE, MADRAS PRESIDENCY.
Females.

Age.	Living at age x .	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x .	Mean after life-time at age x .
1	2	3	4	5	6	7
0	100,000	25,702	25.70	79,255	2,735,111	27.65
1	74,298	5,038	6.78	71,561	2,685,856	36.15
2	69,260	3,271	4.73	67,493	2,614,295	37.75
3	65,989	2,273	3.44	64,769	2,546,502	38.59
4	63,716	1,690	2.67	62,810	2,482,033	38.95
5	62,017	1,448	2.34	61,257	2,419,223	39.01
6	60,569	1,245	2.06	59,923	2,357,966	38.93
7	59,324	1,077	1.82	58,770	2,298,043	38.74
8	58,247	942	1.62	57,765	2,239,273	38.44
9	57,305	833	1.45	56,882	2,181,508	38.07
10	56,472	757	1.34	56,089	2,124,626	37.62
11	55,715	705	1.26	55,361	2,068,537	37.13
12	55,010	680	1.24	54,670	2,013,176	36.60
13	54,330	666	1.23	53,997	1,958,506	36.05
14	53,684	662	1.23	53,333	1,904,509	35.49
15	53,062	655	1.24	52,674	1,851,176	34.93
16	52,347	648	1.24	52,023	1,798,502	34.36
17	51,609	641	1.24	51,373	1,746,479	33.78
18	51,058	636	1.24	50,740	1,695,101	33.20
19	50,422	630	1.25	50,107	1,644,381	32.61
20	49,792	624	1.25	49,480	1,594,254	32.02
21	49,168	620	1.26	48,858	1,544,774	31.42
22	48,548	619	1.27	48,238	1,495,916	30.81
23	47,929	624	1.30	47,617	1,447,678	30.20
24	47,305	629	1.33	46,990	1,400,061	29.60
25	46,676	639	1.37	46,356	1,353,071	28.99
26	46,037	645	1.40	45,714	1,306,715	28.38
27	45,392	661	1.46	45,062	1,261,901	27.78
28	44,731	676	1.51	44,398	1,218,530	27.18
29	44,055	691	1.57	43,719	1,176,546	26.59
30	43,364	710	1.64	43,009	1,127,838	26.01
31	42,654	728	1.71	42,290	1,084,327	25.43
32	41,926	750	1.79	41,551	1,042,537	24.87
33	41,176	771	1.87	40,790	1,000,956	24.31
34	40,405	791	1.96	40,010	960,196	23.76
35	39,614	813	2.05	39,208	920,186	23.23
36	38,801	833	2.15	38,384	880,978	22.71
37	37,968	850	2.24	37,543	842,594	22.19
38	37,118	881	2.37	36,678	805,051	21.69
39	36,237	899	2.48	35,788	768,373	21.20
40	35,338	917	2.60	34,890	732,585	20.73
41	34,421	921	2.67	33,969	697,705	20.27
42	33,500	923	2.76	33,038	663,745	19.81
43	32,577	925	2.84	32,114	630,707	19.36
44	31,652	926	2.93	31,189	598,593	18.91
45	30,726	924	3.01	30,264	567,404	18.47
46	29,802	924	3.10	29,340	537,140	18.02
47	28,878	924	3.20	28,416	507,800	17.58
48	27,954	919	3.29	27,494	479,354	17.15
49	27,035	915	3.38	26,578	451,890	16.71
50	26,120	908	3.48	25,666	425,312	16.28
51	25,212	904	3.58	24,760	399,644	15.85
52	24,308	898	3.69	23,859	374,886	15.42
53	23,410	890	3.80	22,965	351,027	14.99
54	22,520	880	3.91	22,080	328,062	14.57
55	21,640	872	4.03	21,204	305,982	14.14
56	20,763	862	4.15	20,337	284,778	13.71
57	19,906	852	4.28	19,480	264,441	13.28
58	19,054	843	4.42	18,632	244,961	12.86
59	18,211	834	4.58	17,794	226,329	12.43
60	17,377	825	4.75	16,964	208,586	12.00
61	16,552	815	4.92	16,144	191,571	11.57
62	15,737	805	5.11	15,334	175,427	11.15
63	14,932	796	5.33	14,534	160,093	10.72
64	14,136	785	5.56	13,744	145,559	10.30
65	13,351	776	5.81	12,963	131,815	9.87
66	12,575	766	6.09	12,192	118,852	9.45
67	11,809	755	6.40	11,432	106,660	9.03
68	11,054	744	6.73	10,682	95,228	8.61
69	10,310	733	7.11	9,944	84,546	8.20
70	9,577	721	7.53	9,216	74,602	7.79
71	8,856	707	7.96	8,500	65,386	7.38
72	8,145	692	8.50	7,808	56,884	6.98
73	7,437	677	9.03	7,131	49,081	6.58
74	6,780	660	9.73	6,470	41,963	6.19
75	6,120	641	10.47	5,829	35,543	5.80
76	5,479	620	11.32	5,209	29,713	5.42
77	4,859	599	12.32	4,609	24,544	5.05
78	4,260	572	13.43	4,037	19,984	4.69
79	3,688	543	14.72	3,494	15,010	4.34
80	3,145	509	16.19	2,985	12,594	4.00
81	2,630	471	17.86	2,514	9,704	3.68
82	2,140	428	19.77	2,086	7,304	3.37
83	1,737	381	21.92	1,705	5,363	3.08
84	1,356	323	24.18	1,382	3,807	2.81
85	1,028	278	27.08	1,104	2,615	2.54
86	750	226	30.12	878	1,726	2.30
87	524	175	33.50	693	1,089	2.08
88	349	130	37.21	463	653	1.87
89	219	90	41.25	284	360	1.68
90	129	59	45.64	171	195	1.50
91	70	35	50.32	100	95	1.35
92	35	19	55.26	52	43	1.20
93	16	10	60.67	26	17	1.07
94	6	4	65.38	11	6	.94
95	2	1	70.78	4	2	.80
96	1	1		1	1	
97						
98						
99						

TABLE N.
LIFE TABLE, AGRA AND OUDH (UNITED PROVINCES).
Males.

Age.	Living at age x .	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x .	Mean after life-time at age x .
1	2	3	4	5	6	7
0	100,000	29,787	29.79	76,732	2,120,880	21.21
1	70,213	6,595	9.39	66,662	2,044,148	20.11
2	63,618	4,805	7.56	61,325	1,977,486	19.11
3	59,313	2,945	4.96	57,763	1,916,161	18.08
4	56,368	2,083	3.70	55,270	1,858,408	17.31
5	54,285	1,527	2.81	53,485	1,803,138	16.97
6	52,758	1,167	2.21	52,151	1,749,658	16.58
7	51,591	983	1.81	51,109	1,697,502	16.00
8	50,658	781	1.54	50,257	1,646,393	15.50
9	49,877	683	1.37	49,529	1,596,136	15.00
10	49,194	618	1.26	48,881	1,546,607	14.44
11	48,576	575	1.18	48,286	1,497,726	13.93
12	48,001	552	1.15	47,726	1,449,440	13.40
13	47,449	548	1.16	47,175	1,401,714	12.94
14	46,901	561	1.20	46,620	1,354,539	12.50
15	46,340	589	1.27	46,046	1,307,910	12.02
16	45,751	634	1.39	45,434	1,261,873	11.58
17	45,117	676	1.50	44,779	1,216,439	11.16
18	44,441	740	1.66	44,071	1,171,660	10.76
19	43,701	788	1.80	43,307	1,127,589	10.39
20	42,913	830	1.93	42,498	1,084,282	10.02
21	42,083	865	2.06	41,650	1,041,784	9.67
22	41,218	900	2.18	40,768	1,000,134	9.33
23	40,318	928	2.30	39,854	958,366	9.00
24	39,380	950	2.41	38,915	919,512	8.68
25	38,440	967	2.52	37,956	880,597	8.36
26	37,473	977	2.61	36,984	842,641	8.05
27	36,496	988	2.70	36,003	805,657	7.75
28	35,510	988	2.78	35,016	769,654	7.46
29	34,522	989	2.86	34,028	734,638	7.18
30	33,533	987	2.94	33,040	700,610	6.91
31	32,546	981	3.01	32,056	667,570	6.65
32	31,565	974	3.09	31,073	635,514	6.40
33	30,591	967	3.16	30,108	604,436	6.16
34	29,624	956	3.23	29,146	574,328	5.93
35	28,668	946	3.30	28,195	545,182	5.70
36	27,722	933	3.37	27,256	516,987	5.48
37	26,780	921	3.44	26,328	489,731	5.26
38	25,838	907	3.51	25,414	463,403	5.05
39	24,961	893	3.58	24,514	437,989	4.84
40	24,068	878	3.65	23,629	413,475	4.64
41	23,160	865	3.73	22,758	389,846	4.44
42	22,235	849	3.80	21,900	367,088	4.25
43	21,476	835	3.89	21,058	345,188	4.06
44	20,641	820	3.97	20,231	324,130	3.88
45	19,821	805	4.06	19,418	303,899	3.70
46	19,016	791	4.16	18,620	284,481	3.53
47	18,225	777	4.26	17,836	265,861	3.36
48	17,448	763	4.37	17,065	248,025	3.20
49	16,685	750	4.49	16,310	230,959	3.04
50	15,935	737	4.62	15,566	214,649	2.89
51	15,198	723	4.76	14,836	199,083	2.74
52	14,475	710	4.91	14,120	184,247	2.60
53	13,765	697	5.06	13,416	170,127	2.46
54	13,068	683	5.23	12,728	156,711	2.33
55	12,385	671	5.41	12,050	143,985	2.20
56	11,714	657	5.61	11,386	131,935	2.08
57	11,057	643	5.82	10,736	120,549	1.96
58	10,414	629	6.04	10,100	109,813	1.85
59	9,785	614	6.27	9,478	99,713	1.74
60	9,171	598	6.52	8,872	90,235	1.64
61	8,573	582	6.79	8,282	81,363	1.54
62	7,991	564	7.06	7,709	73,081	1.45
63	7,427	549	7.38	7,152	65,372	1.36
64	6,878	530	7.71	6,613	58,220	1.28
65	6,348	511	8.05	6,092	51,607	1.20
66	5,837	491	8.42	5,592	45,515	1.13
67	5,346	472	8.82	5,110	39,923	1.06
68	4,874	454	9.24	4,649	34,813	1.00
69	4,424	435	9.71	4,209	30,164	0.93
70	3,994	408	10.27	3,790	25,955	0.86
71	3,586	385	10.75	3,394	22,165	0.80
72	3,201	363	11.34	3,020	18,771	0.75
73	2,838	340	11.99	2,688	15,751	0.70
74	2,498	318	12.72	2,369	13,083	0.65
75	2,180	295	13.62	2,082	10,744	0.60
76	1,885	272	14.43	1,749	8,712	0.56
77	1,613	249	15.45	1,488	6,963	0.52
78	1,364	227	16.62	1,250	5,475	0.48
79	1,137	204	17.96	1,035	4,225	0.44
80	933	182	19.54	842	3,190	0.40
81	751	161	21.41	670	2,348	0.37
82	590	140	23.64	520	1,678	0.34
83	450	118	26.28	391	1,158	0.31
84	332	98	29.60	283	767	0.28
85	234	77	33.04	198	484	0.25
86	157	58	37.22	128	288	0.22
87	99	42	41.94	73	160	0.19
88	57	27	47.14	44	82	0.16
89	37	16	52.76	22	38	0.13
90	14	8	58.64	10	16	0.10
91	6	4	64.84	4	6	0.08
92	2	1	70.56	2	2	0.06
93	1	1	76.21	1	1	0.05
94	..	..	..	..	..	..
95	..	..	..	..	..	..
96	..	..	..	..	..	..
97	..	..	..	..	..	..
98	..	..	..	..	..	..
99	..	..	..	..	..	..

TABLE O.

LIFE TABLE, AGRA AND OUDH (UNITED PROVINCES).

Females.

Age.	Living at age x.	Dying between ages x and x+1.	Mortality per cent.	Living between ages x and x+1.	Living above age x.	Mean after life-time at age x.
1	2	3	4	5	6	7
0	100,000	29,754	29.75	70,246	2,150,333	21.50
1	70,246	6,562	9.34	63,684	2,078,585	29.52
2	63,684	4,281	6.72	59,403	2,006,873	31.51
3	59,403	2,926	4.93	56,477	1,945,470	32.75
4	56,477	2,069	3.66	54,408	1,887,617	33.42
5	54,408	1,515	2.79		1,832,231	33.68
6	52,890	1,161	2.20			
7	51,729	933	1.80	52,286	1,778,618	33.63
8	50,796	787	1.55	51,242	1,726,332	33.37
9	50,009	694	1.39	50,357	1,675,090	33.08
10	49,315	632	1.28	49,686	1,624,703	32.49
11	48,683	594	1.22	48,995	1,575,048	31.94
12	48,089	566	1.18	48,384	1,526,053	31.35
13	47,523	543	1.15	47,806	1,477,699	30.78
14	46,960	522	1.12	47,242	1,429,863	30.09
15	46,388	507	1.09	46,674	1,382,621	29.44
16	45,791	497	1.09	46,090	1,335,947	28.80
17	45,154	483	1.07	45,472		
18	44,481	463	1.04	44,818	1,289,857	28.17
19	43,748	437	1.00	44,115	1,244,386	27.56
20	42,976	411	0.96	43,362	1,199,567	26.97
21	42,165	383	0.91	42,570	1,155,452	26.41
22	41,322	354	0.86		1,112,090	25.88
23	40,448	328	0.81	41,744	1,069,520	25.37
24	39,550	301	0.76	40,885	1,027,776	24.87
25	38,632	275	0.71	39,999	986,891	24.40
26	37,700	249	0.66	39,091	946,892	23.94
27	36,758	223	0.61	38,166	907,801	23.50
28	35,810	197	0.55	37,229	869,635	23.07
29	34,859	171	0.49	36,284	832,406	22.65
30	33,909	145	0.43	35,334	796,122	22.23
31	32,962	119	0.36	34,384	760,788	21.82
32	32,020	93	0.29	33,436	726,404	21.42
33	31,084	67	0.22	32,491	692,968	21.02
34	30,156	41	0.14	31,532	660,477	20.63
35	29,237	15	0.05	30,580	628,925	20.23
36	28,327			29,636	598,305	19.84
37	27,420			28,702	568,609	19.45
38	26,532			27,776	539,827	19.06
39	25,648			26,850	511,951	18.67
40	24,774			25,924	484,972	18.28
41	23,908			25,000	458,882	17.89
42	23,053			24,076	433,671	17.51
43	22,208			23,152		
44	21,374			22,228	406,330	17.12
45	20,551			21,304	385,850	16.74
46	19,741			20,380	365,220	16.36
47	18,943			19,456	344,429	15.97
48	18,158			18,532	323,467	15.59
49	17,385			17,608	302,321	15.21
50	16,626			16,684	281,099	14.83
51	15,877			15,760	260,799	14.45
52	15,142			14,836	240,557	14.07
53	14,419			13,912	220,272	13.69
54	13,709			12,988	200,040	13.31
55	13,010			12,064	179,760	12.94
56	12,325			11,140	159,437	12.56
57	11,651			10,216	139,071	12.19
58	10,992			9,292	118,667	11.81
59	10,346			8,368	98,224	11.44
60	9,715			7,444	77,760	11.07
61	9,099			6,520	57,296	10.70
62	8,498			5,596	36,832	10.33
63	7,914			4,672	16,368	9.96
64	7,344			3,748		
65	6,792			2,824		
66	6,258			1,900		
67	5,743			976		
68	5,248			452		
69	4,772			228		
70	4,317			104		
71	3,884			40		
72	3,474			16		
73	3,086			6		
74	2,722			2		
75	2,380			0		
76	2,062					
77	1,768					
78	1,498					
79	1,251					
80	1,028					
81	828					
82	652					
83	490					
84	368					
85	290					
86	175					
87	110					
88	64					
89	34					
90	16					
91	7					
92	2					
93	1					

TABLE P.

LIFE TABLE, PUNJAB.

Males.

Age.	Living at age x.	Dying between ages x and x+1.	Mortality per cent.	Living between ages x and x+1.	Living above age x.	Mean after life-time at age x.
1	2	3	4	5	6	7
0	100,000					
1	70,213	29,787	29.79	70,732	2,122,761	21.23
2	63,618	6,595	9.39	66,862	2,046,029	20.14
3	59,313	4,305	6.77	61,325	1,979,397	31.11
4	56,368	2,945	4.97	57,753	1,918,042	32.34
5	54,285	2,083	3.70	55,279	1,860,289	33.00
6		1,527	2.81	53,485	1,805,019	33.25
7	52,758					
8	51,591	1,167	2.21	52,151	1,751,534	35.20
9	50,714	877	1.70	51,137	1,699,383	32.94
10	49,976	738	1.46	50,345	1,648,246	32.50
11	49,345	631	1.26	49,660	1,597,901	31.97
12		600	1.22	49,045	1,548,241	31.33
13	48,745					
14	48,122	623	1.28	48,434	1,499,196	30.76
15	47,450	672	1.40	47,789	1,450,762	30.15
16	46,726	724	1.53	47,088	1,402,976	29.57
17	45,949	777	1.66	46,338	1,355,883	29.02
18		814	1.77	45,542	1,309,550	28.50
19	45,135					
20	44,296	839	1.86	44,716	1,264,008	28.00
21	43,444	852	1.92	43,870	1,219,202	27.53
22	42,590	854	1.96	43,017	1,175,422	27.06
23	41,738	852	2.00	42,164	1,132,405	26.59
24		853	2.04	41,312	1,090,241	26.12
25	40,885					
26	40,031	854	2.09	40,458	1,048,029	25.66
27	39,177	854	2.13	39,604	1,006,471	25.19
28	38,320	857	2.19	38,748	965,307	24.73
29	37,461	859	2.24	37,890	924,119	24.27
30		862	2.30	37,030	882,829	23.82
31	36,599					
32	35,736	863	2.35	36,168	841,599	23.37
33	34,870	866	2.42	35,303	800,311	22.92
34	34,004	866	2.48	34,437	759,001	22.48
35	33,138	866	2.55	33,571	717,720	22.04
36		867	2.62	32,704		
37	32,271					
38	31,403	868	2.69	31,837	683,014	21.16
39	30,534	869	2.77	30,968	651,179	20.74
40	29,663	871	2.85	30,098	620,211	20.31
41	28,789	874	2.95	29,226	590,113	19.89
42		876	3.04	28,351	560,887	19.48
43	27,913					
44	27,035	878	3.15	27,474	532,536	19.08
45	26,154	881	3.26	26,594	505,062	18.68
46	25,271	883	3.37	25,712	478,468	18.29
47	24,389	882	3.49	24,830	452,756	17.92
48		881	3.61	23,948	427,926	17.55
49	23,508					
50	22,630	879	3.74	23,069	403,978	17.18
51	21,757	873	3.86	22,194	380,909	16.83
52	20,891	866	3.98	21,324	358,715	16.49
53	20,027	854	4.09	20,464	337,391	16.15
54		838	4.18	19,618	316,927	15.82
55	19,169					
56	18,308	821	4.27	18,788	297,309	15.49
57	17,447	801	4.36	17,978	278,521	15.16
58	16,586	781	4.44	17,186	260,543	14.83
59	15,724	761	4.58	16,416	243,357	14.49
60		742	4.62	15,694	226,941	14.15
61	15,293					
62	14,572	721	4.72	14,932	211,277	13.82
63	13,870	702	4.82	14,221	196,345	13.47
64	13,187	683	4.92	13,525	182,124	13.13
65	12,524	663	5.03	12,856	168,556	12.79
66		643	5.14	12,202	155,740	12.44
67	11,881					
68	11,256	625	5.26	11,568	143,538	12.08
69	10,650	606	5.38	10,953	131,970	11.72
70	10,003	587	5.51	10,356	121,017	11.36
71	9,494	569	5.65	9,778	110,681	11.00
72		550	5.80	9,219	100,883	10.63
73	8,944					
74	8,412	532	5.95	8,678	91,664	10.25
75	7,897	515	6.15	8,154	82,986	9.87
76	7,400	497	6.29	7,642	74,838	9.48
77	6,920	480	6.43	7,160	67,181	9.08
78		462	6.68	6,689	60,024	8.67
79	6,458					
80	6,013	445	6.90	6,236	53,335	8.25
81	5,582	431	7.17	5,793	47,099	7.83
82	5,161	421	7.64	5,372	41,301	7.40
83	4,745	416	8.06	4,953	35,320	6.96
84		415	8.76	4,537	30,976	6.53
85	4,329					
86	3,914	415	9.60	4,122	26,439	6.11
87	3,500	414	10.59	3,707	22,317	5.70
88	3,089	411	11.72	3,294	18,610	5.32
89	2,690	399	12.91	2,880	15,816	4.96
90		380	14.15	2,500	12,426	4.62
91	2,310					
92	1,958	352	15.21	2,184	9,926	4.30
93	1,631	327	16.72	1,794	7,792	3.98
94	1,332	298	18.25	1,483	5,998	3.68
95	1,066	267	20.02	1,200	4,516	3.38
96		235	22.04	948	3,316	3.11
97	831					
98	631	200	24.09	731	2,368	2.84
99	462	169	26.82	546	1,637	2.59
100	325	137	29.60	394	1,091	2.35
101	219	104	32.76	272	697	2.13
102		80	36.23	179	425	1.92
103	159					
104	84	55	40.08	112	246	1.73
105	47	37	44.29	66	184	1.56
106	24	23	48.74	36	85	1.40
107	11	13	53.43	18	32	1.26
108		6	58.39	8	14	1.13
109	5					
110	2	3	68.49	3	6	1.01
111	1	1	68.64	2	2	.90
112	1	1	73.70			

TABLE Q.
LIFE TABLE, ALL INDIA.
Males.

Age.	Living at age x.	Dying between ages x and x+1.	Mortality per cent.	Living between ages x and x+1.	Living above age x.	Mean after life-time at age x.
1	2	3	4	5	6	7
0	100,000	28,998	29.00	77,289	2,258,626	22.59
1	71,002	4,473	6.30	67,522	2,181,337	30.72
2	64,529	4,241	6.57	60,288	2,119,815	32.76
3	60,288	2,913	4.83	57,375	2,051,544	34.03
4	57,375	2,067	3.60	55,308	1,992,799	34.73
5	55,308	1,523	2.75	53,785	1,936,512	35.01
6	53,785	1,168	2.17	52,617	1,882,001	34.99
7	52,617	933	1.77	51,684	1,823,823	34.76
8	51,684	796	1.52	50,888	1,776,688	34.38
9	50,888	686	1.35	50,202	1,725,407	33.90
10	50,202	626	1.25	49,576	1,674,858	33.36
11	49,576	593	1.20	48,983	1,624,963	32.77
12	48,983	585	1.19	48,398	1,575,676	32.16
13	48,398	560	1.22	47,838	1,526,976	31.54
14	47,838	605	1.26	47,233	1,478,863	30.93
15	47,233	626	1.32	46,607	1,431,347	30.32
16	46,607	651	1.40	46,262	1,384,447	29.72
17	46,262	676	1.47	45,586	1,338,185	29.13
18	45,586	703	1.55	44,903	1,292,587	28.56
19	44,903	724	1.62	44,179	1,247,670	28.00
20	44,179	742	1.69	43,462	1,203,484	27.46
21	43,462	758	1.76	42,712	1,160,022	26.92
22	42,712	773	1.82	41,946	1,117,310	26.39
23	41,946	787	1.89	41,166	1,075,364	25.87
24	41,166	800	1.96	40,373	1,034,198	25.36
25	40,373	811	2.03	39,568	993,825	24.86
26	39,568	820	2.10	38,752	954,257	24.37
27	38,752	829	2.16	37,928	915,506	23.88
28	37,928	838	2.23	37,094	877,577	23.39
29	37,094	844	2.30	36,253	840,483	22.92
30	36,253	850	2.37	35,406	804,236	22.45
31	34,981	855	2.44	34,554	768,824	21.98
32	34,126	861	2.52	33,696	734,270	21.52
33	33,265	865	2.60	32,832	700,574	21.06
34	32,400	869	2.68	31,966	667,742	20.61
35	31,531	872	2.77	31,095	635,776	20.16
36	30,659	875	2.85	30,222	604,681	19.72
37	29,784	877	2.94	29,346	574,450	19.29
38	28,907	879	3.04	28,468	545,113	18.86
39	28,028	879	3.14	27,588	516,645	18.43
40	27,140	879	3.24	26,710	489,057	18.01
41	26,270	875	3.33	25,832	462,347	17.60
42	25,395	871	3.43	24,960	436,515	17.19
43	24,524	865	3.53	24,092	411,555	16.78
44	23,659	856	3.62	23,231	387,463	16.38
45	22,803	849	3.72	22,378	364,232	15.97
46	21,954	842	3.83	21,533	341,854	15.57
47	21,112	839	3.93	20,698	320,321	15.17
48	20,283	839	4.04	19,874	299,623	14.77
49	19,464	808	4.15	19,060	279,749	14.37
50	18,656	798	4.28	18,257	260,689	13.97
51	17,858	787	4.41	17,464	242,432	13.58
52	17,071	775	4.54	16,684	224,968	13.18
53	16,296	762	4.68	15,915	208,284	12.78
54	15,534	750	4.83	15,159	192,360	12.38
55	14,784	737	4.98	14,416	177,210	11.99
56	14,047	724	5.15	13,685	162,794	11.59
57	13,323	711	5.34	12,968	149,109	11.19
58	12,612	698	5.53	12,263	136,141	10.79
59	11,914	685	5.75	11,573	123,878	10.40
60	11,229	674	6.00	10,892	112,306	10.00
61	10,555	661	6.26	10,224	101,414	9.61
62	9,894	648	6.55	9,570	91,190	9.22
63	9,246	634	6.86	8,929	81,620	8.83
64	8,612	620	7.20	8,302	72,691	8.44
65	7,992	605	7.57	7,690	64,389	8.06
66	7,387	590	7.98	7,092	56,690	7.68
67	6,797	574	8.44	6,510	49,697	7.30
68	6,223	557	8.95	5,944	43,097	6.93
69	5,666	539	9.51	5,395	37,153	6.56
70	5,127	521	10.17	4,866	31,757	6.19
71	4,604	502	10.89	4,355	26,891	5.84
72	4,104	480	11.70	3,864	22,536	5.49
73	3,624	457	12.60	3,396	18,672	5.15
74	3,167	431	13.60	2,952	15,276	4.82
75	2,736	402	14.71	2,535	12,324	4.50
76	2,334	372	15.92	2,148	9,789	4.19
77	1,962	340	17.31	1,792	7,441	3.89
78	1,622	306	18.85	1,486	5,849	3.61
79	1,316	271	20.59	1,180	4,380	3.33
80	1,045	236	22.55	927	3,200	3.06
81	809	200	24.73	709	2,273	2.81
82	609	166	27.21	526	1,564	2.57
83	443	133	29.95	376	1,038	2.34
84	310	102	32.97	259	682	2.13
85	208	76	36.35	170	403	1.93
86	132	53	40.02	106	233	1.75
87	79	35	43.97	62	127	1.58
88	44	21	48.18	34	85	1.42
89	23	12	52.61	17	51	1.28
90	11	6	57.20	8	31	1.15
91	5	3	62.23	4	14	1.03
92	2	1	68.29	2	6	.89
93	1	1	75.84	1	2	.75
94	..	..	..	..	..	..

TABLE R.
LIFE TABLE, ALL INDIA.
Females.

Females.						
Age x.	Living at age x.	Dying between ages x and x+1.	Mortality per cent.	Living between ages x and x+1.	Living above age x.	Mean after life-time at age x.
1	2	3	4	5	6	7
0	100,000	28,460	28.46	77,558	2,330,505	23.31
1	71,540	6,165	8.62	68,214	2,232,047	31.49
2	65,375	4,027	6.16	63,224	2,184,733	33.42
3	61,348	2,766	4.51	59,579	2,121,509	34.58
4	58,582	1,974	3.37	57,541	2,061,630	35.19
5	56,608	1,485	2.62	55,830	2,004,089	35.40
6	55,123	1,169	2.12	54,516	1,948,259	35.34
7	53,954	959	1.78	53,459	1,893,743	35.10
8	52,995	817	1.54	52,577	1,840,284	34.73
9	52,178	728	1.40	51,808	1,787,707	34.26
10	51,450	663	1.29	51,115	1,735,899	33.74
11	50,787	627	1.24	50,471	1,684,784	33.17
12	50,160	615	1.23	49,852	1,634,313	32.58
13	49,545	615	1.24	49,238	1,584,461	31.98
14	48,931	627	1.28	48,618	1,535,233	31.38
15	48,304	646	1.34	47,981	1,486,605	30.78
16	47,658	670	1.41	47,323	1,438,624	30.19
17	46,988	695	1.48	46,640	1,391,301	29.61
18	46,293	722	1.56	45,932	1,344,661	29.05
19	45,571	743	1.63	45,200	1,298,729	28.50
20	44,838	761	1.70	44,448	1,253,529	27.96
21	44,067	774	1.76	43,680	1,209,081	27.44
22	43,293	786	1.82	42,900	1,165,401	26.92
23	42,507	798	1.88	42,108	1,122,501	26.41
24	41,709	808	1.94	41,305	1,080,393	25.90
25	40,901	818	2.00	40,492	1,039,088	25.40
26	40,083	825	2.06	39,670	998,598	24.91
27	39,258	832	2.12	38,842	958,926	24.43
28	38,426	838	2.18	38,007	920,084	23.94
29	37,588	843	2.24	37,166	882,077	23.47
30	36,745	848	2.31	36,321	844,911	22.99
31	35,897	852	2.37	35,471	808,590	22.53
32	35,045	855	2.44	34,618	773,119	22.06
33	34,190	858	2.51	33,761	738,501	21.60
34	33,332	861	2.58	32,902	704,740	21.14
35	32,471	863	2.66	32,040	671,838	20.69
36	31,608	865	2.74	31,176	639,798	20.24
37	30,743	867	2.82	30,310	608,622	19.80
38	29,876	868	2.91	29,442	578,312	19.36
39	29,008	869	3.00	28,574	548,870	18.92
40	28,139	868	3.08	27,705	520,296	18.49
41	27,271	865	3.17	26,838	492,591	18.06
42	26,406	861	3.26	25,976	465,733	17.64
43	25,545	856	3.35	25,117	439,777	17.22
44	24,689	850	3.44	24,264	414,660	16.80
45	23,839	842	3.53	23,418	390,396	16.38
46	22,997	834	3.63	22,580	366,978	15.96
47	22,163	825	3.72	21,750	344,398	15.54
48	21,338	816	3.83	20,930	322,648	15.12
49	20,522	808	3.94	20,118	301,718	14.70
50	19,714	800	4.06	19,314	281,600	14.28
51	18,914	791	4.18	18,518	262,286	13.87
52	18,123	781	4.31	17,732	243,768	13.45
53	17,342	770	4.44	16,957	226,036	13.03
54	16,572	759	4.58	16,192	209,079	12.62
55	15,813	749	4.74	15,433	192,887	12.20
56	15,064	739	4.91	14,694	177,449	11.78
57	14,325	729	5.09	13,960	162,755	11.36
58	13,596	720	5.30	13,236	148,795	10.94
59	12,876	711	5.52	12,520	135,559	10.53
60	12,165	703	5.78	11,814	123,039	10.11
61	11,462	694	6.06	11,115	111,225	9.70
62	10,768	684	6.36	10,426	100,110	9.30
63	10,084	674	6.68	9,747	89,684	8.89
64	9,410	663	7.04	9,078	79,937	8.49
65	8,747	651	7.44	8,422	70,859	8.10
66	8,096	638	7.88	7,777	62,487	7.71
67	7,458	623	8.36	7,146	54,680	7.33
68	6,827	608	8.89	6,531	47,514	6.95
69	6,207	590	9.48	5,932	40,983	6.58
70	5,607	570	10.12	5,352	35,051	6.22
71	5,067	548	10.82	4,793	29,699	5.86
72	4,519	525	11.63	4,256	24,908	5.51
73	3,994	500	12.51	3,744	20,650	5.17
74	3,494	472	13.50	3,258	16,906	4.84
75	3,022	441	14.60	2,802	13,648	4.52
76	2,581	409	15.88	2,376	10,846	4.20
77	2,172	374	17.22	1,985	8,470	3.90
78	1,798	340	18.89	1,628	6,485	3.61
79	1,458	299	20.52	1,303	4,857	3.33
80	1,159	251	22.49	1,023	3,549	3.06
81	898	222	24.69	787	2,621	2.81
82	676	184	27.16	594	1,734	2.57
83	492	147	29.90	418	1,150	2.34
84	345	114	32.90	288	732	2.12
85	231	84	36.28	189	444	1.93
86	147	59	39.93	118	255	1.74
87	88	39	44.00	68	137	1.56
88	49	24	48.50	37	69	1.40
89	25	13	53.50	15	32	1.24
90	12	7	59.07	8	14	1.10
91	5	3	65.30	4	6	.96
92	2	1	72.89	2	2	.84
93	1	1	80.34	1	1	.72
94	..	..	89.31	..	..	..
95	..	..	..	..	..	..
96	..	..	..	..	..	..
97	..	..	..	..	..	..
98	..	..	..	..	..	..
99	..	..	..	..	..	..

APPENDIX.

SYNOPSIS OF GRADUATION FORMULAS ADOPTED.

(1) Age-Distribution—Male Lives.

Values of Y_x = population living at curtate age x .

Bengal—

$$Y_x = .710668 x^{.007758} (90 - x)^{1.863567}.$$

After age 59, a subtractive correction of the form $(a + bx^2)$ was applied.

Bombay—

$$Y_x = .0166468 (x + 2.35770)^{.329059} (90.97335 - x)^{2.517923}.$$

Burma—

$$Y_x = .432273 x^{.042484} (95 - x)^{1.811777}.$$

After age 59, an expression of the form $(a - bx - km^x)$ was substituted.

Madras—

$$Y_x = .60994 x^{.066316} (90 - x)^{1.865926}.$$

From age 10 to age 40, a subtractive expression equal to $.000064 (40 - x) + .000038 (40 - x)^2 - .0000022 (40 - x)^3$ was applied to the logarithm of Y_x , deduced as above.

United Provinces—

$$Y_x = .054608 (x + 1.33175)^{.278872} (90.88535 - x)^{2.273459}.$$

Punjab—

The graduation formula employed was

$$Y_x = \frac{1}{\sqrt{\pi}} \int_{-\infty}^x e^{-t^2} dt \quad (normal \text{ curve of error})$$

where Y_x represents the population recorded above age x , relative to a total population of 1 at all ages; and x is a function of x , determined, by examination of the unadjusted data, as of the form $(a + bx + cx^2 + dx^3)$ for all values of x .

The above formulae were employed, generally speaking, from about age 18 to the end of life. For ages under 18, the age-distribution was determined by combining the rate of mortality shown amongst the Proclaimed clans, modified as explained below, with the reduced annual rate of increase of the population at each age.

(2) Rates of mortality at age 0—12, based on Proclaimed Clans data.

Mr. G. F. Hardy's formulae for the graduation of the rates of mortality were as follows:—

$$l_x = 53,675 - 492x + 24,610 (.65)^x + \frac{21,715}{20x + 1}.$$

$$L_x = \int_x^{x+1} l_x dx = 53,429 - 492x + 19,997.6 (.65)^x + 2,500 \log_{10} \frac{20x + 21}{20x + 1}.$$

These formulae were employed in the United Provinces, from ages 0 to 12, and in the Punjab from age 0 to 6, after which the values were adjusted, so as to make a smooth junction with those already deduced for ages 15 and upwards.

The formulae given above were modified in the remaining Provinces as under:—

Bengal—

$$l_x = 53,675 - 567x + 24,610 (.65)^x + \frac{21,715}{20x + 1}$$

$$L_x = 53,391.5 - 567x + 19,997.6 (.65)^x + 2,500 \log_{10} \frac{20x + 21}{20x + 1}$$

Bombay—

$$l_x = 53,675 - 392x + 24,610 (.65)^x + \frac{16,286.25}{20x + 1}$$

$$L_x = 53,479 - 392x + 19,997.6 (.65)^x + 2,500 \log_{10} \frac{20x + 21}{20x + 1}$$

Burma—

$$l_x = 65,256.25 - 369x + 18,457.5 (.65)^x + \frac{16,286.25}{20x + 1}$$

$$L_x = 65,071.75 - 369x + 14,998.2 (.65)^x + 1,875 \log_{10} \frac{20x + 21}{20x + 1}$$

Madras.—The method followed in this province (of reducing the force of mortality in the Proclaimed Clans Table by 10½ per cent. at ages 0—12) does not lend itself readily to expressions similar to the above, but the following formulae give results closely approximating to those set out in Table L, which were deduced by a somewhat different method:—

$$l_x = 57,016 - 481x + 23,341 (.65)^x + \frac{19,643}{20x + 1}$$

$$L_x = 56,776 - 481x + 18,964 (.65)^x + 2,261.5 \log_{10} \frac{20x + 21}{20x + 1}.$$

(3) Decennial rates of increase in male population.

Values of $\log r_x$, where r_x is the rate of increase in the decennium at curtate age x .

Bengal—

$$\log r_x = .03 (e) - \frac{(x - 29)^2}{500} \log_e 10 + .015 (e) - \frac{(x - 60)^2}{333.3} \log_e 10$$

$$+ .045 - .0016x \text{ (at ages 0—25 only)}$$

$$+ \frac{500}{1 + .32(x - 25) + 3.9792(x - 25)^2} \text{ (at ages 25—37 only).}$$

Bombay—

$$\log r_x = e^{-(3 + .04x)} \text{ (at ages 0—20 only)}$$

$$.02237077 - .000894831x + .0000600851x^2$$

$$- .000000659986x^3 \text{ (age 20 to end of life)}$$

These two curves join at age 20, at which point the differential coefficient of $\log r$ was made identical for both expressions.

Burma—

$$\log r_x = .06 - .02 (e) - \frac{(x-28)^2}{200} \log_e 10 - .015805 (.73114)^x$$

Madras—

$$\log r_x = .040577 - .000907 (x-19) + .000028 (x-19)^2 \text{ (ages 0-20)}$$

$$.039855 - .0005585 (x-37) + .0000016 (x-37)^2 \text{ (ages 20-60)}$$

$$.046476 + .0019807 (x-60) - .000046 (x-60)^2 \text{ (ages 60 to end)}$$

Punjab—

$$\log r_x = .00380; r = 1.0088, \text{ at all ages.}$$

United Provinces—

$$\log r_x = .025 (e) - \frac{(x-53)^2}{288} + .017 (e) - \frac{(x-13)^2}{69.106} - .008$$

The 31st October 1912.

$$- .00865 (.83255)^x$$

T. G. ACKLAND.

SUBSIDIARY TABLE I.

Age distribution of 10,000 of each sex in India and the main provinces.

Age.	1911.		1901.		1891.		1881.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9
INDIA.								
TOTAL	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0-1	320	336	266	275	326	347	263	275
1-2	161	176	163	175	173	188	220	237
2-3	271	298	274	297	287	319	242	271
3-4	294	329	276	303	318	354	295	329
4-5	281	294	275	288	305	319	298	307
Total 0-5	1,327	1,433	1,254	1,339	1,409	1,527	1,318	1,419
5-10	1,383	1,383	1,394	1,382	1,428	1,396	1,432	1,383
10-15	1,165	997	1,264	1,082	1,139	946	1,214	1,006
15-20	848	826	866	835	835	811	811	779
20-25	822	930	787	892	802	897	799	905
25-30	896	909	879	895	876	904	896	925
30-35	829	835	848	851	842	846	885	881
35-40	622	556	609	567	613	555	597	527
40-45	634	631	649	652	638	626	642	645
45-50	380	338	370	339	366	323	344	318
50-55	432	443	437	452	411	426	436	464
55-60	177	164	177	169	179	170	161	157
60-65	257	305	466	555	462	573	475	591
65-70	83	75						
70 and over	145	175						
Mean Age	24.7	24.7	24.7	25.1	24.4	24.9	24.5	25.2
BENGAL, BIHAR AND ORISSA.								
TOTAL	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0-1	316	326	285	291	317	333	232	233
1-2	137	148	138	150	141	152	235	250
2-3	282	310	297	328	293	323	292	322
3-4	312	351	314	351	335	373	351	354
4-5	295	308	293	306	307	318	320	321
Total 0-5	1,342	1,443	1,327	1,426	1,393	1,499	1,430	1,510
5-10	1,561	1,538	1,521	1,490	1,556	1,474	1,555	1,445
10-15	1,209	994	1,247	1,015	1,219	974	1,139	901
15-20	840	890	850	896	818	837	757	765
20-25	759	903	752	884	702	827	711	842
25-30	909	933	898	905	840	894	882	935
30-35	806	777	795	778	808	819	860	856
35-40	657	559	625	551	645	566	630	551
40-45	573	547	598	584	627	609	633	633
45-50	370	328	372	330	365	318	353	316
50-55	367	384	392	406	394	410	409	441
55-60	170	169	168	168	167	168	163	166
60 and over	437	535	449	567	466	605	478	639
Mean Age	24.4	24.5	24.3	24.5	24.0	24.8	24.2	25.2

SUBSIDIARY TABLE I—*contd.*Age distribution of 10,000 of each sex in India and the main provinces—*contd.*

Age.	1911.		1901.		1891.		1881.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9
BOMBAY.								
TOTAL	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0-1	331	355	206	214	337	362	276	291
1-2	175	196	150	164	164	186	190	210
2-3	295	330	252	276	300	342	223	253
3-4	291	331	252	277	314	358	254	288
4-5	288	307	287	303	320	339	292	305
Total 0-5	1,380	1,519	1,147	1,234	1,435	1,587	1,235	1,347
5-10	1,261	1,268	1,413	1,434	1,414	1,395	1,460	1,433
10-15	1,084	925	1,325	1,148	1,063	886	1,308	1,109
15-20	843	791	838	807	803	753	860	820
20-25	881	971	897	894	846	935	865	988
25-30	930	940	945	926	941	932	951	946
30-35	830	874	838	881	880	872	861	847
35-40	655	587	653	602	621	552	629	579
40-45	649	663	628	649	629	636	515	497
45-50	395	352	378	356	358	319	401	416
50-55	435	449	408	431	421	442	381	417
55-60	175	155	176	163	163	149	179	193
60-65	68	205	374	473	426	542	357	458
65-70	110	136						
70 and over								
Mean Age	24.1	24.0	24.2	24.5	24.0	24.2	23.6	24.1
MADRAS.								
TOTAL	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0-1	285	284	294	297	330	338	301	301
1-2	173	177	158	161	171	178	201	207
2-3	283	285	280	288	315	327	212	232
3-4	309	315	310	322	352	365	262	280
4-5	283	280	297	300	314	316	271	276
Total 0-5	1,333	1,341	1,339	1,368	1,482	1,524	1,247	1,286
5-10	1,334	1,312	1,434	1,406	1,391	1,346	1,380	1,354
10-15	1,220	1,091	1,300	1,140	1,084	923	1,318	1,132
15-20	876	845	825	757	828	783	875	798
20-25	817	947	711	868	820	973	819	974
25-30	792	836	755	824	821	865	827	873
30-35	745	816	816	891	828	885	892	927
35-40	590	533	520	599	592	505	591	488
40-45	643	656	670	675	670	661	650	660
45-50	410	355	376	320	365	305	329	290
50-55	454	408	465	430	427	400	416	474
55-60	218	189	190	162	177	157	168	162
60-65	295	320						
65-70	94	90	520	594	515	613	498	592
70 and over	179	201						
Mean Age	25.1	25.3	24.5	24.8	24.6	25.0	24.6	25.2

SUBSIDIARY TABLE I—*concl.*Age distribution of 10,000 of each sex in India and the main provinces—*concl.*

Age.	1911.		1901.		1891.		1881.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9
PUNJAB.								
TOTAL	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0-1	381	444	301	327	409	466	318	357
1-2	146	172	180	177	288	313	179	201
2-3	229	264	255	272	292	327	205	231
3-4	359	302	256	284	291	309	247	280
4-5	262	290	273	290	323	326	267	287
Total 0-5	1,277	1,472	1,245	1,350	1,603	1,741	1,216	1,356
5-10	1,333	1,388	1,354	1,365	1,364	1,355	1,354	1,353
10-15	1,189	1,029	1,231	1,087	1,054	916	1,216	1,069
15-20	916	817	813	843	1,045	1,078	902	861
20-25	850	889	794	852	927	948	856	915
25-30	874	884	837	874	942	1,000	852	882
30-35	790	828	820	861	648	602	833	859
35-40	536	514	551	542	659	708	514	495
40-45	601	652	642	673	350	326	648	693
45-50	377	347	355	337	504	503	354	323
50-55	475	460	468	462	201	163	496	473
55-60	182	152	184	159	372	364	174	146
60-65	236	297						
65-70	195	71	606	590	326	550	585	575
70 and over	170	200						
Mean Age	25.2	24.7	25.0	24.9	23.0	22.6	25.0	24.7
UNITED PROVINCES.								
TOTAL	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0-1	320	336	304	314	342	359	282	280
1-2	144	159	172	188	148	165	220	248
2-3	211	238	275	298	247	281	192	219
3-4	245	279	244	266	294	335	266	299
4-5	240	254	233	246	277	296	279	287
Total 0-5	1,160	1,266	1,228	1,312	1,308	1,486	1,228	1,333
5-10	1,339	1,328	1,299	1,284	1,328	1,290	1,337	1,276
10-15	1,226	1,028	1,267	1,074	1,168	941	1,248	999
15-20	859	756	864	704	838	732	807	719
20-25	868	929	829	886	858	899	848	915
25-30	803	913	886	896	867	895	931	945
30-35	849	854	870	882	892	910	918	927
35-40	597	588	563	563	504	544	531	525
40-45	692	711	690	719	703	722	695	737
45-50	382	362	373	358	341	321	327	315
50-55	478	502	486	510	483	517	496	537
55-60	168	162	173	173	152	150	149	144
60-65	275	327						
65-70	65	66	452	590	500	643	485	628
70 and over	143	180						
Mean Age	25.08	25.7	24.9	25.6	24.8	25.4	26.9	25.6

SUBSIDIARY TABLE II.

Age distribution of 10,000 of each sex in each main religion.

AGE AND RELIGION.	1911.		1901.		1891.		1881.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9
HINDU.	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0—5	1,293	1,388	1,206	1,286	1,367	1,484	1,277	1,375
5—10	1,336	1,332	1,361	1,346	1,400	1,372	1,400	1,354
10—15	1,151	984	1,268	1,082	1,134	938	1,220	1,011
15—20	851	805	871	814	831	782	821	769
20—40	3,216	3,276	3,157	3,229	3,169	3,234	3,216	3,282
40—60	1,073	1,642	1,682	1,676	1,635	1,596	1,601	1,612
60 and over	480	573	455	567	464	594	465	597
Mean Age	24.9	25.2	24.9	25.3	24.6	25.2	24.6	25.4
MUSALMAN.	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0—5	1,397	1,550	1,380	1,495	1,545	1,680	1,415	1,524
5—10	1,526	1,548	1,509	1,510	1,515	1,469	1,528	1,460
10—15	1,208	1,015	1,261	1,068	1,131	925	1,197	976
15—20	833	872	840	869	847	888	777	800
20—40	3,047	3,123	3,010	3,097	3,040	3,136	3,023	3,132
40—60	1,493	1,395	1,506	1,439	1,471	1,396	1,545	1,518
60 and over	496	497	494	522	451	506	515	590
Mean Age	23.9	23.3	24.1	24.0	23.7	23.8	24.3	24.6
CHRISTIAN.	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0—5	1,356	1,491	1,290	1,449	1,347	1,551	1,266	1,457
5—10	1,314	1,411	1,384	1,479	1,308	1,421	1,298	1,450
10—15	1,199	1,178	1,283	1,244	1,122	1,111	1,127	1,138
15—20	882	945	865	905	869	922	828	884
20—40	3,357	3,132	3,299	3,099	3,486	3,147	3,722	3,208
40—60	1,406	1,398	1,483	1,394	1,468	1,389	1,383	1,394
60 and over	428	445	396	430	401	459	376	469
Mean Age	24.0	23.3	24.0	23.4	24.2	23.6	24.2	23.8
ANIMISTIC.	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0—5	1,640	1,724	1,370	1,449	1,544	1,637	1,642	1,642
5—10	1,583	1,521	1,565	1,515	1,718	1,642	1,654	1,654
10—15	1,099	960	1,323	1,151	1,249	1,054	1,054	1,054
15—20	753	802	872	898	744	763	763	763
20—40	3,085	3,234	3,080	3,196	3,890	3,068	Not available.	Not available.
40—60	1,455	1,312	1,453	1,383	1,450	1,313	Not available.	Not available.
60 and over	385	447	337	408	405	473	Not available.	Not available.
Mean Age	22.9	22.8	22.2	23.3	22.8	23.0	Not available.	Not available.

SUBSIDIARY TABLE III.

Proportion of children under 10 and of persons over 60 to those aged 15—40; also of married females aged 15—40 per 100 females.

PROVINCE, STATE OR AGENCY.	PROPORTION OF CHILDREN, BOTH SEXES, PER 100						PROPORTION OF PERSONS OVER 60 PER 100 AGED 15-40.						Number of married females aged 15-40 per 100 females of all ages.		
	Persons aged 15-40.			Married females aged 15-40.			1911.		1901.		1891.				
	1911.	1901.	1891.	1911.	1901.	1891.	Males.	Females.	Males.	Females.	Males.	Females.	1911.	1901.	1891.
INDIA.	68	67	72	167	167	174	12	14	12	14	12	14	34	33	34
Provinces.	69	69	73	169	170	175	12	14	12	14	12	15	33	33	34
Ajmer-Merwara	58	38	72	144	100	171	8	11	6	9	11	14	39	38	35
Assam	78	73	79	197	192	202	10	10	9	9	11	12	33	33	32
Bengal	73	73	75	181	182	187	11	12	11	13	12	14	34	33	32
Bihar and Orissa	73	71	78	168	164	174	12	16	12	16	13	17	33	33	33
Bombay	64	65	71	159	166	171	10	12	10	12	11	13	35	33	35
Burma	65	64	65	211	206	212	14	16	13	16	14	17	26	26	25
Central Provinces and Berar	73	62	80	160	148	177	12	15	9	12	14	17	36	34	34
Coorg	45	48	51	156	164	163	5	8	5	7	4	7	32	32	35
Madras	68	73	73	165	179	175	15	15	14	15	13	15	32	31	32
N.-W. F. Province	82	77	82	212	205	213	16	13	13	12	7	6	32	32	35
Punjab	70	69	72	183	170	178	15	15	16	15	8	7	34	34	37
United Provinces	62	64	67	150	153	157	12	14	12	15	12	16	35	34	35
States and Agencies.	67	60	70	162	157	171	11	13	10	12	11	13	34	33	35
Assam State	88	82	...	232	209	...	14	15	16	17	...	...	27	29	...
Baroda State	60	50	68	145	135	162	8	10	6	9	9	12	38	34	36
Bengal States	74	73	75	200	208	210	11	10	11	10	14	13	33	31	30
Bihar and Orissa States	79	78	83	189	190	199	8	11	9	11	9	13	33	32	32
Bombay States	68	60	73	160	153	110	10	12	7	10	10	13	36	34	35
Central India Agency	64	49	67	158	199	...	8	11	7	9	9	12	36	33	...
Central Provinces States	84	73	89	188	184	203	9	12	7	10	10	14	35	33	33
Hyderabad State	68	62	71	157	157	164	14	15	12	13	13	15	35	33	35
Kashmir State	77	77	81	183	190	...	17	14	16	15	17	14	34	33	...
Madras States	66	64	61	170	168	156	11	12	10	11	11	12	33	32	33
Mysore State	64	75	68	163	193	176	15	16	14	17	11	14	31	29	32
Punjab States	63	62	67	163	155	169	14	14	15	15	7	6	35	35	38
Rajputana Agency	63	49	70	151	132	...	10	12	9	11	11	14	37	34	...
Sikkim State	72	62	...	186	157	...	15	17	16	15	...	...	31	34	...
United Provinces States	66	60	64	152	140	149	12	14	10	13	15	20	36	37	36

NOTE.—In the cases where the columns have been left blank, either the civil condition was not recorded or it was recorded for a very small number of persons.

SUBSIDIARY TABLE IV.

Variation in population at certain age-periods.

PROVINCE, STATE, OR AGENCY.	Period.	VARIATION PER CENT. IN POPULATION (INCREASE +, DECREASE -).					
		All ages.	0-10.	10-15.	15-40.	40-60.	60 and over.
		3	4	5	6	7	8
INDIA	1881-1891	+ 11.2	+ 16.1	+ 4.3	+ 10.8	+ 9.7	+ 8.0
	1891-1901	+ 1.8	+ 5.1	+ 14.5	+ 2.3	+ 5.2	+ 0.3
	1901-1911	+ 6.6	+ 9.7	+ 1.7	+ 7.3	+ 5.1	+ 8.6
Ajmer-Merwara	1881-1891	+ 17.7	+ 20.1	+ 55.5	+ 5.5	+ 23.2	+ 35.2
	1891-1901	+ 12.1	+ 44.5	+ 8.4	+ 5.1	+ 4.3	+ 34.5
	1901-1911	+ 5.1	+ 53.5	+ 39.6	+ 0.8	+ 1.7	+ 20.5
Assam	1881-1891	+ 15.5	+ 14.1	+ 25.5	+ 16.4	+ 11.8	+ 9.8
	1891-1901	+ 7.4	+ 4.2	+ 7.1	+ 12.2	+ 7.0	+ 9.7
	1901-1911	+ 15.2	+ 16.8	+ 9.8	+ 12.6	+ 16.4	+ 18.8
Bengal	1881-1891	+ 7.5	+ 9.6	+ 11.5	+ 7.0	+ 15.4	+ 19.7
	1891-1901	+ 7.7	+ 6.1	+ 14.3	+ 8.6	+ 6.1	+ 0.6
	1901-1911	+ 8.0	+ 9.3	+ 5.8	+ 10.1	+ 3.6	+ 0.9
Bihar and Orissa	1881-1891	+ 6.4	+ 3.4	+ 18.0	+ 5.2	+ 7.0	+ 7.9
	1891-1901	+ 1.1	+ 3.4	+ 1.4	+ 5.2	+ 0.3	+ 1.9
	1901-1911	+ 3.5	+ 6.6	+ 3	+ 3.5	+ 7	+ 2.7
Bombay	1881-1891	+ 15.6	+ 23.3	+ 6.5	+ 13.6	+ 20.5	+ 37.5
	1891-1901	+ 5.5	+ 15.2	+ 19.8	+ 4.1	+ 3.4	+ 17.4
	1901-1911	+ 6.4	+ 10.4	+ 13.6	+ 7.7	+ 9.2	+ 16.5
Burma	1881-1891	+ 24.6	+ 19.6	+ 22.9	+ 28.6	+ 23.1	+ 30.1
	1891-1901	+ 21.3	+ 22.3	+ 13.2	+ 23.3	+ 22.1	+ 14.7
	1901-1911	+ 16.2	+ 15.3	+ 24.7	+ 14.2	+ 17.4	+ 25.5
C. P. and Berar	1881-1891	+ 10.7	+ 11.5	+ 13.3	+ 6.6	+ 12.3	+ 11.8
	1891-1901	+ 7.9	+ 21.8	+ 4.1	+ 0.1	+ 4.0	+ 30.6
	1901-1911	+ 17.9	+ 33.5	+ 11.3	+ 15.0	+ 15.0	+ 42.2
Coorg	1881-1891	+ 2.9	+ 10.6	+ 18.6	+ 8.3	+ 8.1	+ 8.2
	1891-1901	+ 4.4	+ 3.9	+ 33.8	+ 1.8	+ 7.1	+ 9.4
	1901-1911	+ 3.1	+ 7.4	+ 13.6	+ 1.1	+ 3.6	+ 12.1
Madras	1881-1891	+ 18.5	+ 29.2	+ 3.0	+ 16.1	+ 21.5	+ 23.9
	1891-1901	+ 7.8	+ 4.3	+ 31.3	+ 3.3	+ 11.6	+ 6.3
	1901-1911	+ 8.4	+ 3.9	+ 2.7	+ 11.8	+ 10.2	+ 12.7
N. W. F. Province	1881-1891	+ 17	+ 32	+ 2	+ 26	+ 8	+ 43
	1891-1901	+ 10	+ 3	+ 38	+ 3	+ 33	+ 105
	1901-1911	+ 7	+ 9	+ 6	+ 3	+ 11	+ 16
Punjab	1881-1891	+ 10.1	+ 26.5	+ 5.0	+ 18.2	+ 7.0	+ 40.9
	1891-1901	+ 8.2	+ 5.1	+ 27.2	+ 0.2	+ 27.1	+ 108.9
	1901-1911	+ 2.2	+ 0.3	+ 6.2	+ 1.9	+ 3.2	+ 4.6
United Provinces	1881-1891	+ 6.3	+ 9.9	+ 0.3	+ 5.5	+ 6.1	+ 9.6
	1891-1901	+ 1.6	+ 3.2	+ 12.2	+ 1.6	+ 4.3	+ 4.2
	1901-1911	+ 0.9	+ 1.7	+ 4.7	+ 0.7	+ 1.6	+ 3.0
Baroda State	1881-1891	+ 10.5	+ 14.6	+ 0.8	+ 10.9	+ 9.1	+ 16.7
	1891-1901	+ 19.2	+ 35.6	+ 1.1	+ 12.4	+ 14.7	+ 40.6
	1901-1911	+ 4.1	+ 22.0	+ 28.4	+ 2.2	+ 4.9	+ 20.9
Central India Agency	1891-1901	+ 16.4	+ 32.9	+ 10.1	+ 9.3	+ 6.8	+ 39.2
	1901-1911	+ 8.4	+ 35.7	+ 12.9	+ 4.2	+ 3.0	+ 19.1
Cochin State	1891-1901	+ 12.3	+ 11.8	+ 18.4	+ 11.6	+ 11.1	+ 9.1
	1901-1911	+ 13.1	+ 29.8	+ 7.9	+ 14.4	+ 13.7	+ 15.8
Hyderabad State	1881-1891	+ 19.2	+ 26.9	+ 2.7	+ 17.0	+ 10.9	+ 30.2
	1891-1901	+ 3.4	+ 14.2	+ 18.7	+ 2.8	+ 3.4	+ 12.2
	1901-1911	+ 30.0	+ 28.8	+ 3.1	+ 18.0	+ 18.9	+ 33.6
Kashmir State	1891-1901	+ 15.0	+ 8.0	+ 48.1	+ 13.2	+ 14.1	+ 14.1
	1901-1911	+ 6.8	+ 8.2	+ 1.6	+ 8.6	+ 2.5	+ 9.5
Mysore State	1881-1891	+ 18.1	+ 42.1	+ 22.3	+ 10.9	+ 28.6	+ 49.6
	1891-1901	+ 12.1	+ 9.0	+ 39.6	+ 0.7	+ 20.8	+ 31.3
	1901-1911	+ 4.8	+ 4.4	+ 3.9	+ 12.7	+ 0.4	+ 15.3
Rajputana Agency	1891-1901	+ 13.3	+ 37.6	+ 2.8	+ 11.3	+ 13.4	+ 27.3
	1901-1911	+ 5.3	+ 34.7	+ 29.6	+ 6.0	+ 1.6	+ 19.0
Travancore State	1891-1901	+ 11.4	+ 21.5	+ 21.4	+ 14.3	+ 9.3	+ 0.4
	1901-1911	+ 5.2	+ 19.1	+ 19.4	+ 13.6	+ 14.6	+ 19.8

NOTE.—Column 3 shows variation in population for which age was returned and not in total population. For the purpose of this table unspecified ages have been left out of account. Except in the case of C. P. and Berar the percentages are based on variations in unadjusted figures for previous censuses. In calculating the figures for Bihar and Orissa, Sambalpur and the Feudatory States have been left out of account.

SUBSIDIARY TABLE V.

Age distribution of 1,000 of each sex in certain castes.

CASTE.	MALES. NUMBER PER MILL AGED					FEMALES. NUMBER PER MILL AGED					
	0-5.	5-12.	12-15.	15-40.	40 and over.	0-5.	5-12.	12-15.	15-40.	40 and over.	
	1	2	3	4	5	6	7	8	9	10	11
ASSAM.											
Ahom	152	218	62	380	169	182	223	59	383	153	
Jugi	143	199	61	399	198	154	193	47	413	153	
Kachari (Animist)	199	206	55	360	180	211	199	51	378	161	
Kaitia	156	202	64	379	199	173	210	51	382	154	
Koch	160	211	63	374	192	171	210	48	391	180	
Kshattriya (Manipuri)	158	224	60	362	196	157	216	59	363	200	
BENGAL.											
Bagdi	123	180	77	412	208	129	164	54	426	217	
Balshab	107	163	69	404	257	96	128	60	413	308	
Barul	136	184	75	397	208	149	180	63	413	195	
Bauri	129	212	102	389	168	159	188	69	407	197	
Brahman	113	162	71	433	221	132	173	63	402	230	
Dhoba	119	180	75	422	204	135	184	59	425	187	
Goala	100	143	68	459	225	125	162	60	414	253	
Hari	123	189	72	411	205	138	175	60	430	197	
Jogi (Hindu)	124	191	72	406	208	134	189	56	422	199	
Jolaha	123	180	74	424	190	142	187	65	417	189	
Kalbaria, (Chhet)	123	178	80	412	202	134	173	63	420	208	
Kalbaria, (Jailya)	122	182	74	417	205	133	178	63	427	193	
Kamar	116	169	79	424	215	132	169	66	418	215	
Kayastha	121	174	75	418	212	139	177	57	404	223	
Malo	121	172	68	412	227	135	167	61	419	218	
Muchi	121	184	71	425	199	143	185	68	422	182	
Napit (Hajjam)	120	173	72	423	208	133	173	61	418	210	
Namasudra	126	193	71	396	201	145	186	58	424	187	
Pod	143	210	73	379	190	160	199	66	401	183	
Rajbansl	133	198	65	397	207	159	196	51	416	175	
Sadgop	111	162	79	418	230	116	157	67	410	250	
Santal	132	224	78	359	187	135	213	67	394	161	
Sutradhar	118	183	71	415	213	133	180	65	420	202	
Tanti and Taiwa	116	155	75	439	215	127	163	66	418	236	
Teli and Tili	113	161	79	431	216	121	158	66	416	239	
BIHAR AND ORISSA.											
Babhan	106	190	66	408	230	110	175	45	396	274	
Brahman	114	184	73	406	223	119	171	52	396	250	
Chamar	145	234	89	367	185	141	200	54	401	204	
Chasa	127	199	79	395	200	131	182	65	392	219	
Dhanuk	130	220	59	381	210	127	189	48	403	233	
Dhobi	135	211	71	388	196	133	190	52	404	311	
Dhuniya	148	242	61	353	194	142	207	66	403	216	
Gaura	130	200	83	395	192	122	178	66	403	216	
Goala (Ahi)	126	213	66	393	202	135	196	57	398	216	
Hajjam	139	215	73	380	193	138	188	59	400	217	
Jolaha	156	235	73	345	191	145	201	58	385	210	
Kahar	139	213	71	379	198	139	171	51	406	249	
Kalwar	130	214	65	387	204	133	184	51	394	238	
Kandh (Animist)	151	205	67	417	161	154	194	61	430	161	
Kandh (Hindu)	145	200	67	412	178	154	185	53	420	183	
Kandu	135	217	68	382	198	136	184	49	396	233	
Kayastha	113	178	63	401	240	116	175	50	393	269	
Kewat	133	196	75	404	192	139	190	63	403	214	
Khandayat	125	197	84	400	194	119	178	67	402	234	
Koiri	129	201	68	392	212	136	190	53	400	221	
Kumhar	137	209	75	381	198	144	209	73	387	196	
Kurmi	120	178	83	402	183	126	183	69	401	221	
Lohar	146	216	79	373	186	147	190	66	393	209	
Munda (Animist)	166	214	83	373	184	161	211	74	391	193	
Munda (Hindu)	160	216	75	385	194	139	193	71	386	211	
Musahar	136	224	66	365	199	150	221	52	397	180	
Nuniya	135	221	74	366	193	143	186	48	400	223	
Oran (Animist)	168	183	55	389	200	173	204	59	448	116	
Oran (Hindu)	179	221	74	354	172	193	203	67	366	172	
Pan (Animist)	144	222	76	414	144	153	219	59	425	142	
Pan (Hindu)	142	229	79	388	182	148	214	61	404	175	
Rajput	110	195	69	405	220	114	177	46	392	271	
Santal (Animist)	186	223	89	367	134	185	202	103	371	199	
Santal (Hindu)	151	189	100	361	159	133	195	122	386	164	
Tanti and Taiwa	138	217	71	369	205	125	185	58	400	229	
Teli and Tili	137	213	69	383	193	137	193	59	396	215	
BOMBAY.											
Agri	149	198	64	405	134	155	192	51	415	186	
Bharvad	139	188	76	393	184	148	198	69	399	226	
Bhil	162	197	58	404	159	260	176	52	421	151	
Brahman	121	146	71	420	223	129	155	68	415	243	
Koli	155	167	56	442	180	171	152	44	439	194	
Kunbi	145	175	67	395	215	147	161	53	416	225	
Lingayat	139	157	87	402	224	134	170	66	400	230	
Lohana	124	179	73	442	182	150	175	65	423	180	
Maratha	155	183	72	373	237	137	170	51	396	243	
Mshar, Holiya or Dhod	152	179	68	401	202	162	158	55	404	231	
BURMA.											
Arakanese	108	159	70	439	224	114	169	65	434	213	
Chin	138	180	64	402	216	147	175	48	425	205	
Kachin	75	158	63	433	216	86	137	61	421	235	
Karen	141	189	68	399	203	147	191	68	413	181	
Shan	126	161	64	402	217	117	153	57	407	266	
Talaing	158	197	73	382	190	159	203	71	398	169	

SUBSIDIARY TABLE V—*contd.*Age distribution of 1,000 of each sex in certain castes—*contd.*

CASTE.	MALES. NUMBER PER MILLA AGED					FEMALES. NUMBER PER MILLA AGED				
	0-5.	5-12.	12-15.	15-40.	40 and over.	0-5.	5-12.	12-15.	15-40.	40 and over.
BURMA—<i>contd.</i>										
Taungtha	180	180	85	353	222	141	105	94	495	198
Wa-Palaung	128	123	87	421	261	122	145	57	420	256
C. P. and BERAR.										
Ahir (Hindu)	163	193	59	401	184	168	182	45	403	202
Ahir (Animist)	175	202	55	390	178	180	192	45	415	164
Baniya	119	156	66	434	225	131	160	51	412	240
Brahman	118	150	63	431	232	133	172	49	397	249
Chamar	175	177	43	408	194	177	162	37	418	205
Dhinar	164	181	58	401	198	170	172	45	412	208
Dhobi	161	186	59	409	194	164	172	46	410	208
Gond (Hindu)	164	178	52	402	204	162	164	40	411	223
Gond (Animist)	170	192	56	390	192	171	179	47	405	198
Kalar	153	183	59	400	205	157	176	45	398	221
Kumbi	141	164	61	380	254	146	169	48	395	244
Kurmi	154	187	63	411	185	157	174	49	404	210
Lodhi	158	189	64	405	184	155	170	48	408	213
Lohar	156	188	62	395	199	167	178	50	401	204
Mali	156	172	59	384	223	160	173	47	388	237
Mehar	171	177	56	380	216	172	168	47	402	208
Rajput	135	171	63	416	215	144	171	53	394	238
Teli	167	182	59	389	203	165	171	48	394	221
MADRAS.										
Palija	119	168	73	380	260	117	173	60	391	259
Brahman (Tamil)	109	152	72	412	255	111	144	50	394	292
Brahman (Telugu)	119	189	84	384	224	109	168	55	378	300
Chetti	132	174	74	383	237	119	167	64	394	269
Kaikolan	130	179	73	379	225	137	184	72	380	227
Kammalan	135	180	72	386	227	135	176	61	400	223
Kamsala	112	186	79	403	218	120	190	56	394	240
Kapu	112	194	76	381	237	115	193	61	389	242
Komati	121	171	77	376	255	121	170	70	374	256
Mala	147	222	72	350	209	140	198	63	394	205
Paraiyan	194	195	69	357	215	162	181	53	404	206
Shanan	141	197	76	382	214	140	186	66	387	231
Tiyar	138	182	81	419	180	135	169	72	438	186
Vellala	122	170	77	393	230	123	173	70	390	244
N.-W. F. PROVINCE.										
Awan	142	191	92	365	210	179	186	63	382	184
Pathan	151	187	96	364	202	162	182	77	371	208
PUNJAB.										
Agarwal	116	163	73	430	213	130	167	65	417	239
Ahir	121	165	72	410	232	135	165	61	385	239
Arain	135	186	77	379	233	141	190	66	377	206
Aron	121	184	76	399	230	133	192	70	394	218
Awan	142	192	76	369	221	150	189	61	383	217
Biloch	145	200	79	344	252	165	195	56	367	217
Brahman	105	154	73	423	245	124	164	60	404	248
Chamar	120	171	77	414	209	148	172	65	413	201
Chuhra	153	190	78	390	176	133	183	63	391	182
Jat	125	178	80	394	225	144	176	66	386	227
Jhinwar	124	169	74	410	223	148	176	63	400	213
Julaha	134	174	72	384	235	154	170	63	393	217
Kanet	104	155	71	411	259	113	163	59	419	248
Kashmiri	124	179	86	382	235	139	176	68	379	239
Khatri	112	164	73	415	231	136	168	66	392	239
Kumhar	139	177	77	390	217	154	177	64	390	214
Lohar	135	173	76	387	224	147	180	68	391	214
Maachhi	152	190	79	384	218	165	189	61	375	226
Mirasi	138	178	73	384	227	151	177	62	394	226
Moehi	142	188	76	379	223	161	185	65	378	211
Nai	127	175	76	396	226	146	175	62	395	222
Pathan	113	169	71	430	227	144	181	65	385	224
Rajput	125	174	78	396	227	145	170	63	393	224
Salyid	124	179	74	391	225	135	178	65	393	216
Sheikh	114	168	75	428	225	137	172	65	410	221
Tarkhan	131	175	75	390	229	151	173	64	388	221
Teli	137	182	77	395	209	137	175	64	395	208
UNITED PROVINCES.										
Agarwal	97	151	84	418	250	116	172	74	394	244
Ahir	108	184	74	414	220	116	173	69	411	235
Bhandi	113	176	76	408	228	123	174	61	406	203
Bihar	124	190	77	398	211	138	190	65	404	212
Brahman	143	204	84	392	197	148	170	65	408	212
Chamar	109	167	73	411	248	110	161	59	398	272
Dhobi	120	183	71	408	204	127	182	59	406	218
Doma	125	192	73	404	208	134	183	59	411	201
Gadaria	185	184	80	439	211	132	173	62	408	213
Gadaria	117	199	79	408	213	127	198	62	407	213
Gujar	107	182	86	409	217	119	176	73	407	223
Jat	105	168	84	404	229	117	167	79	384	243
Kachhi	123	185	69	404	223	143	187	132	381	230
Kayastha	104	159	74	402	216	132	177	69	405	235

SUBSIDIARY TABLE V—*concl.*Age distribution of 1,000 of each sex in certain castes—*concl.*

Age distribution of 1,000 of each sex in certain cases										
CASTE.	MALES. NUMBER PER MILLA AGED					FEMALES. NUMBER PER MILLA AGED				
	0-5.	5-12.	12-15.	15-40.	40 and over.	0-5.	5-12.	12-15.	15-40.	40 and over.
	1	3	4	5	6	7	8	9	10	11
UNITED PROVINCES										
—contd.										
Kewat	125	195	68	402	210	136	183	61	401	219
Kumhar	125	186	71	403	215	133	177	55	412	216
Kurmi	112	176	69	415	228	119	170	53	411	245
Lohar	120	183	72	407	218	132	180	53	404	224
Lodha	113	183	72	416	216	123	175	54	414	224
Mallah	149	209	69	374	199	141	176	55	407	221
Nai	118	183	75	405	215	129	175	56	407	227
Path	120	203	66	405	206	131	191	56	415	207
Pathan	117	184	70	394	235	129	178	58	390	245
Rajput	107	170	75	409	241	116	166	62	407	249
Salyid	119	172	75	393	241	132	177	60	401	246
Shekha	116	179	72	404	229	129	179	59	411	222
Teli	119	187	71	409	214					
BARODA STATE.										
Kunbi Kadwa	140	183	68	435	189	165	144	68	444	179
Kunbi Lewa	128	143	64	435	226	140	132	54	434	240
Koli	161	140		450	185	172	103	55	431	230
CENTRAL INDIA AGENCY.										
Baniya	121	143	86	430	220	136	148	100	393	223
Bhil	103	157	77	429	244	102	162	76	405	185
Brahman	118	151	86	412	233	137	164	72	385	238
Gond	172	174	91	441	224	180	154	82	401	217
Gujar	127	128	80	441	221	141	148	84	399	227
Rajput	121	137	100	421						228
COCHIN STATE.										
Ilavan	150	178	82	412	173	147	186	77	427	177
Indian Christian	155	183	83	405	174	158		75	406	175
HYDERABAD STATE.										
Brahman	155	128	84	401	232	156	133	82	359	270
Golla	147	165	107	366	215	173	103	93	362	236
Kapu	166	134	112	387	201	141	136	99	401	201
Koli	162	144	116	370	208	173	125	100	380	247
Komati	161	129	100	367	237	141	154	98	360	263
Lingayat	170	134	118	366	232	171	126	88	358	240
Madiga and Mang	190	144	90	362	219	154	148	96	367	219
Mahar and Mala	174	148	93	391	231	146	148	110	371	215
Maratha	143	137	81	399	208	181	171	87	367	227
Munnar	176	136	61	370	244	178	131	79	409	239
Mutras	168	142	75	370	226	178	131	79	362	237
Salu	189	153	86	346	241	14				
Sheikh	146	126	69	388	232	171	151			
Telaga	164	151	82	371						
KASHMIR STATE.										
Bat	151	196	71	382	200	171	196	67	388	178
Brahman	109	152	74	405	260	122	183	56	395	244
MYSORE STATE.										
Boda	118	178	74	384	251	129	188	65	384	234
Besta	118	180	79	383	240	124	183	69	395	229
Brahman	114	163	60	406	248	127	170	61	388	254
Golla	112	172	73	375	268	126	168	65	373	248
Holey	115	170	75	407	233	125	183	67	408	217
Kuruba	116	175	81	384	243	123	184	69	387	237
Lingayat	111	168	86	398	237	118	185	74	388	235
Madiga	127	164	74	379	241	141	196	64	388	211
Vakkaliga	112	173	81	393	221	120	187	73	381	239
Sheikha	127	187	76	389		142	206	80	388	204
RAJPUTANA AGENCY.										
Brahman	116	151	55	427	251	126	142	41	416	275
Gujar	129	165	60	435	213	151	180	47	419	223
Jat	131	160	60	437	212	147	154	51	417	231
Kumhar	150	158	55	428	209	164	149	35	420	232
Mali	140	163	57	425	215	163	155	44	425	223
Mahajan	125	165	58	416	236	124	153	43	419	233
Meo or Mewati	124	175	58	408	208	157	171	75	401	224
Mina	138	169	55	423	204	148	168	41	420	247
Nai	129	154	57	423	226	124	155	42	425	274
Rajput	116	149	57	423	231	138	165	51	417	229
Shekha	123	157	65	424						
TRAVANCORE STATE.										
Chennan	149	210	59	373	204	154	195	52	423	171
Indian Christian	136	185	66	405	187	150	166	106	404	171
Ishavan	122	202	79	411	186	125	192	74	426	183
Nayar	128	172	73	414	208	143	190	71	407	213
Pulayan	138	165	50	446	201	138	168	55	478	161

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SUBSIDIARY TABLE VI.

Reported birth-rate per mille during the decade 1901-10 in the main provinces.

PROVINCE.	NUMBER OF BIRTHS (BOTH SEXES) PER MILLE IN										AVERAGE BIRTH-RATE PER MILLE DURING THE DECADE.			
	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	Persons.	Males.	Females.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Assam	34.0	34.2	35.6	35.5	36.5	34.9	35.8	38.4	35.6	36.5	35.7	18.5	17.2	
Bengal	37.3	38.8	36.4	40.6	37.5	35.2	35.7	37.8	39.2	37.5	37.6	19.4	18.2	
Bihar and Orissa	40.0	41.9	42.3	45.2	42.6	40.4	39.9	38.1	38.7	41.4	41.1	21.0	20.1	
Bombay	25.2	34.2	31.2	35.1	33.1	33.8	33.0	35.7	35.6	37.3	33.4	17.3	16.1	
Barma	32.4	31.9	33.7	32.8	34.4	32.4	32.8	34.8	35.9	36.0	33.9	17.5	16.4	
Central Provinces and Berar	28.9	50.2	45.2	53.4	54.0	51.7	52.5	52.8	51.6	55.4	49.6	25.4	24.2	
Madras	25.1	28.2	31.2	30.7	32.0	30.9	30.8	32.4	33.1	33.6	30.8	15.7	15.1	
North-West Frontier Province	29.5	33.6	31.6	34.9	35.4	38.6	32.5	37.3	34.7	38.0	34.6	19.0	15.6	
Punjab	35.4	43.8	42.9	41.5	44.4	43.7	40.8	41.8	35.1	42.8	41.2	21.6	19.6	
United Provinces	41.3	45.8	46.1	46.7	41.2	40.2	41.2	37.5	33.3	41.0	41.4	21.5	19.9	

SUBSIDIARY TABLE VII.

Reported death-rate per mille during the decade 1901-10 in the main provinces.

Average death-rate during the decade 1901-10 in the main provinces.														
PROVINCE.	NUMBER OF DEATHS (BOTH SEXES) PER MILE IN										AVERAGE DEATH-RATE PER MILE DURING THE DECADE.			
	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	Persons.	Males.	Females.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Assam	27.9	29.0	26.5	25.9	23.4	30.6	25.6	35.2	32.9	34.4	28.6	29.8	29.4	
Bengal	30.0	34.9	32.0	32.9	36.3	33.1	33.4	31.7	31.1	31.3	32.7	33.3	31.5	
Bihar and Orissa	32.1	31.3	34.7	31.6	39.9	36.8	37.5	40.7	32.5	35.7	35.3	37.3	33.4	
Bombay	37.1	39.0	43.9	41.4	31.8	35.1	32.8	27.1	27.4	30.3	34.6	34.7	34.5	
Burma	22.3	18.8	23.3	21.3	24.4	26.8	26.6	28.2	30.2	28.1	25.2	26.5	23.7	
Central Provinces and Berar	24.4	27.6	36.2	32.5	37.2	43.5	41.7	38.1	33.1	44.9	35.9	37.9	34.0	
Madras	21.3	20.2	22.2	22.5	21.4	27.4	24.3	26.2	21.8	24.7	23.2	24.0	22.4	
North-West Frontier Province	19.2	24.4	28.4	28.6	26.8	33.7	35.1	35.8	26.6	26.9	28.5	27.8	29.3	
Punjab	36.1	44.1	49.0	49.1	47.6	36.9	62.1	50.7	80.9	33.3	44.0	41.3	47.1	
United Provinces	30.3	32.5	40.3	34.7	44.0	39.1	43.5	52.7	37.3	38.7	39.3	38.9	39.7	

SUBSIDIARY TABLE VIII.

Reported death-rate per mille in certain provinces by sex and age.

Age.	Average of decade 1901-10.		1903.		1905.		1907.		1909.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
	2	3	4	5	6	7	8	9	10	11
BENGAL	34	31	33	31	37	35	34	32	33	30
Under 1 year	270	228	202	221	202	249	248	212	266	223
1-5	45	39	43	37	64	48	48	38	42	37
5-10	19	15	19	15	23	18	20	16	17	14
10-15	14	12	14	13	16	14	14	12	11	10
15-20	19	21	19	21	21	24	20	21	19	21
20-30	20	21	19	21	21	24	21	23	22	22
30-40	23	23	22	22	24	24	25	25	22	24
40-50	28	26	28	25	29	27	30	27	27	24
50-60	42	37	40	36	43	40	48	41	41	36
60 and over	79	64	78	66	68	68	88	70	77	58
BIHAR AND ORISSA	38	34	37	33	42	38	39	36	34	31
Under 1 year	304	282	314	267	329	284	291	257	271	285
1-5	59	52	60	57	89	61	60	54	54	48
5-10	20	17	20	17	24	21	22	20	18	15
10-15	15	14	15	14	19	17	17	16	13	11
15-20	16	14	16	14	23	21	22	21	17	15
20-30	20	18	20	18	25	23	25	22	21	17
30-40	25	20	20	22	32	27	30	27	27	24
40-50	30	23	30	25	49	46	50	46	46	43
50-60	46	42	43	39	100	84	101	87	100	86
60 and over	98	77	86	71						
BOMBAY	35	34	43	44	33	32	33	33	23	27
Under 1 year	320	285	317	284	352	318	316	276	309	270
1-5	64	52	63	51	66	62	64	52	47	46
5-10	15	13	16	13	12	12	12	13	10	10
10-15	18	16	24	20	11	13	11	14	8	9
15-20	18	21	29	22	16	18	17	20	12	14
20-30	20	21	29	22	17	19	19	21	14	16
30-40	22	23	33	28	30	21	22	22	24	18
40-50	32	26	43	35	41	33	45	37	36	29
50-60	47	39	61	55	83	66	87	87	55	75
60 and over	100	98	114	112						
BURMA	27	24	26	23	26	23	29	25	29	26
Under 1 year	332	233	332	223	337	240	298	212	270	276
1-5	30	25	39	25	30	27	30	25	30	27
5-10	14	12	13	11	14	12	16	14	13	12
10-15	10	9	10	9	10	9	12	13	10	8
15-20	16	12	14	12	15	12	16	14	15	14
20-30	15	13	13	12	17	16	17	19	19	19
30-40	17	17	13	17	17	16	23	23	27	23
40-50	23	20	21	19	21	21	33	28	33	27
50-60	29	24	28	24	28	23	70	67	77	72
60 and over	68	59	56	54	57	54				
MADRAS	24	22	23	22	22	21	25	24	23	21
Under 1 year	199	165	204	170	201	166	195	162	210	171
1-5	81	29	30	29	27	28	33	32	27	25
5-10	9	7	9	7	7	7	10	10	8	7
10-15	7	6	9	8	8	11	10	13	9	12
15-20	10	13	12	10	11	12	13	13	12	11
20-30	12	12	11	12	11	14	13	13	13	14
30-40	14	12	18	14	18	20	26	26	29	24
40-50	18	16	18	14	29	24	69	71	65	65
50-60	31	26	30	26	70	66				
60 and over	71	67	67	63						
PUNJAB	41	47	45	54	44	53	59	66	30	32
Under 1 year	306	310	346	351	321	319	308	306	247	246
1-5	66	71	72	80	67	61	76	81	45	43
5-10	19	23	20	26	26	31	38	38	11	13
10-15	17	25	18	23	23	34	38	44	10	11
15-20	19	24	19	26	25	32	39	41	13	14
20-30	21	24	22	28	25	31	43	48	16	18
30-40	24	29	26	34	28	42	50	50	23	23
40-50	35	36	36	41	47	55	72	77	37	35
50-60	46	50	57	63	72	124	185	84	84	61
60 and over	95	105	102	121	92	105				
UNITED PROVINCES	39	40	40	40	43	45	43	44	36	27
Under 1 year	352	331	426	394	361	341	348	328	296	253
1-5	71	71	80	88	64	65	80	79	56	50
5-10	15	18	19	17	21	22	21	22	17	16
10-15	12	13	11	12	17	20	14	18	10	10
15-20	14	19	13	18	20	27	18	24	12	13
20-30	16	20	15	18	23	28	21	25	18	19
30-40	19	20	18	18	26	29	24	26	23	22
40-50	30	28	24	23	34	34	53	49	31	32
50-60	51	44	40	36	53	51	62	48	61	54
60 and over	87	74	75	63	93	88	98	80	109	91

NOTE.—The ratios in the case of Burma relate to Lower Burma only.

SUBSIDIARY TABLE IX.

Reported deaths from certain diseases per mille of each sex in the main provinces.

DISEASE.	Sex.	Actual number of deaths in										TOTAL.	Average annual rate per mille.
		1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.		
ASSAM.													
Fever.	Male	44,755	41,732	39,666	37,503	35,518	37,266	38,642	50,492	53,974	45,483	425,051	15.6
	Female	38,941	35,947	35,338	33,068	32,183	33,427	35,505	47,469	49,456	41,897	383,781	15.0
Cholera.	Male	3,944	6,323	4,826	2,857	11,345	16,005	4,048	11,582	4,219	17,130	82,984	3.1
	Female	3,524	6,330	4,084	2,731	11,533	17,077	4,244	10,807	3,562	17,352	81,529	3.2
Small pox.	Male	1,695	3,409	570	798	1,102	1,588	2,269	2,475	1,609	970	16,545	.6
	Female	1,579	3,264	541	761	1,067	1,406	1,984	2,124	1,504	957	15,187	.6
BENGAL.													
Fever.	Male	501,170	570,933	517,688	527,727	556,203	512,476	512,664	496,986	468,357	479,376	5,143,575	24.0
	Female	443,358	512,020	471,808	486,123	512,772	466,709	470,109	447,867	450,732	442,437	4,712,530	23.0
Cholera.	Male	34,899	49,286	50,490	54,372	89,130	71,792	83,111	68,640	46,527	62,333	609,194	2.9
	Female	29,425	41,511	43,355	48,088	83,048	69,829	75,079	58,822	41,829	56,748	539,734	2.6
Small pox.	Male	11,223	16,194	6,975	4,968	2,460	7,609	8,328	6,155	20,593	6,325	90,838	.4
	Female	8,944	14,543	6,012	4,529	2,044	5,968	6,337	5,018	17,028	5,399	76,463	.3
Plague.	Male	8,241	7,598	8,708	4,986	6,317	2,151	2,699	1,436	1,545	1,043	51,012	.2
	Female					3,004	834	1,044	409	619	378		
BIHAR AND ORISSA.													
Fever.	Male	349,765	396,344	347,561	328,133	406,879	379,096	381,901	418,415	386,215	373,725	3,705,084	23.1
	Female	325,726	302,024	317,891	314,215	377,242	349,338	263,916	300,821	370,991	343,982	3,465,949	20.4
Cholera.	Male	23,637	31,067	56,831	18,278	48,304	63,565	58,130	94,145	16,780	95,133	480,796	3.0
	Female	22,792	29,167	52,720	16,963	45,286	68,018	57,671	88,232	15,231	61,249	452,338	2.7
Small pox.	Male	8,859	13,868	8,961	3,910	2,687	6,521	9,336	15,394	11,350	2,353	88,143	.5
	Female	8,634	12,825	8,511	3,923	2,507	6,063	8,861	14,273	10,130	2,085	77,635	.5
Plague.	Male	70,388	25,380	56,972	70,450	48,940	23,381	38,088	5,945	4,186	19,060	545,450	2.6
	Female					67,829	32,827	46,781	8,158	5,429	26,149		
BOMBAY.													
Fever.	Male	162,285	189,517	124,048	129,384	126,975	142,030	135,125	125,099	116,896	136,802	1,339,021	14.1
	Female	139,996	131,023	125,856	121,946	118,398	132,623	125,204	117,273	106,992	127,161	1,245,947	13.9
Cholera.	Male	7,299	1,906	976	6,853	2,888	23,740	4,131	983	14,755	2,183	66,619	.7
	Female	6,301	1,323	849	6,303	2,508	22,379	3,525	821	13,969	1,561	59,529	.7
Small pox.	Male	2,803	1,132	1,488	2,222	8,750	2,105	937	1,395	2,538	2,374	25,744	.3
	Female	2,582	1,057	1,244	2,067	8,235	1,968	925	1,131	2,486	2,226	23,891	.2
Plague.	Male	66,315	93,402	141,559	111,933	37,790	27,950	47,324	14,818	13,135	13,273	587,592	6.0
	Female	61,941	91,350	139,719	112,024	33,573	23,575	46,285	12,527	11,184	11,770	543,359	6.1
BURMA.													
Fever.	Male	29,363	38,026	43,652	41,879	38,303	42,128	44,437	43,236	44,576	44,168	4,040,7	9.9
	Female	21,313	29,529	34,166	33,677	30,790	33,716	34,738	34,425	36,284	36,846	3,150,4	8.4
Cholera.	Male	2,187	1,284	4,860	1,908	3,218	4,546	5,361	7,020	6,618	1,267	38,22	.9
	Female	1,866	637	3,373	1,077	2,129	3,328	3,617	4,391	4,771	744	25,331	.6
Small pox.	Male	1,451	1,146	1,070	1,022	3,666	5,053	1,587	745	860	1,123	17,523	.4
	Female	1,024	769	850	737	2,495	3,487	1,295	543	351	694	12,295	.3
Plague.	Male	3	1	0	3	2,599	5,208	5,431	3,975	3,975	4,372	43,033	1.9
	Female					1,093	3,429	3,818	2,777	2,971	3,369		
C. P. AND BEHAR.													
Fever.	Male	88,583	89,780	95,397	84,621	107,655	115,911	110,231	112,984	94,227	132,699	1,032,108	17.5
	Female	82,762	84,277	90,447	78,571	99,540	109,230	103,617	104,786	86,317	123,793	963,333	16.0
Cholera.	Male	41	23	219	1,540	674	19,656	2,199	4,744	3,976	2,711	35,783	.6
	Female	25	21	295	1,427	543	19,112	2,092	4,304	3,711	2,605	34,045	.6
Small pox.	Male	2,139	2,467	1,114	1,002	4,431	5,242	1,962	4,760	2,161	1,516	27,784	.5
	Female	2,336	2,183	970	943	3,933	4,947	1,864	4,294	1,994	1,278	24,942	.4
Plague.	Male	3	5,240	51,514	49,866	6,441	9,513	19,060	3,229	9,970	15,000	222,652	2.9
	Female					6,205	8,098	18,714	3,907	9,246	13,991		
MADRAS.													
Fever.	Male	150,784	141,408	159,174	149,710	135,347	153,526	145,040	150,321	136,541	162,791	1,484,651	8.2
	Female	144,070	136,281	155,762	143,550	129,697	151,400	139,390	145,513	131,897	153,590	1,436,110	7.7
Cholera.	Male	42,906	15,782	14,305	12,045	8,701	75,047	41,350	78,694	20,847	17,223	321,899	1.8
	Female	38,494	15,987	13,088	11,064	8,187	67,764	40,206	68,286	18,577	15,371	294,994	1.6
Small pox.	Male	13,425	12,613	7,596	5,137	9,410	15,060	11,261	11,240	9,768	9,730	105,229	.6
	Female	12,777	12,354	7,419	4,754	9,130	14,771	11,204	10,994	9,104	9,468	101,945	.6
Plague.	Male	8,033	10,795	13,291	20,125	3,070	484	1,529	1,680	1,964	2,390	68,873	.2
	Female					2,718	434	1,343	1,869	1,880	2,477		
PUNJAB.													
Fever.	Male	259,690	240,444	254,358	191,042	186,409	203,765	206,856	347,828	214,612	177,696	2,382,103	20.9
	Female	248,945	222,068	254,949	187,363	183,688	204,113	198,625	349,230	196,901	166,236	2,221,658	23.7
Cholera.	Male	95	198	8,582	306	1,324	2,495	245	6,892	851	1,262	22,390	.2
	Female	85	173	6,106	320	873	1,739	172	5,405	632	899	16,374	.2
Small pox.	Male	3,277	6,099	8,026	5,018	2,442	6,892	5,763	15,074	1,720	1,597	55,913	.5
	Female	2,877	5,530	7,099	4,966	2,281	6,347	5,314	13,578	1,632	1,422	51,196	.5
Plague.	Male	8,943	75,783	89,343	178,433	158,534	43,886	306,193	15,014	17,681	65,890	956,705	8.8
	Female	8,916	65,519	116,114	217,924	176,363	47,876	302,492	16,694	18,024	69,593	1,068,515	11.4
UNITED PROVINCES.													
Fever.	Male	578,652	599,752	677,429	569,038	649,053	670,935	695,301	689,009	738,975	681,990	6,350,034	27.8
	Female	540,323	569,848	641,090	571,091	629,373	646,545	654,904	681,310	691,916	609,016	6,535,821	23.3
Cholera.	Male	27,129	13,014	23,752	3,420	60,597	76,862	11,401	43,366	11,816	62,741	323,499	1.3
	Female	26,666	12,146	23,407	3,107	61,190	72,687	11,037	40,173	10,807	49,721	311,036	1.3
Small pox.	Male	580	2,746	11,634	3,802	1,732	7,254	12,119	32,005	3,182	490	75,484	.3
	Female	451	2,230	10,316	3,196	1,541	5,948	10,526	27,901	2,725	393	66,817	.3
Plague.	Male	9,778	40,223	34,400	179,082	173,477	20,859	144,789	10,071	16,298	70,405	1,315,252	2.8
	Female					210,325	33,771	184,973	12,897	22,096	87,669		

CHAPTER VI.

Sex.



252. In all the census tables the distinction of sex is maintained, but for the purpose of this Chapter the most important are Table VII in which the statistics of sex are combined with those for age, religion and civil condition and Table XIV in which they are combined with caste, tribe or race. The following proportional tables will be found at the end of this Chapter:—

- The number of females per thousand males in different parts of India at each of the last four censuses.
 - The corresponding proportion at different ages in the total population and the main religions.
 - The proportion for certain selected castes.
- Two other tables based on the vital statistics are added showing:—
- Actual number of births and deaths of each sex reported during the last two decades in certain provinces.
 - Deaths by sex and age in the quinquennium 1905-09, and the proportion of female to male deaths in certain provinces.

25

Before discussing the subject from a general point of view it will be convenient to glance at the principal features of the statistics in each of the main provinces.

Assam.

254. In the actual population of Assam there are only 940 females per thousand males, but the proportion rises to 963 if migration be left out of account. Throughout the plains, males are in excess, but females predominate in most of the hill districts, which are inhabited mainly by Animistic tribes, who practise adult marriage and whose women, though they have to work hard, enjoy a better position than those of most other Indian communities. The deficiency of women is less among Muhammadans than among Hindus; it is also less among the lower Hindu castes than among those of higher status. Between 1881 and 1901 the proportion of females in the natural population showed an upward tendency, but it has now fallen slightly below the level at which it stood thirty years ago.

Bengal.

255. In Bengal the number of females per thousand males is 945 in the actual, and 970 in the natural, population. Males are in excess in the natural population in all but six districts, four of which border on Bihar and Orissa. The Muhammadans have a higher proportion of females (958) than the Hindus (931) in the province as a whole, and in every natural division. Females are in defect amongst all the local Hindu castes except seven, of which four rank very low and two, though clean, are castes of inferior status, while one (Baishnab) is in the habit of admitting outsiders, who are chiefly women. Mr. O'Malley can trace no correlation between social status and the proportion of the sexes. The proportion of females to males has fallen continuously during the last thirty years, not only in the actual, but also in the natural, population. In the latter it is now only 970 per mille, compared with 1,013 in 1881.

Bihar and Orissa.

256. In Bihar and Orissa there is a preponderance of females, their number per thousand males being 1,043 in the actual, and 1,014 in the natural, population. The only districts in which females are in defect in the natural population are Purnea on the Bengal border, and Patna and Gaya, where the deficiency is due largely to plague which, as will be shown in paragraph 269, is specially fatal to females. The Muhammadans (1,074) have a larger proportion of females than the Hindus and Animists (1,040). Nearly every local caste shows an excess of females, except the three high castes of Brahman, Rajput and Babhan, the trading Baniya and the Animistic Bhumij. In this province, also, the Provincial Superintendent has been unable to trace any general connection between social status and the sex proportions. In the actual population the proportion of females was highest in 1901. In the natural population it reached its maximum in 1891. There was a slight drop in 1901, and at the present census the proportion is 4 per mille lower than it was in 1881.

Bombay.

257. In Bombay there are only 933 females per thousand males in the actual, and 942 in the natural, population. This is due largely to the figures for Sind, where the conditions resemble those of the Punjab rather than the rest of Bombay. In that sub-province there are only 812 females per thousand males, or 834 if migration be allowed for. In the rest of the Presidency the proportion of females in the natural population ranges from 919 in Gujarat, where female infanticide was once very common, to 996 in the Konkan. The proportion is highest amongst the Animistic tribes. It is higher amongst Hindus (953) than amongst Muhammadans (860), but this is due entirely to the fact that Muhammadans are found chiefly in Sind where females are in great defect amongst all sections of the population. In three of the five natural divisions, taken separately, the proportion of females is higher amongst Muhammadans than it is amongst Hindus. As in several other provinces, there was a steady rise in the proportion of females between 1891 and 1901, but it has now fallen to less than it was thirty years ago. In Sind the decline has been continuous since 1881, and amongst the

Number of females per thousand males.

Natural Division.	Hindus.	Muham- madans.
Gujarat . . .	924	941
Konkan . . .	1,038	1,111
Deccan . . .	969	929
Karnatak . .	978	970
Sind . . .	804	816

NOTE.—The above figures refer only to British territory.

Muhammadans since 1891.

Burma.

258. The importance of discounting the effect of migration in an examination of the sex proportions is especially great in Burma, where the number of females per thousand males is only 959 in the actual, but rises to 1,028 in the natural, population. An excess of females is found, not only amongst the Burmese, but also amongst the majority of the aboriginal tribes. There is a marked deficiency amongst the Chinese, who have only 375 females per thousand males; this is partly because many of them are immigrants, and partly because, as noted elsewhere, the male issue of mixed marriages claim Chinese nationality while the female children are brought up as Burmese. The proportion of females in the natural population has remained practically unchanged since 1901.

Central Provinces
and Berar.

259. In the Central Provinces and Berar the number of females per thousand males is 1,008 in the actual, and 1,019 in the natural, population. The Animists have the largest proportion and next to them, the Hindus. The lower proportion amongst Muhammadans is due, as in Bombay, to the fact that they are found chiefly in those parts of the province where women generally are least numerous. Some of the lower Hindu castes of aboriginal extraction have a larger proportion of females than the castes of twice-born rank. In this province there is no trace of female infanticide and no serious neglect of female infant life. The proportion of females, after rising steadily up to 1901, now shows a decline.

Mr. Marten has made an interesting special enquiry into the size and sex constitution of families and the relative fecundity of the different castes. This enquiry which covered more than a third of a million families, shows that certain low castes have the largest families and the Brahmins, Baniyas and the aboriginal Gonds, the smallest. The Rajput family is of average size, and that of the Muhammadans slightly above the average. The enquiry also shows that the number of females per thousand males amongst first born children is only 864 against a general average of 921.

Madras.

260. In the Madras Presidency also there is an excess of females, the number per thousand males being 1,032 in the actual, and 1,011 in the natural, population. There are great local variations in the proportions. In the Agency tracts and the Deccan females are in defect, but elsewhere the proportion ranges from 1,007 in the East Coast, Central to 1,077 in the East Coast, South. These figures refer to the actual population. It is difficult in this province to discount the effect of migration in the case of individual districts; the bulk of the emigrants are found in Ceylon, Burma and the Malay peninsula, where, as a rule, only the province, and not the district, of birth was recorded in the census schedules. We know, however, that these emigrants were chiefly natives of the coast districts; and as about 70 per cent. of the 884,000 natives of Madras enumerated in the above countries were males, it is clear that the relatively high proportion of females along the coast must be due largely to emigration. In this province the Hindus have a slightly larger proportion of females than the Muhammadans, and the Animists the lowest of all. In the actual population the excess of females has grown steadily since 1881, but in the natural population though there was an increase in 1891 and 1901, the present proportion is the lowest on record.

North-West
Frontier
Province.

261. In the British districts of the North-West Frontier Province, where the number of females per thousand males is 858 in the actual, and 887 in the natural, population, some of the conditions which will be adduced in explanation of a deficiency of females in India generally do not exist. There is no suspicion of female infanticide and no neglect of female infant life. Infant marriage is unknown; widows remarry freely, and abortions are extremely rare. On the other hand, the Pathan is exceptionally jealous of his woman-kind; and the Superintendent concludes from an examination of the proportions at different ages that some omissions may have occurred, chiefly at the age-period '10—15'. He does not, however, think that these omissions are by any means sufficient to explain the great deficiency of females. That such a deficiency exists is clearly shown by various local customs, and in particular by the high prices paid for brides. Nor is it easy to see why there should be a special tendency to omit females of this age. Marital jealousy would lead rather to omissions at the age-period '20—25' where, however, there is a

great excess of females. Mr. Latimer ascribes such omissions as may have occurred not to marital but to paternal jealousy. In his opinion a father may feel that he is depressing the market value of his daughter if he talks much about her, but his objection to do so disappears as soon as she is married or betrothed. It is impossible without local knowledge to say how much weight should be given to this view, but the matter is of no great moment, as Mr. Latimer considers the apparent deficiency at this age-period to be due mainly to migration and misstatement of age. There has been a gradual rise in the proportion of females since 1881, but in that year there was a considerable fall as compared with 1868.

The birth statistics support the census to this extent that they show an extraordinarily large excess of male births. They are, however, still so inaccurate that no great reliance can be placed on them.

262. There is a great dearth of females in the Punjab. In the actual population there are only 817 of this sex per thousand males, and in the natural population only 811. The proportion is lowest (795) in the south-eastern part of the province and highest (901) in the Himalayan region. It is higher amongst the Muhammadans (833) than amongst Hindus (820) and lowest of all amongst the Sikhs (746). In this province the high castes have a larger proportion of females than many of those of lower status. The greatest inequality in the sex proportions is found amongst those sections of the community who were formerly suspected of female infanticide. This aspect of the question will be further discussed in paragraphs 276 and 279. Between 1881 and 1901 the proportion of females rose from 844 to 854, but it has now dropped to 817, or less than it has ever been before. The Provincial Superintendent says that this is due chiefly to the ravages of plague which, as will be seen in paragraph 269, is most fatal to females. It is satisfactory to note that, in spite of the general fall in the proportion of females to males, in the age-period '0-5' it has risen since 1901 from 926 to 941.

263. In the actual population of the United Provinces there are 915, and in the natural population 902, females per thousand males. The province thus occupies an intermediate position between the Punjab on its western border and Bihar and Orissa on its eastern. Females are in greatest defect (848 per thousand males) in the districts contiguous to the Punjab, and their proportion increases gradually towards the east. The Muhammadans have slightly more females than the Hindus and the low caste Hindus have more than those of twice-born rank. The number of females per thousand males rose from 925 in 1881 to 937 in 1901, but has now fallen to 915. The decrease, which is shared by all parts of the province, is ascribed by Mr. Blunt to the ravages of plague and malaria. "For every four men whom plague carries off, it carries off five women."

264. Returning now to the proportions for the whole of India, the first thing to be noted is the great contrast between them and those obtaining in western Europe, where the number of females per thousand males varies from 1,093 in Portugal and 1,068 in England and Wales to 1,013 in Belgium and 1,003 in Ireland, the general average being 1,038.* In the Report for 1901, while not denying the possibility of some few females having been omitted from the record, I concluded that the local conditions of India, tending to produce a relatively high mortality amongst females were sufficient to account for the difference referred to above. As this view has been questioned in some quarters,† it is necessary to deal somewhat more fully with the matter on the

* This figure is taken from Sir J. A. Baines's paper on *The Recent Growth of Population in Western Europe*. (*Journal of the Royal Statistical Society*, LXXII, 685.)

† I refer principally to the article on the Indian Census of 1901 by Dr. Georg von Mayr published in the *Allgemeine Statistische Archiv*, 7th Vol., Part I, pages 265-339. This distinguished statistician has made a close study of Indian, as of all other, census literature, and it is with great deference that I venture to differ from him on this question. His criticism of the chapter on Sex in the last Census Report for India was elaborated by Kirchhoff in his *Essay über das Verhältnis der Geschlechter in Indien* (München 1909).

Mr. T. G. Aekland, F.I.A., whose report on the age statistics has been reproduced in the last chapter, is inclined to share von Mayr's opinion. He writes, "I entirely agree as to the complete efficiency of the system laid down for enumeration, and that the results have never probably been so accurate as on the present occasion; but I still think that it is almost impossible to consider the anomalies arising in the female figures as entirely due to the inaccuracy of the age return, or to variations in the rates of mortality of female, as compared with male, lives. I agree, however, that this point is open to doubt, and that it would not be right to be dogmatical upon it." In reply to a letter asking for the reasons which led him to this conclusion, Mr. Aekland wrote:—"I should not propose to follow the matter up further, as I do not think that the data available enable one to come to a definite conclusion upon the subject."

present occasion. The objections to it which have been put forward are briefly as follows:—

- (1) It is very unlikely that there should be so great a difference between the proportions in India and in western Europe.
- (2) It is well known that natives of India are reticent regarding their women, and that in some parts women are regarded as of very little account. It is, therefore, natural to suppose that the return of them at the census should be incomplete.
- (3) The age statistics show that the proportion of females is lowest between the ages 10 and 20. This is the time of life when it might be supposed that there would be a tendency to conceal the existence of unmarried females.
- (4) The increasing accuracy of each succeeding census has been accompanied by a rise in the proportion of females. It is only reasonable to suppose that there is a connection between the two phenomena.
- (5) The vital statistics for the decade 1891-1900 disclosed a relatively low female mortality, and in this respect they were confirmed by the mortality rates deduced from the age return of the last census.

265. In reply to the argument based on the difference between the propor-

NUMBER OF FEMALES PER THOUSAND MALES.		
Roumania (Census of 1899)	.	968
Bulgaria (" 1905)	.	962
Servia (" 1900)	.	946
Japan (" 1910)	.	979
Ceylon (" 1911)	.	888
" excluding immigrants	.	920
Siberia (Census of 1897)	.	955
Caucasus (" 1897)	.	897
United States (" 1910)	.	943
Canada (" 1911)	.	886
New Zealand (" 1906)	.	887

tions in India and western Europe, it may be pointed out that the latter is the only part of the world where females are in excess. In the south-east of Europe they are in marked defect; and in some of the Balkan States the deficiency is almost as great as it is in India. The same state of things exists in all eastern countries where censuses have been taken, as well as in the United States, Canada, New Zealand and several of the Australian Colonies. It may be objected that in the latter countries the deficiency is caused by the immigration of males. This is no doubt true to some extent, but it must be remembered that a similar objection applies to the proportions quoted for western Europe, which also refer to the actual, and not to the natural, population. There can be no doubt that in Ireland, at least, the small excess of females would be more than wiped out, if allowance were made for the relatively large emigration of males.* That immigration is not the full explanation is clearly shown by the interesting statistics compiled in connection with the latest census of the United States of America which show that the proportion of females in the native white population born of native parents is almost identical with that existing in India ten years ago.

The sex proportions in the United States have been worked out separately for the native-born population, distinguishing between those born of native white parents and those born of immigrant white parents and negroes. In the first category the proportion of females per thousand males is 961, in the second it approaches equality, and in the third it is 1,011. The excess of males in the native white population born of native parents is ascribed to the fact that while, as elsewhere, the number of males at birth exceeds that of females and the male mortality is greater than the female, the general death-rate is relatively so much lower, that the excess mortality amongst males does not produce equality in the number of the sexes at so early an age as in Europe; consequently, in the population at all ages, the slightly greater male death-rate does not overcome the advantage which males have at birth. Amongst the native white population born of foreign parents, the general rate of mortality is higher; consequently the males lose sooner their initial advantage and equality in the sex proportions results.

The low proportion of females in Ceylon, 920 per thousand males excluding immigrants, is of special interest, as in that colony there is admittedly no tendency to omit females. The Singhalese have always held their women in considerable respect, and they treat their sons and daughters alike with the greatest kindness. In other respects also the conditions of female life are better than in India. Infant marriages are rare and women seldom have to do hard work.

It may I think, be taken as proved that, in respect of the sex proportions, the figures for western Europe are exceptional, and that those in India do not differ greatly from the proportions in other parts of the world. I will endeavour

* There are, moreover, certain localities where males are in excess in the actual population, e.g., Brittany.

your later on to explain why they should differ from those in western Europe, but will first refer briefly to the other arguments which have been brought forward against the conclusion arrived at in the last Census Report.

266. It is said that reticence regarding women and the low estimation in which they are held would naturally lead to a relatively incomplete return of them. This may have been the case at the comparatively perfunctory enumerations taken prior to 1881. Since that year, however, the arrangements for the census have been elaborated with the utmost care. The enumerators have always been very carefully trained and the work done by them thoroughly checked. Special stress has been laid on the importance of enumerating everybody, and the particular attention of inspecting officers has been directed to the necessity of securing a complete return of females.

There is a difference of 84 per mille between the proportion of females to males in India and that in western Europe. If the proportion were as high here as it is there, there would be 13½ million, or 9 per cent. more, females than are shown in our census returns. It is ridiculous to suppose that this number, or any appreciable fraction of it, should have escaped inclusion in the census schedules. The enquiries made by the supervising officers failed to bring to light any special tendency to omit females from the record. The census staff, being more largely composed of permanent officials, was more efficient in the Punjab than in most other parts of India, but it is here that the deficiency of females is most marked. It is extremely unlikely that any appreciable number should have been omitted owing to indifference. Neither is reticence regarding females likely to have caused any material omissions. Such reticence, if it existed, would occur only amongst the better classes whose numbers are relatively insignificant. Moreover, as the enumerator was usually a fellow villager and near neighbour, the heads of families would have no particular reason to avoid mention of their women; and even if they did so, his local knowledge would enable him to detect the omission. Lastly, if reticence regarding women had any effect, it would reduce the proportions for Muhammadans more than those for Hindus, but in almost all parts of India the proportion of females amongst the adherents of that religion is relatively high. The figures for several provinces taken as a whole appear to show a larger proportion for Hindus, but, except in Madras, we have already seen that this is because the Muhammadans are resident chiefly in the part of the province where females generally are in greatest defect.

It may be added that in the Punjab, where the general proportion is very low, it is lowest amongst the Sikhs who, on the whole, are least reluctant to talk about their women. In Baluchistan the proportion of women is lower amongst the Jat and other tribes who are least reticent about their women than it is amongst those who are most so.

267. The theory of omissions does not fit in with the local variations in the sex proportions. There is no difference whatever in the attitude towards women in the United Provinces and in Bihar, and yet in the natural population of the former tract there are only 902 females per thousand males against 1,009 in the latter. There is a difference of more than a hundred in the proportions per mille in two of the natural divisions of the Madras Presidency, although women

Number of females per thousand males.

Toda	756	Kachin	1,010
Kachari	958	Kandh	1,025
Bhil	974	H3	1,063
Garo	988	Khasi	1,103
Lepcha	999	Lushai	1,188

Animistic tribes neither scorn nor seclude their women, but there are extraordinary differences in the sex ratios amongst such tribes in different parts of India. That the deficiency of females in the north-west of India is a real fact is shown not only by the census returns, which are just as accurate there as in the parts of India where females predominate, but also by the social conditions, such as the very high bride-prices which are commonly paid there amongst the communities which take money for their daughters and the extensive traffic in women which was mentioned in the last Census Report. Where sufficient women are available, the Hindu is very particular in his choice of a wife, and he would not dream of taking one until he had satisfied himself as to her antecedents and social status. In the Punjab and Sind and the western part of the United Provinces,

however, wives are so hard to obtain that these scruples disappear, and men who cannot otherwise provide themselves with help-mates frequently purchase women imported from elsewhere of whom they know absolutely nothing, accepting without enquiry the procurer's assurances regarding them, although they must often know perfectly well that their statements are untrue.

268. At first sight the figures in Subsidiary Table II showing the proportions of the sexes at different age-periods would seem to support the view that females between the ages of 10 and 20 have been omitted from the record. This, however, is not the case. The deficiency at this period of life is due partly to the greater inaccuracy of the age returns of females, and in particular to the under-statement of the ages of those who have attained puberty but are still unmarried and the exaggeration of the ages of very young mothers, and partly to the fact that the mortality amongst young married females is far higher than it is amongst males of the same age. It is worthy of note that the deficiency at this time of life is least marked in Burma, where the ages are more accurately returned than in other parts of India, and where girls seldom marry before puberty. The deficiency at the age-period in question occurs, not only in provinces where females generally are in defect, but also in those like Madras where they outnumber males to a greater extent than in many countries of western Europe, and where, therefore, there is no *a priori* reason to suspect any omissions from the returns. On the other hand, the relative deficiency in the Punjab as compared with India generally is not quite so great at this time of life as it is amongst persons over 20 years of age. Lastly, omissions of females, if they occurred, would be expected amongst those under 30 years of age, but Subsidiary Table II shows that the proportion of females to males below that age is higher than it is in the female population as a whole.

For a fuller examination of the question from the point of view of the age distribution the reader is referred to paragraphs 205 and 219 to 222 of the last Census Report. I have not thought it necessary to repeat at length what I wrote ten years ago.

269. The suggestion that the steady increase in the proportion of females between 1881 and 1901 was due to the growing accuracy of succeeding enumerations has been shown to be unfounded by the result of the recent census, when the proportion has again fallen to that found to exist in 1881. It was stated, moreover, in the Report for 1901 that practically no portion of the general increase in the population then recorded was due to the enumeration having been more accurate than in 1891. Improved enumeration cannot, therefore, have had anything to do with the rise of five per mille at that census in the proportion of females to males. And that being so it seems improbable that it should have had much to do with the smaller rise of four per mille in 1891. Moreover, the continuous improvement which was noticeable up to 1901 was not uniformly distributed. In two of the larger provinces there was no change between 1881 and 1891, and in two others between 1891 and 1901, while

NUMBER OF FEMALES PER THOUSAND MALES.			
Provinces.	1881	1891	1901
Bengal *	1,008	1,005	998
Bombay.	938	938	945
Burma.	877	962	962
Madras *	1,020	1,020	1,025
Punjab *	843	851	852
United Provinces	925	930	937

in one there was a steady decline. The net gain was greater in the second decade than in the first. If improved enumeration had been the cause of the variations, they would have been more uniform, and the gain would have been greater in the first of the two decades. The fall in the proportion which has now taken place is due mainly to the figures for the Punjab and the United Provinces, where the extreme unhealthiness of recent years has resulted in a decrease in the population. This decrease has occurred entirely amongst females; the number of males remains almost the same as in 1901. Before the census was taken the vital statistics had already shown that in Upper India the female mortality from plague was far in excess of male; and enquiries had been instituted as to why this should be so. The con-

* These figures relate to Bengal and the Punjab as they stood in 1901. The figures for Madras include those for Cochin and Travancore.

clusion arrived at was that it is due to the different habits of the two sexes. Women spend much more time than men in their houses, in which they sit most of the day. They generally go barefooted. They sweep the floors and handle the grain for threshing or grinding. They nurse persons suffering from plague; and, when death occurs in a house, they assemble there for purposes of mourning and sit round the corpse. They are thus much more exposed to infection through the rat-flea, which attacks human beings when its natural host dies, and is now generally recognized as the medium by which bubonic plague is chiefly spread. A similar explanation would account for a greater mortality of women from malaria, such as occurred in the epidemic of 1908 in the United Provinces, *vide* paragraph 36 of the Provincial Report. The mosquitoes which carry the germs of the disease are found chiefly in the dark corners of houses; and the women, who are most confined to them, would thus naturally be more frequently bitten.

In 1904 when plague raged in the Punjab the recorded mortality per mille was 44.5 for males and 54.4 for females; and the mortality attributed to plague was 16.5 and 23.4 respectively. In the south of India women do not appear to be specially liable to plague. For this there are several reasons. They are less confined to their houses, and take a more active part in out-door work. Also, in these parts, plague chiefly attacks the inhabitants of the slums of large towns, where the proportion of males is much greater than in the general population, on the basis of which the death-rate is calculated.

270. However that may be, the fact remains that there has been a fall in the proportion of females at the present census, and that it is the result of a rise in their relative death-rate. In the previous decade, as stated in the Report for 1901, the improvement in the proportion which was then registered was due mainly to a relatively high mortality amongst males in the tracts affected by the great famines of 1897 and 1900. This explanation has been challenged, but it is none the less correct. The fact that women suffer from famine less than men is clearly proved by the vital statistics of famine years, as was shown in paragraph 224 of the last Report. It is also well recognized by famine administrators, as will be seen from the extracts from various famine reports and other official papers which I have collected in the Appendix to this Chapter.* Their greater immunity is due partly to physical causes—they have more fat on their bodies and are less metabolic—and partly to external circumstances. It is they who collect edible jungle products, and who cook for the family; they have the handling of the food for their children; they more frequently receive gratuitous relief, and when employed on famine works their tasks are comparatively light; they wander less than the men; they are less ashamed to beg and at the same time are probably more successful when they do so. Lastly, during a famine there is a great diminution in their fecundity with the result that there are fewer deaths than usual from child-birth.

271. The truth seems to be that the proportion of the sexes is never constant. Changes similar to those which have taken place in India occur also in Europe. In Ireland the proportion of females per thousand males fell from 1,050 in 1871 to 1,027 in 1901 and 1,003 in 1911, while in England it rose from 1,042 in 1851 to 1,068 in 1901. Just as the general birth and death rates vary from time to time, so also do the rates for the two sexes taken separately. Some conditions are more adverse to females and others to males; and the relative mortality varies accordingly. In Ireland the number of female, per thousand male, deaths rose from 995 in the quinquennium 1866-70 to 1,016 in 1901-05, and in England it fell from 976 in 1846-50 to 936 in 1901-05. Though the causes determining sex are still obscure, it is well known that the proportion of female to male births also varies from time to time. In England in fifty years it rose by 15, and in France in a hundred years by 26, per mille. These variations have been examined by one of the best known of recent writers on sex, who concludes that the proportions are in a sense self-regulating, so that disturbances tend to bring about their own compensation.†

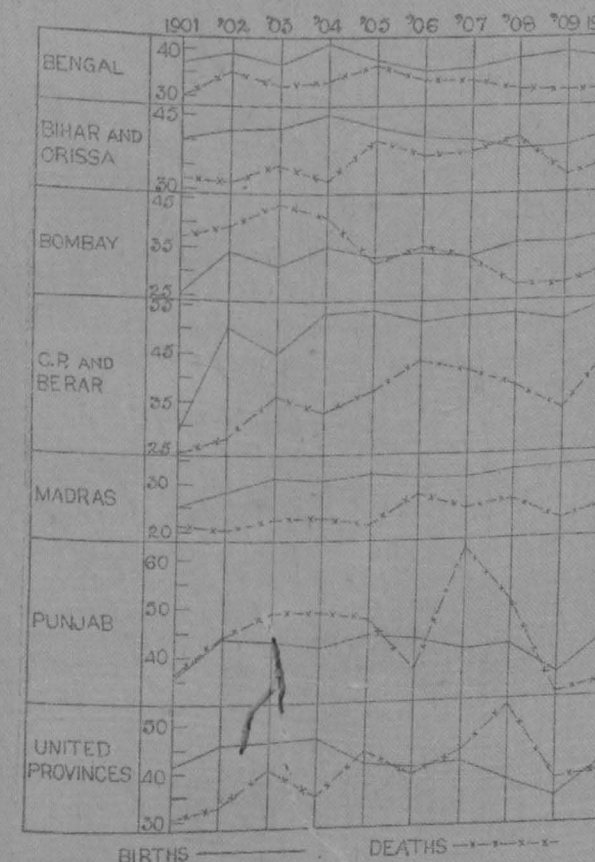
Such variations are naturally to be expected if, as is now generally believed, sex is not inherent in the ovum, but is determined by external circumstances.

* In the famine of 1900 women on relief works were paid the same wages as men similarly employed. The Commission who afterwards reported on the operations came to the conclusion that the sex distinction should be revived. They said it was a physiological fact that women require less food than men.
† C. Dusing.—*Die Regulierung des Geschlechtsverhältnisses bei der Vermehrung der Menschen, Thiere und Pflanzen*.—Jena 1884.

stances, such as the degree of nourishment of the mother, her age and that of the father.

272. It remains to examine the bearing of the birth and death returns on the census figures, but before doing so it is necessary to consider the extent to which they are to be relied upon. The main results disclosed by the birth and death returns are exhibited in the diagram in the margin. The question how far they can be taken as a basis for reliable intercensal estimates of the growth of the population has already been considered in Chapter II, where the variation in the natural population is compared with the difference between the number of births and deaths recorded during the decade. It must be remembered, however, that omissions of births and deaths go to counter-balance one another, so that there may be a good deal of leakage without the net result being materially affected. It is necessary, therefore, for the purpose of this Chapter to go further and consider how far the reported occurrences agree with the birth and death rates calculated by the Actuary, and whether there is any special tendency to fail to report occurrences of

Diagram showing the yearly number of births and deaths per mille in the main Provinces.



any particular kind. It will be seen from the marginal statement that although the estimated and reported birth and death rates agree very closely in the Punjab, there is often a very considerable difference. It is clear that in most provinces the vital statistics are still very defective. They are based on returns from village headmen or watchmen; and although they are tested to a certain extent, this checking is nothing like as complete and thorough as the checking of the census schedules by supervisors and charge superintendents.

273. The general opinion of Provincial Superintendents is that there is no special tendency to fail to report the vital occurrences of females, but Mr. Blunt in the United Provinces thinks that deaths in epidemics are not fully reported and that the omissions mostly refer to females. However that may be, it would clearly be very unsafe to draw any inference adverse to the accuracy of the results of the census from a discrepancy between them and the vital statistics. But there is in reality no discrepancy. The fact that prior to 1901 these statistics showed a greater excess of births over deaths in the case of females does not, as has been supposed, contradict the conclusion arrived at in the last Census Report. Contrariwise it supports it. If, as was there urged, the steady rise in the proportion of females at each successive census up to 1901 was genuine, it must necessarily have been because the excess of births over deaths was greater in their case than in that of males. According to the census of 1911 there has been a fall in the proportion of females, and this again is confirmed by the vital statistics, which show that in

Province.	RATE PER MILLE OF			
	BIRTHS.		DEATHS.	
	Reported.	Estimated by Actuary.	Reported.	Estimated by Actuary.
Assam and old Bengal	38.9	46.7	33.6	40.0
Bombay	33.4	41.0	34.6	35.8
Burma	33.9	42.9	25.2	32.7
Madras	30.8	41.9	23.2	33.4
Punjab	41.2	44.3	44.0	43.3
United Provinces	41.4	46.5	39.3	46.0

the main British provinces during the decade 1901-10 the male births exceeded the male deaths by 4.9 millions, while the corresponding excess in the case of females was only 4.5 millions. It is true that the relative gain to the male population according to the vital statistics is smaller than that disclosed by the census, but the difference is only a matter of degree, and can be explained by the inferior accuracy of the vital statistics, and also, to some extent, by migration between British territory and Native States. The important point is that both sets of statistics agree in showing a relatively more rapid growth of the female population in the period 1891-1901 and a relatively more rapid growth of the male population in 1901-10.

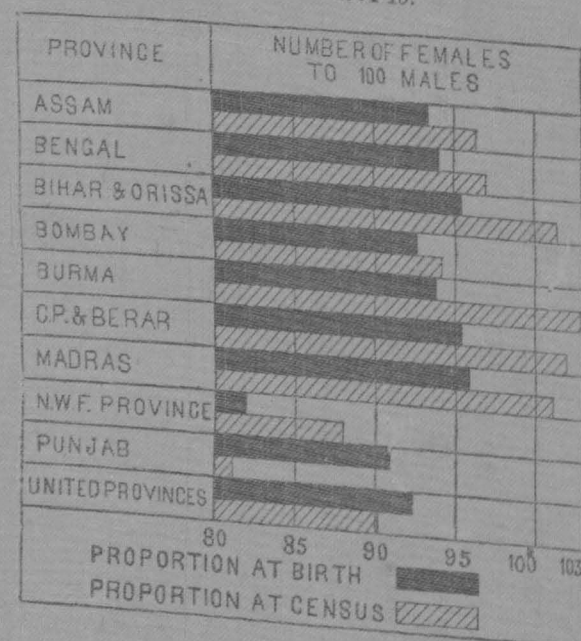
Reasons for difference in sex proportions in India as compared with Europe.

274. We may now investigate the reasons why the proportion of females should be lower in India than in western Europe. In both cases more males than females are born; and although the excess is on the whole slightly greater in India, the mean difference is not very great. In Europe, as in India, there are marked local variations, but except in Baluchistan and the North-West Frontier Province, where the vital statistics are not very reliable, every area under registration in India has its counterpart in Europe.

NUMBER OF FEMALE PER THOUSAND MALE BIRTHS.	
Madras 958	Scotland 959
Bihar and Orissa 955	Belgium 955
C. P. & Berar 954	Germany, Ireland 949
Bengal 941	Norway 944
Burma 938	Roumania 935
Bombay 926	Bulgaria 927
United Provs. 924	Spain 907
Punjab 909	Portugal 899
N.-W. F. Prov. 819	Greece 834

NOTE.—The proportions for India are the average of the decade 1901-10, and those for European countries (except Roumania, Portugal and Greece) of the quinquennium 1901-05.

The very unusual figures for the North-West Frontier Province attracted considerable attention during the first half of the last decade; and in each of the years 1903 to 1906 steps were taken to test the returns in small selected areas. The final conclusion arrived at by the Sanitary Commissioner was that the reported deficiency of female births was due largely to defective registration. The net result of the testing was to raise the proportion of female, per thousand male, births from 819 to 832. Calculated on the original returns, the omissions detected amounted in the case of males to 10, and in that of females to 12, per cent. In one or two of the annual Sanitary Reports the testing was described as perfunctory, so that even the latter figure cannot be relied upon. All that can safely be said is that the proportion of females at birth is even lower in this province than it is in the Punjab.



of still births amongst the hardy women of his province.

It may be interesting to mention that during the last twenty years 1,522 births have been reported by European members of the Indian Civil Service in connection with their family pension fund. Of these 800 were males and 722 females. There were thus only 903 female, per thousand male, births. This is far below the corresponding proportion for Great Britain and Ireland, but the absolute figures are perhaps too small to justify any inference as to the influence of climate on the sex proportions at birth. Nor is it safe to draw general conclusions from the figures for a special section of the community; according to A. Bertillon the proportion of male births in England is relatively high amongst the clergy. It may be noted, however, that the male-producing tendency amongst Europeans in India which is suggested by these statistics appears to have its counterpart in Cuba, where the black race tends to produce an excess of females and the white race an excess of males.*

275. It will be noticed, that in seeking an equivalent elsewhere for the sex proportions at birth in Burma and elsewhere it has sometimes been necessary to go beyond the limits of western Europe. In that tract as a whole, there

* W. Haepe, "The Proportion of the Sexes produced by White and Coloured Peoples in Cuba. Philosophical Transactions of the Royal Society of London, Series B, Vol. 200 pp. 318-321.

are 948 female to a thousand male births, compared with an average of 937 in the Indian provinces. The difference per mille is only 11; and this does not go very far towards accounting for the difference of 84 in the sex proportions at the census. It is therefore in the conditions after birth, as affecting the relative mortality of the two sexes, that an explanation must be sought. As Letourneau has said "it is the social actions of men which produce the most profound disturbances in the proportion of the sexes."* In Europe, boys and girls are equally well cared for. Consequently, as boys are constitutionally more delicate than girls,† by the time adolescence is reached, a higher death-rate has already obliterated the excess of males and produced a numerical equality between the two sexes. Later on in life, the mortality amongst males remains relatively high, owing to the risks to which they are exposed in their daily avocations; hard work, exposure in all weathers and accidents of various kinds combine to make their mean duration of life less than that of women, who are for the most part engaged in domestic duties or occupations of a lighter nature. Hence the proportion of females steadily rises. In India the conditions are altogether different. Sons are earnestly longed for, while daughters are not wanted. This feeling exists everywhere, but it varies greatly in intensity. It is strongest amongst communities, such as the higher Rājput clans, where large sums have to be paid to obtain a husband of suitable status and the cost of the marriage ceremony is excessive, and those like the Pathans, who despise women and hold in derision the father of daughters. Sometimes the prejudice against daughters is so strong that abortion is resorted to when the midwife predicts the birth of a girl. Formerly female infants were frequently killed as soon as they were born, and even now they are very commonly neglected to a greater or less extent. The advantage which nature gives to girls is thus neutralized by the treatment accorded to them by their parents. To make matters worse, they are given in marriage at a very early age, and cohabitation begins long before they are physically fit for it. To the evils of early child-bearing must be added unskilful midwifery; and the combined result is an excessive mortality amongst young mothers. In India almost every woman has to face these dangers. Lastly, amongst the lower classes, who form the bulk of the population, the women often have to work as hard as, and sometimes harder than, the men; and they are thus less favourably situated in respect of their occupations than their sisters in Europe.

So ardently are sons longed for by Hindus that, in all parts of India, when a woman becomes pregnant, a special ceremony is performed in order to induce the birth of a male child. In Travancore the form which this ceremony takes is the "handing by the husband to his pregnant wife of a small quantity of curdled milk with a grain of a special kind of paddy and two peas. Before sipping this drink she is asked, by way of attention being prominently drawn 'What are you drinking?' She then answers, as it were by way of openly expressing the exercise of her will-power in the desired direction of sex determination, 'Pumsavanam' i.e., it is a rite that would give male offspring."

276. The above is a summary of the conditions prevailing in India which tend to reduce the proportion of females below that in western Europe, but in order to appreciate them fully and to arrive at a conclusion as to their relative importance, it is necessary to discuss them in more detail, and to correlate them with the local variations in the sex proportions. And first as to female infanticide. Hypergamy, or the rule that a girl must be given in marriage to a man of higher rank, makes it difficult and very expensive to obtain a suitable husband, while the admission of inferiority which is implied in giving a girl in marriage is a blow to a man's pride. Apart from this a Rājput husband often tyrannizes over his father-in-law. Female infanticide was resorted to in order to avoid these troubles which the marriage of a daughter involved. This practice is of very old standing in the north-west of India. After the British occupation it first came prominently to notice towards the end of the 18th century amongst the hypergamous Rājput clans of Gujrat, where steps were taken to put it down by Duncan, Walker and others. The practice was soon afterwards found to be extremely prevalent in the United Provinces, the Punjab and Rajputana amongst various sections of the popula-

Female Infanticide.

* The Evolution of Marriage, p. 75.

† Darwin has pointed out that the male sex is more variable in structure than the female, and variations in important organs would generally be injurious. It may be mentioned here that according to the same authority female infanticide, if long continued, would tend to cause an excess of males at birth. Girls being killed in families where the majority of the children are females, and spared in those where the majority are males, those who survive and become mothers would belong to a stock with a male-producing tendency.

tion, especially Khatris, Rājputs and Jats and all classes of Sikhs.* With the Jats it frequently happened that where several brothers lived jointly, the eldest alone married and the younger brothers shared his wife. There was thus no need for many women.† In most cases infanticide was practised only to a limited extent, and the first and possibly second daughter would be allowed to live, especially when there were also several sons. But with some tribes every single daughter was killed, so that sometimes not a single girl was to be found in a whole village. After other measures to put a stop to it had been tried and found unsuccessful, an Act (VIII of 1870) was passed with the object of placing under police surveillance the communities suspected of the practice.

277. Infanticide seems always to have been rare amongst Hindus of Bengal and the peninsula area, but it was by no means unknown amongst the aboriginal tribes. Russell, writing in 1836, says that amongst the tribes of the Orissa hills—

“The destruction of female children is common, I may say general. The expense attending the marriage rites is said to be the origin of this cruel custom. They purchase their women from other parts of the country without reference to their parentage.”

The Khonds were specially addicted to the practice. Lieutenant Macpherson, who in 1841 was deputed to Ganjam to suppress it and human sacrifices, came across many large villages in which there was not a single female child. This tribe was influenced largely by the belief that souls return to human form in the same family, but that they do so only if the naming ceremony on the seventh day after birth has been performed. Infants dying before that ceremony do not return. As Khonds, like other natives of India, ardently desire male offspring, this belief was a powerful inducement to the destruction of female infants, as a means of reducing the number of female souls which might be reborn in the family.‡ The crime was also common amongst the Todās of the Nilgiris who, being polyandrous, had no great need of women and, being poor, did not wish to rear superfluous offspring; and amongst certain Nāga tribes in Assam, whose object was to avoid raids by their stronger neighbours in quest of wives. Amongst the Todās the low proportion of females returned at the census has been amply confirmed in the course of independent enquiries by Dr. Rivers and other anthropologists.

The extent to which the practice prevailed half a century ago in Northern India was clearly shown by the Hon^{ble} Mr. Strachey in his speech introducing the Bill which afterwards became Act VIII of 1870. He said that the prevalence of female infanticide in many parts of India had long been a matter of unhappy notoriety. From time immemorial this crime had been practised in many parts of India, and especially in the north by many tribes of Rājputs. Although it might be said that the crime was peculiar to the Rājputs, this was not, strictly speaking, true; for there were other tribes of Hindus with whom the practice was common, and in some parts of the country female infanticide was practised even by some classes of Muhammadans... Mr. Unwin, the Magistrate and Collector of Mynpuri, found that, in that district among the Chauhān Rājputs, hardly a single female child, young or old, was forthcoming. In Etawah Mr. Monckton soon afterwards found the same, and Mr. Gubbins made the same discovery in Agra... Shortly afterwards the first Punjab war occurred, and in 1846 the Jullundur Doab was annexed to the British territories. Lord Lawrence was Commissioner of the new division, and he found this practice equally prevalent there. It was found, subsequently, that there were other tribes, besides the Rājputs in the Punjab, who commonly practised the same crime, especially the Bedis, a numerous and very influential class of Sikhs... In the Benares division, Mr. Moore personally made most minute investigations into the facts in three hundred and eight villages. In sixty-two of these villages he found that there were no female children under the age of six years. In another part of the division, Mr. Moore found a community of Hara Rājputs, regarding whom he said:—“Not only are there no girls to be found in their houses now, but there never have been any, nor has such an event as the marriage of a daughter taken place for more than two hundred years.” In some reports of 1869 it was stated that in practising infanticide it had become customary, instead of suffocating the unfortunate infant at once, to allow it to die a cruel and lingering death. Elsewhere the usual methods were to drown the infant in milk, or poison it with bhang, or by a preparation of datura or opium smeared on the mother's breast.

The following extract from a letter written by one of the Kathiawar Chiefs in 1807 to Major Walker, the Resident at Baroda, who had asked him to put a stop to female in-

* The last Sikh Guru found it necessary specially to excommunicate the *Kuri māri*, or slayers of female children (*Punjab Census Report* 1891, page 219).

† As noted further on, the Todās are also suspected of infanticide, but there is no trace of the practice amongst the Tibetans, nor among the other Indian communities that are or were formerly polyandrous.

‡ I have not been able to hear of any similar superstition elsewhere.

fanticide is interesting as showing, not only that the practice was common, but also that it was openly admitted by the persons addicted to it:—

“...It is notorious that since the Avatara of Sri Krishna, the people (the Jarejabs) who are descended from the Jadus, have during a period of 4,900 years been in the habit of killing their daughters; and it has no doubt reached your knowledge that all God's creation, even the mighty Emperors of Hindustan, have always preserved friendship with this Court; and never acted in this respect (female infanticide) unreasonably... But you, who follow the paths of the King, and who are an Amir of the great Sirkar, the Honourable Company, having written me on this subject, I have derived much uneasiness; for it does not accord with your good character... God is the giver, and God is the taker-away. If any one's affairs go to ruin he must attribute his fortune to God. No one has until this day wantonly quarrelled with this Durbar, who has not in the end suffered loss. This Durbar wishes no one ill, nor has it ever wantonly quarrelled with any one. Everything that may happen is from God. I bow obedient. Do not again address me on this subject.”

In his book on *Indian Infanticide* (W. H. Allen & Co., London 1857) the Reverend John Cave Brown gave some interesting figures of the sex proportions amongst this class of Rājputs, showing that the crime was gradually becoming less common. In 1842 there were only 701 females to 6,208 males; five years later there were 1,130 to 6,445, and again five years later 1,723 to 6,761.

Macpherson in his report of 1841 regarding the Khonds writes:—

“This usage appears to have existed from time immemorial. Generally the life of no female child is spared, except when a woman's first child is a female, or when the head of a tribe, etc., wishes to form connections by intermarriage. The infants are destroyed by exposure in the jungle ravines immediately after their birth, and I found many villages without a single female child.”

The crime is common amongst many primitive races. Amongst the Trobriands of New Guinea, for example, “no man likes a family of girls, and if a couple have no sons and three girls are born in succession, the last born might be killed. Formerly this was the open and recognized practice. Now it can only be done secretly.”*

278. It is difficult to say how far the murder of female infants still prevails. The figures for certain communities, which will be quoted in the next paragraph, show that there is still, in their case, a great dearth of females, but there is very little direct evidence that it is due to actual infanticide, and it may equally well be the result of the more or less deliberate neglect of girls. We have seen that, as far back as 1869, the destruction of female infants was already beginning to take this more insidious form; and the change would no doubt have been accelerated, after the Infanticide Act was passed, by the fear of detection and the gradual growth of a feeling that the actual killing of female children was wrong. But that infanticide continued long after 1870 is certain. A Panjabi Brahman of good family says that, though the practice has now been discontinued, it was formerly quite common in his family: he himself was forced as a boy to assist at the murder of his infant sister, who was killed by having ice-cold water poured over her head, and an aunt of his had seven daughters all of whom were starved to death. Not many years ago a Political Officer, when discussing with the Durbar of a Native State the expenditure to be incurred on the marriage of the Chief's sister, in reply to his question as to the amount spent on previous occasions when ladies of the family were married, was told that *there had never before been such a marriage*, in other words, this was the first female in the family who had been allowed to live. In view of facts like these, it seems highly improbable that actual infanticide has ceased altogether in northern India, but the general opinion is that it is now comparatively rare. It must, however, be remembered that a whole generation would have to pass away, before a diminution in the prevalence of infanticide would take full effect. It would seem from their present sex proportions that the Khonds must have completely abandoned the practice. The Todās still have a great dearth of women; Dr. Rivers, who recently made an exhaustive study of this tribe, writes:—“All accounts of the Todās agree in attributing to them the practice of female infanticide, though at the present time the Todās are very chary of acknowledging the existence of the practice. They deny it absolutely for the present and they are reluctant to speak about it for the past.”

* The Melanesians of New Guinea, p. 705. For other instances see Westermarck, *The Origin and Development of the Moral Ideas*, London, 1906, i, 394. It may be interesting to note that infanticide is mentioned by Strabo as a practice of the Kathaions, who inhabited the region east of the Ravi, while according to Arrian, in the country of Sopithes, all children were inspected by officers appointed for the purpose, and those who appeared deformed or otherwise defective were killed. McCrindle's *Ancient India*, Ed. 1896, pp. 219, 347.

Neglect of female
infant life.

279. The neglect of female infants is of two kinds. There is the deliberate neglect with the object of causing death, which is practically infanticide in a more cruel form; and there is the half unconscious neglect, due partly to habit and partly to the parents' great solicitude for their sons. The boys are better clad, and when ill are more carefully tended. They are allowed to eat their fill before anything is given to the girls. In poor families, when there is not enough for all, it is invariably the girls who suffer. In this way, even where there is no deliberate intention of hastening a girl's death, she is at a great disadvantage as compared with her brothers in the struggle for life.

In the Punjab the lowest proportion of females is found amongst Jat Sikhs (702), Hindu Rajputs (756), Gujars (763) and Hindu Jats (774). Infanticide was at one time notoriously prevalent among all these communities. Castes such as Kanet (947), Dagi and Koli (934) and Jogi Rawal (1,035) that were never suspected of the practice have a much larger proportion of females. Pandit Hari Kishan Kaul says that the amount of actual infanticide is now insignificant, but that the neglect of female infants is the general rule:—

"Girls are usually insufficiently clad and less trouble is taken to protect them from heat and cold than is the case of boys. In the illness of female children no notice is taken unless the ailment becomes serious, while the slightest indisposition in a boy upsets the whole family and the best available medical assistance is summoned. . . . But the neglect of female infants, which has probably been the most important cause of the disparity of the sexes, is diminishing rapidly, owing partly to the spread of education and partly to changes in custom."

It is to be noticed that in the above communities the proportion of girls to boys under the age of 5 is only 832, while in the case of several castes which charge a bride price and therefore presumably take more care of their girls it ranges from 1,005 to 1,052. The excess of the female, over the male, infantile death rate is still far greater than elsewhere in the districts where female infanticide was formerly most common.

In the United Provinces the smallest proportion of females is found amongst the Jats (769) and Gujars (755). In that Province suspicion of infanticide has rested more heavily and more continuously on the Jats than on any other caste. Mr. Blunt says that "if there is no infanticide there is considerable and very widespread neglect of girls." He points out in this connection that, while amongst Hindus the proportion of females to males under five years of age is 997, amongst Muhammadans it is 1,012. In Rajputana the Hindu Rajputs have only 779 females per thousand males, whereas the Muhammadan Rajputs have 847, and the proportion in the Agency as a whole is 909; in the age-period '0-5' the proportion of females among Hindu Rajputs is only 831, as compared with 1,003 among all Hindus.

Early marriage.

280. The evil effects of early marriage on the female constitution are well known and have been cited in other countries also as the main reason for a deficiency of women. Amongst certain Australian tribes, for example, the great excess of males has been attributed, not to the paucity of females born, but to the far greater mortality amongst them after puberty, on account of their too early maternity.* The Baroda Census Superintendent of 1901 (himself an Indian) speaking of the hard lot of child wives, says that numbers of them "march from the nuptial bed to the funeral pile. Nervous debility, consumption and uterine diseases create a havoc among them."

Deaths consequent
on child birth.

281. The general birth-rate is much higher in India than in western Europe (about 44 against 32 per mille) so that, even if other things were equal, the deaths from child-birth would be more numerous. But other things are not equal. There are no trustworthy statistics on the subject in this country; except where death occurs in the course of parturition, it is usually returned as due to 'fever.' But it is well known that the mortality is very high owing to unskilful midwifery and septicæmia. In some parts as many as a third of the children born die during the first year of life, and it is believed that the majority of these die during the first month from septic poisoning. If so the deaths of the mothers also must be very numerous.

* P. Beveridge quoted by Frazer (*Totemism and Exogamy* IV, 83) says: "I have seen girls frequently of not more than eleven or twelve years old becoming mothers; and child-bearing at these tender years entails future infirmities which materially assist in carrying them off ere they have well reached maturity."

Nor is it merely in the above respect that the dangers of childbearing are far greater in India than in Europe. The midwives of this country are notoriously ignorant and unskilful.* They are entirely useless in cases of cross birth; and even in ordinary confinements the patients get very little help from them. After delivery the mother is given various nauseous messes, which are often selected mainly for their supposed efficacy in scaring demons; she is confined for days to a dark, ill-ventilated room in which a fire is kept smouldering and incense is sometimes burnt and she gets no proper nursing and no special nourishment. It would seem probable that the more delicately nurtured women of the higher castes must suffer more from treatment like this than the hardier women of the cultivating and labouring classes.

Bad treatment of
women.

282. In many parts girls are subjected to a somewhat trying ordeal at the time when they attain puberty; and all Hindu women during their monthly periods are regarded as unclean and compelled to live apart from the family. Widows, especially those who lose their husbands while they are still very young, are generally treated as family drudges, and, being supposed to be practically dead to the world, are expected to lead a life of absolute self-denial and to content themselves with the coarsest food and only one meal a day. Amongst the higher castes widows often live to a great age, but as a general rule, their longevity must be affected by the conditions under which they live. Young widows, again, are sometimes apt to form illicit connections; when this becomes known they are often made away with, while if they become pregnant abortion is resorted to, and death not infrequently ensues. The caste statistics for most provinces show that the proportion of females in different castes tends to vary inversely with the number of widows. Thus in the Central Provinces and Berar, the twice-born castes, who have most widows, have the smallest proportion of females to males; the position is exactly reversed with the menial castes, while the higher cultivating castes occupy an intermediate position in both respects. The Doms of Bihar, who have very few widows, have more females than males, while there is a marked deficiency of females amongst the Doms of Bengal, with whom widows are more numerous. Similar variations are found in the barber, blacksmith and milkman castes of these two provinces.

Hard work.

283. Amongst many sections of the population women have to take their share, or more than their share, in the work by which the family is supported, but as a rule this does not seem to affect their longevity. The proportion of females is, on the whole, highest amongst the lower castes, whose women work hardest; and it is exceptionally high amongst the Lushais where they do practically all the work, and the men spend their time loafing and smoking. That hard work sometimes goes a good way to account for the dearth of females is clear, however, from the proportions amongst the nomad, semi-nomad and settled people of Baluchistan. Females are most numerous amongst those who are settled, and least so amongst the nomads. Mr. Bray explains this as follows:—

"No one who has seen the woman of Baluchistan trudge heavily burdened along the road with her lord and master stepping briskly ahead, or has watched her wearily pitch the tent while he looks on with a critical eye, can doubt that nomadism tells far more hardly on the women than it does on the men."

Similarly in the North-West Frontier Province, where the proportion of females is exceptionally low, Mr. Latimer says that "women are regarded as chattels, and are valued chiefly for their capacity to work like cattle; and it is thus not likely that they can withstand the rigours of the climate as well as males, who in childhood are more carefully tended by their parents and in later life take care to provide for their own food and comfort without much thought for their womenkind."

But on the whole, it would seem rather that the inactive life led by ladies of the upper classes, who are secluded in dark and often ill-ventilated houses, is more adverse to longevity than hard work out of doors. It is well known that tuberculosis is a frequent visitor to zenanas, and that ladies behind the parda suffer from many female troubles which their poorer sisters escape.

* The methods of the indigenous midwife were described in paragraph 939 of the Bengal Census Report for 1901. See also some of the Reports on the present census, e.g., Punjab, para. 324; United Provinces, para. 207; and Bombay, para. 159.

APPENDIX.

Relative mortality of males and females in famine years.

Extract from Report by the Sanitary Commissioner, Madras.—(Review of the Madras Famine, 1876-78, Appendix B., page 122.)

The ratio of male mortality in fact was just one-fifth in excess of that of the female. These figures relate to actual statistics of relief camps in the Salem district, and I think there can be no doubt that what is true in regard to this district and in relief camps in every part of the country must be held to apply generally to the distressed populations, viz., that the mortality pressed unduly on the bread winners amongst the adults. * * * The very unusual proportion of male mortality registered throughout the Presidency during the past year (58.4 per mille of males to 48.04 females) points most clearly to the fact that those who left home to seek work and food and exhausted their energies in hopeless wandering had the least chance of surviving the hardships to which they were exposed.

Extract from Report by Mr. W. C. Bennet, C.S., on the mortality in the Lucknow and Rae Bareilly Divisions.—(Report on the Famine in the North-Western Provinces and Oudh, 1877-79, page 350.)

The only point which I wish to notice here, and perhaps the most noticeable feature in the return, is the great preponderance of adult male over adult female mortality, a preponderance which is striking enough in the case of deaths from all causes, but still more remarkable in the case of deaths from famine. When it is considered that an enormous majority of the deaths from famine occurred among the very lowest classes, it is quite absurd to suppose any attempt at concealment of the deaths of grown women. From what I know of native feeling generally, and from the particular experience I have gained in the last month, I am positive that there is no more reluctance to admit the deaths of their women than there would be in an English village, and that even in the highest classes there is never a momentary thought of concealment. I over and over again came across families where all the adult males and most of the children had died, leaving only the women and one or two young ones alive. I am, in fact, unable to entertain a shadow of doubt as to the substantial accuracy of the figures given above; at the same time I do not conceal from myself the extreme difficulty of giving an adequate explanation.

Causes.—There probably is no one general cause that can be alleged; but a number of small concurrent causes, which, each comparatively unimportant in itself, combined to produce the result. When questioned on the point, the natives assert it even more strongly than the statistics do, and offer the following explanations:—

In the first place, they say the woman in a Hindu family always keeps the household stores, and has no scruple in availing herself of the advantage this gives her.

In the second place, she commonly has some small metal ornaments which she disposes of in time of need for her own benefit.

Thirdly,—and this is a reason which will account for much,—her ordinary means of livelihood were not extinguished so completely as those of her husband; the household work of sweeping and garnishing the dwellings of the well-to-do continued to support large numbers of women when the men had absolutely no work to look for.

Fourthly, they refer to the common feelings of tenderness with which women are regarded. Not only is charity extended to them which would be denied to an adult male, but the husbands themselves will very generally rather starve than see their wives starve before them. No one who has seen an Indian famine can fail to have been struck by the extraordinary habits of self-restraint and patience under suffering which are the fruits of the lifelong discipline and of the religious system of the people, and I have little doubt that this sacrifice on the part of the males, which is alleged without boasting as a matter of course, really had the effect of saving a large number of women who would otherwise have perished.

Finally, it was on the males that the brunt of the struggle fell. The incessant anxiety, the wanderings from place to place in search of employment, the long watches by the growing crops during inclement nights, all operated fatally on bodies enfeebled by want, and destitute of even the ordinary insufficient clothing.

Extract from Report by Captain D. G. Pitcher on the mortality in the Rohilkhand Division.—(Report on the Famine of 1877 in the North-Western Provinces and Oudh, page 313.)

The excess of deaths in men over women is a singular fact well known to the people themselves, and accounted for in identically the same manner by all classes from Shahjahanpur to Bijoor—from the peasant to the police. It is attributed to the women, who have the

cooking to do for the whole household, taking for themselves and for their children more than a fair share of the food provided. I tried one day to find out from some labourers irrigating fields what they purchased with their small wage of five pice a day. "That we can't say," was the reply; "we give all cash to our women, and if you want to know how it is spent, you must ask them, as we don't know." Another reason given for the preponderance of male over female deaths was that the men when hard pressed were too proud to beg of their neighbours, but that the women and children felt no such shame, and importuned the more wealthy villagers. Again the women when hard up would go off to the mother-in-law's house, but the men once married and separated from the parental roof appear to look for little help therefrom. Another reason was no doubt due to the fact that the watching of crops at night is done by men only. Last year, whatever the thermometer may have shown, the cold was more trying with the cutting wind and rain that accompanied it than it had been for many years past, while owing to the scarcity of food the fields required an extra number of watchers, and indeed, watching fields constituted one of the chief sources of income of the poor. Straw for bedding was scarce and many who had enough wherewith to purchase food were yet unable to purchase clothing. Hence it is conceivable that many in these night watchings contracted fever, of which, when disabled from work, they were left by their relatives to die. There remains also the fact that the men considerably exceed the women in numbers, to what extent my village returns when completed will afford some indication.

Extract from Mr. Baines' Report on the Census of Bombay, 1881, pages 34 and 35.

In the worst period of famine males suffered more than females * * * The smaller mortality amongst females than amongst males appears to be a general characteristic throughout the four districts most affected; and if the year of greatest mortality be taken it will be seen that though the number and proportion of the deaths differ so widely in the four districts, the proportion of the females that died to males is singularly uniform, more so than in any other year of the series. The action of the famine in equalising the numbers of the two sexes, too, is seen in the comparison of the figures for the two enumerations.

Extract from Appendix II to the Resolution on the Administration of Famine Relief in the North-Western Provinces and Oudh during the years 1896 and 1897, Volume II, page 126.

There were 823,839 deaths among males as opposed to 681,898 deaths among females. This higher death-rate among males has been observed in former famines, and various reasons have been adduced for its occurrence. Of these, the greater exposure of males to vicissitudes of weather, as in watching fields at night, etc., seems the most probable. To this it is added that women having the control of the food and cooking of the household, are able to secure a larger share for themselves. But it is also to be remembered that, as a matter of fact, the male population of these provinces is considerably larger than the female.

Extract from the Report on the Famine in the Madras Presidency during 1896 and 1897, pages 165 and 166.

The actual excess over normal, however, that is, the difference between 19.2 per mille and 22.6 per mille, shows that 1,767 more females died than in the period selected to afford an average. This calculation does not differentiate the mortality from epidemic diseases, but, on the other hand, the increased rate of death of females in proportion to that of males, is of special significance, if it be held in mind that the tendency on the part of the indifferent agency employed for registration is to ignore occurrences affecting the inferior sex. The women undoubtedly exhibited more signs of deterioration than the men.

During the 1877 famine, the late Surgeon-General Cornish, then Sanitary Commissioner, found that deaths among men were far more numerous than amongst women. This he ascribed to the exhaustion following the aimless wandering of the men in search of employment that formed a special feature during the famine of that time. With, however, labour provided for the population, as in the present instance, the women have suffered disproportionately owing, it may be presumed, to the special tax upon their vitality in connection with their functions as mothers, and the extra strain involved in fulfilling domestic duties, in addition to the day's work, of a nature most were not accustomed to. The fact that the wife, according to Hindu etiquette, eats what the husband deigns to leave her also cannot be ignored.

(N.B.—The famine of 1896-97 in the Madras Presidency was not very severe and the excess mortality was slight.)

Extract from the Central Provinces Census Report for 1901, pages 116 and 117.

Colonel Scott-Reid, the late Administrative Medical Officer, informed me that he had remarked the better condition of women in famine time, especially on admission into and residence in Jail * * * Mr. Fuller also noticed on several occasions that women on relief works looked fitter than men.

During the whole ten years 2,042,217 deaths of males were reported as against 1,724,555 of females or 1,000 to 844. In 1896 the number of female deaths to 1,000 males was 838; in 1897 it was as low as 801, and in 1900 it was 839. Thus in 1897, when the famine mortality was most severe, five men died for every four women.

Extract from a paper read by the late Sir Charles Elliott before the Royal Society of Arts in 1905.

All the authorities seem agreed that women succumb to famine less easily than men; and the diminution in the birth-rate, with the lessened risk of life from parturition, tends in the same direction.

[Sir Charles Elliott was Famine Commissioner in Mysore in 1876, and Census Commissioner for India in 1881.]

Extract from the United Provinces Census Report for 1911, pages 195 and 196.

The kind of effect produced by famine on the ratios of the sexes may be seen by comparing the proportions of female to male deaths in a normal and famine year. I put side by side the figures of 1891 (normal) and 1897 (famine) and 1901 (normal) and 1908 (famine). I have reproduced the older figures because of the striking difference between them and the newer figures. In both series we find that the ratio of female deaths rises above the normal

Age.	Female deaths to 100 male deaths in—			
	1891.	1897.	1901.	1908.
0-1	90	95	89	96
1-5	99	102	102	103
5-10	78	79	81	85
10-15	71	70	74	80
15-20	114	103	121	103
20-30	101	90	113	109
30-40	78	72	86	94
40-50	75	72	84	87
50-60	74	73	82	91
60 and over	81	80	89	105

in infancy. At 1 to 5 and 5 to 10, it is slightly higher than the normal, between 15 and 30 it is very appreciably lower. The reason is that when scarcity begins to threaten, conception diminishes; the birth-rate of a famine year is consequently lower than the normal, though not so much lower as the birth-rate of the year succeeding a famine is. The peculiar dangers of this period are lessened, and woman, who in their absence is at her prime of life, reaps to the full the advantages which assist her in famine. Normally one would expect similar though smaller diminutions in the ratio of female deaths at all other age-periods, owing to these very advantages; and in 1897 the figures fulfil expectation.

But in 1908 they do not. The ratio of female deaths is very appreciably higher than the normal at all these age-periods. Of this striking difference an explanation is needed.

One cause of the difference is undoubtedly the effect of malaria. Both in 1897 and 1908 there were epidemics of this disease, which is the usual concomitant though not the effect of famine; and in attempting to gauge the effect of famine on the ratio of the sexes the effect of the subsequent malaria on the ratio should be excluded. For malaria attacked equally those who had felt the pressure of famine and those who had not, European troops, European ladies, who had passed the summer in the hills, poor and rich alike. Indeed malaria attacked most those who had felt the pressure of famine least, for it was most severe and most fatal just where famine had not been present. To get a true picture of the effect of famine on the ratio of the sexes it would be necessary to work out the figures given above for the months of the year in which famine was prevalent. This is unfortunately impossible as figures by age-period and sex are not available for separate months. But the measure of the difference that would result if the calculation were possible can be gauged from the following facts. From January to August 1908 (the famine period) the ratio of female deaths to 100 male deaths was 88; from September to December 1908, after famine was over and malaria had appeared, the ratio was 106; 48 per cent. of the total deaths of the year occurred during the famine months, 52 per cent. during the malaria months. The ratio of female to 100 male deaths from fever was 99 over the whole year; during the famine months it was 88, during the malaria months it was 110. The ratio of female to 100 male deaths from fever in 1901 was 92. These facts make it quite clear that in famine woman suffers proportionately less than man, and that the figures for the whole year 1908 are upset merely by the epidemic of malaria of its last months. In 1897, it may be noted, malaria was much less dangerous to females: the percentage of female to male deaths from fever was only 86 through the whole year; whilst the total deaths of that year were fewer by 70,000 than the deaths from fever alone in 1908.

There is also another and more gratifying cause. There can be no doubt that a part of the differences mentioned are due to the fact not that more women died but that fewer men died during the famine. This is attributable chiefly to the absence of wandering. This experience of wandering was, I think, due to the fact that the people by 1908 had learnt by the famine shows, they had not yet obtained such confidence in Government, and took to their traditional methods of escape from famine—at best, wandering in search of work, and at worst, looting the grain dealer's shops. In 1908 there was no predisposition to wander: a timely distribution of gratuitous relief at an unusually early date kept them at home; and when the relief works opened, they flocked to them at once, often in ready-made gangs. It is these wanderers who feel the worst effects of famine; it is chiefly they who starve. And it is amongst them that man would most severely feel his disadvantages and woman would reap the fullest benefit of her advantages. If male mortality has decreased at this famine it is because there was next to no wandering.

SUBSIDIARY TABLE I.

Number of females per 1,000 males by Provinces, States and Agencies.

Province, State or Agency.	NUMBER OF FEMALES TO 1,000 MALES.							
	1911.		1901.		1891.		1881.	
	Actual population.	Natural population.	Actual population.	Natural population.	Actual population.	Natural population.	Actual population.	Natural population.
1	2	3	4	5	6	7	8	9
INDIA.	954	953	963	963	958	958	954	956
Ajmer-Merwara	884	818	900	876	881	893	861	773
Assam	940	963	940	973	942	966	953	965
Baluchistan	790	833	...	...	...	...	...	...
Bengal	945	970	960	982	973	995	994	1,013
Bihar and Orissa	1,043	1,014	1,047	1,027	1,040	1,032	1,024	1,018
Bombay	923	942	945	950	938	945	938	947
Burma	959	1,028	962	1,027	962	1,017	877	980
Central Provinces and Berar	1,008	1,019	1,019	1,026	985	*	973	*
Coorg	799	962	801	963	804	954	775	939
Madras	1,032	1,011	1,029	1,029	1,023	1,025	1,021	1,019
North-West Frontier Province	858	887	846	885	843	892	819	879
Punjab	817	811	854	846	850	844	844	844
United Provinces of Agra and Oudh	915	902	937	926	930	917	925	914
Baroda State	925	927	936	970	928	929	917	890
Central India Agency	949	955	948	954	912	921	897	903
Cochin State	1,007	1,001	1,004	996	998	992	989	*
Hyderabad State	968	974	964	970	964	971	968	974
Kashmir State	887	881	88	887	880	887	...	...
Mysore State	979	990	980	994	991	1,000	1,007	1,008
Rajputana Agency	909	898	905	901	891	883	852	843
Sikkim State	951	1,033	916	956	935	...	...	...
Travancore State	981	979	981	986	982	*	1,006	*

* Not available.

Notes.—The proportions for Provinces include the Native States attached to them, except in the case of the N.-W. F. Provinces, where they are for British territory only, and Madras, where they exclude those for Cochin and Travancore. The proportion for India in column 2 has been calculated on the population dealt with in Imperial Table VII. In calculating the natural population for India as a whole, the emigrants from India to the Straits Settlements, Ceylon and other places for which returns are available have been taken into account.

SUBSIDIARY TABLE II.

Number of females per 1,000 males at different age-periods by main religions at each of the last three censuses.

ALL RELIGIONS.

Age.	India.		Assam.		Bengal, Bihar and Orissa.		Bombay.		Burma.	Central Provinces and Berar.	Madras.	Punjab.	United Provinces.
	1911.	1901.	1911.	1901.	1911.	1901.	1911.	1901.	1911.	1901.	1911.	1901.	1911.
0-1	951	955	933	978	973	974	973	953	983	997	994	984	908
1-2	951	955	933	978	973	974	973	953	983	997	994	984	908
2-3	951	955	933	978	973	974	973	953	983	997	994	984	908
3-4	951	955	933	978	973	974	973	953	983	997	994	984	908
4-5	951	955	933	978	973	974	973	953	983	997	994	984	908
5-10	951	955	933	978	973	974	973	953	983	997	994	984	908
10-15	951	955	933	978	973	974	973	953	983	997	994	984	908
15-20	951	955	933	978	973	974	973	953	983	997	994	984	908
20-25	951	955	933	978	973	974	973	953	983	997	994	984	908
25-30	951	955	933	978	973	974	973	953	983	997	994	984	908
30-35	951	955	933	978	973	974	973	953	983	997	994	984	908
35-40	951	955	933	978	973	974	973	953	983	997	994	984	908
40-45	951	955	933	978	973	974	973	953	983	997	994	984	908
45-50	951	955	933	978	973	974	973	953	983	997	994	984	908
50-55	951	955	933	978	973	974	973	953	983	997	994	984	908
55-60	951	955	933	978	973	974	973	953	983	997	994	984	908
60 and over	951	955	933	978	973	974	973	953	983	997	994	984	908
Total 0-30	951	955	933	978	973	974	973	953	983	997	994	984	908
Total 30 and over	951	955	933	978	973	974	973	953	983	997	994	984	908
Total all ages	951	955	933	978	973	974	973	953	983	997	994	984	908

NOTE.—The figures for Provinces include those for the States attached to them, except in the case of Madras where they exclude Cochin and Travancore.

* Not available.

SUBSIDIARY TABLE II—contd.

Number of females per 1,000 males at different age-periods by main religions at each of the last three censuses—contd.

HINDU.

Age.	India.		Assam.		Bengal, Bihar and Orissa.		Bombay.		Central Provinces and Berar.		Madras.	Punjab.	United Provinces.
	1911.	1901.	1911.	1901.	1911.	1901.	1911.	1901.	1911.	1901.	1911.	1901.	1911.
0-1	951	955	933	978	973	974	973	953	983	997	994	984	908
1-2	951	955	933	978	973	974	973	953	983	997	994	984	908
2-3	951	955	933	978	973	974	973	953	983	997	994	984	908
3-4	951	955	933	978	973	974	973	953	983	997	994	984	908
4-5	951	955	933	978	973	974	973	953	983	997	994	984	908
5-10	951	955	933	978	973	974	973	953	983	997	994	984	908
10-15	951	955	933	978	973	974	973	953	983	997	994	984	908
15-20	951	955	933	978	973	974	973	953	983	997	994	984	908
20-25	951	955	933	978	973	974	973	953	983	997	994	984	908
25-30	951	955	933	978	973	974	973	953	983	997	994	984	908
30-35	951	955	933	978	973	974	973	953	983	997	994	984	908
35-40	951	955	933	978	973	974	973	953	983	997	994	984	908
40-45	951	955	933	978	973	974	973	953	983	997	994	984	908
45-50	951	955	933	978	973	974	973	953	983	997	994	984	908
50-55	951	955	933	978	973	974	973	953	983	997	994	984	908
55-60	951	955	933	978	973	974	973	953	983	997	994	984	908
60 and over	951	955	933	978	973	974	973	953	983	997	994	984	908
Total 0-30	951	955	933	978	973	974	973	953	983	997	994	984	908
Total 30 and over	951	955	933	978	973	974	973	953	983	997	994	984	908
Total all ages	951	955	933	978	973	974	973	953	983	997	994	984	908

NOTE.—The figures for Provinces include those for the States attached to them, except in the case of Madras, where they exclude Cochin and Travancore.

* Not available.

SUBSIDIARY TABLE II—*contd.*Number of females per 1,000 males at different age-periods by main religions at each of the last three censuses—*contd.*

MUSALMAN.

Age.	India.			Assam.			Bengal, Bihar and Orissa.			Bombay.			Central Provinces and Berar.			Madras.			Punjab.			United Provinces.		
	1911.	1901.	1891.	1911.	1901.	1891.	1911.	1901.	1891.	1911.	1901.	1891.	1911.	1901.	1891.	1911.	1901.	1891.	1911.	1901.	1891.	1911.	1901.	1891.
0-1	991	997	1,029	991	997	1,029	991	997	1,029	991	997	1,029	991	997	1,029	991	997	1,029	991	997	1,029	991	997	1,029
1-2	1,029	1,027	1,022	1,029	1,027	1,022	1,029	1,027	1,022	1,029	1,027	1,022	1,029	1,027	1,022	1,029	1,027	1,022	1,029	1,027	1,022	1,029	1,027	1,022
2-3	1,049	1,038	1,045	1,049	1,038	1,045	1,049	1,038	1,045	1,049	1,038	1,045	1,049	1,038	1,045	1,049	1,038	1,045	1,049	1,038	1,045	1,049	1,038	1,045
3-4	1,051	1,046	1,040	1,051	1,046	1,040	1,051	1,046	1,040	1,051	1,046	1,040	1,051	1,046	1,040	1,051	1,046	1,040	1,051	1,046	1,040	1,051	1,046	1,040
4-5	998	991	983	998	991	983	998	991	983	998	991	983	998	991	983	998	991	983	998	991	983	998	991	983
Total 5-9	1,029	1,016	1,022	1,029	1,016	1,022	1,029	1,016	1,022	1,029	1,016	1,022	1,029	1,016	1,022	1,029	1,016	1,022	1,029	1,016	1,022	1,029	1,016	1,022
5-10	933	923	912	933	923	912	933	923	912	933	923	912	933	923	912	933	923	912	933	923	912	933	923	912
10-15	773	764	768	773	764	768	773	764	768	773	764	768	773	764	768	773	764	768	773	764	768	773	764	768
15-20	902	970	986	902	970	986	902	970	986	902	970	986	902	970	986	902	970	986	902	970	986	902	970	986
20-25	1,089	1,115	1,099	1,089	1,115	1,099	1,089	1,115	1,099	1,089	1,115	1,099	1,089	1,115	1,099	1,089	1,115	1,099	1,089	1,115	1,099	1,089	1,115	1,099
25-30	932	974	993	932	974	993	932	974	993	932	974	993	932	974	993	932	974	993	932	974	993	932	974	993
Total 30-39	917	956	956	917	956	956	917	956	956	917	956	956	917	956	956	917	956	956	917	956	956	917	956	956
30-40	854	878	881	854	878	881	854	878	881	854	878	881	854	878	881	854	878	881	854	878	881	854	878	881
40-50	854	886	876	854	886	876	854	886	876	854	886	876	854	886	876	854	886	876	854	886	876	854	886	876
50-60	807	913	917	807	913	917	807	913	917	807	913	917	807	913	917	807	913	917	807	913	917	807	913	917
60 and over	921	991	1,033	921	991	1,033	921	991	1,033	921	991	1,033	921	991	1,033	921	991	1,033	921	991	1,033	921	991	1,033
Total 30 and over	806	902	909	806	902	909	806	902	909	806	902	909	806	902	909	806	902	909	806	902	909	806	902	909
Total all ages	919	937	940	919	937	940	919	937	940	919	937	940	919	937	940	919	937	940	919	937	940	919	937	940

NOTE.—The figures for Provinces include those for the States attached to them, except in the case of Madras, where they exclude Cochin and Travancore.

* Not available.

SUBSIDIARY TABLE II—*contd.*Number of females per 1,000 males at different age-periods by main religions at each of the last three censuses—*contd.*

ANIMISTIC.

Age.	India.			Assam.			Bengal, Bihar and Orissa.			Bombay.			Burma.			Central Provinces and Berar.			Madras.		
	1911.	1901.	1891.	1911.	1901.	1891.	1911.	1901.	1891.	1911.	1901.	1891.	1911.	1901.	1891.	1911.	1901.	1891.	1911.	1901.	1891.
1	1,020	1,035	1,044	1,020	1,035	1,044	1,020	1,035	1,044	1,020	1,035	1,044	1,020	1,035	1,044	1,020	1,035	1,044	1,020	1,035	1,044
2	1,067	1,061	1,076	1,067	1,061	1,076	1,067	1,061	1,076	1,067	1,061	1,076	1,067	1,061	1,076	1,067	1,061	1,076	1,067	1,061	1,076
3	1,080	1,083	1,107	1,080	1,083	1,107	1,080	1,083	1,107	1,080	1,083	1,107	1,080	1,083	1,107	1,080	1,083	1,107	1,080	1,083	1,107
4	1,098	1,115	1,120	1,098	1,115	1,120	1,098	1,115	1,120	1,098	1,115	1,120	1,098	1,115	1,120	1,098	1,115	1,120	1,098	1,115	1,120
5	1,095	1,090	1,085	1,095	1,090	1,085	1,095	1,090	1,085	1,095	1,090	1,085	1,095	1,090	1,085	1,095	1,090	1,085	1,095	1,090	1,085
Total 5-9	1,060	1,074	1,083	1,060	1,074	1,083	1,060	1,074	1,083	1,060	1,074	1,083	1,060	1,074	1,083	1,060	1,074	1,083	1,060	1,074	1,083
10-14	909	984	947	909	984	947	909	984	947	909	984	947	909	984	947	909	984	947	909	984	947
15-19	880	884	886	880	884	886	880	884	886	880	884	886	880	884	886	880	884	886	880	884	886
20-24	1,074	1,046	1,017	1,074	1,046	1,017	1,074	1,046	1,017	1,074	1,046	1,017	1,074	1,046	1,017	1,074	1,046	1,017	1,074	1,046	1,017
25-29	1,277	1,260	1,295	1,277	1,260	1,295	1,277	1,260	1,295	1,277	1,260	1,295	1,277	1,260	1,295	1,277	1,260	1,295	1,277	1,260	1,295
30-34	1,073	1,050	1,082	1,073	1,050	1,082	1,073	1,050	1,082	1,073	1,050	1,082	1,073	1,050	1,082	1,073	1,050	1,082	1,073	1,050	1,082
35-39	1,063	1,025	1,008	1,063	1,025	1,008	1,063	1,025	1,008	1,063	1,025	1,008	1,063	1,025	1,008	1,063	1,025	1,008	1,063	1,025	1,008
40-44	937	974	901	937	974	901	937	974	901	937	974	901	937	974	901	937	974	901	937	974	901
45-49	879	899	873	879	899	873	879	899	873	879	899	873	879	899	873	879	899	873	879	899	873
50-54	905	1,019	941	905	1,019	941	905	1,019	941	905	1,019	941	905	1,019	941	905	1,019	941	905	1,019	941
55-59	1,173	1,238	1,157	1,173	1,238	1,157	1,173	1,238	1,157	1,173	1,238	1,157	1,173	1,238	1,157	1,173	1,238	1,157	1,173	1,238	1,157
60 and over	922	928	957	922	928	957	922	928	957	922	928	957	922	928	957	922	928	957	922	928	957
Total 30 and over	1,068	1,016	991	1,068	1,016	991	1,068	1,016	991	1,068	1,016	991	1,068	1,016	991	1,068	1,016	991	1,068	1,016	991
Total all ages	1,068	1,016	991	1,068	1,016	991	1,068	1,016	991	1,068	1,016	991	1,068	1,016	991	1,068	1,016	991	1,068	1,016	991

NOTE.—The figures for Provinces include those for the States attached to them, except in the case of Madras, where they exclude Cochin and Travancore. The figures for 1901 in Bombay relate to British territories only.

* Not available.

SUBSIDIARY TABLE III.

Number of females per 1,000 males for certain selected castes.

CASTE.	NUMBER OF FEMALES PER 1,000 MALES.						
	All ages.	0-5.	5-12.	12-15.	15-20.	20-40.	40 and over.
ASSAM.							
Ahom							
Jugi	987	1,054	960	887	1,093	880	845
Kachari (Hindu)	964	1,032	937	740	1,055	985	941
Kachari (Animist)	839	970	884	996	1,122	737	693
Kalita	999	1,063	960	919	1,313	1,000	894
Koch	921	1,024	957	724	804	960	855
Kshattriya (Manipuri)	930	1,027	956	738	964	1,013	899
	1,003	997	970	1,002	1,019	1,027	1,031
BENGAL.							
Bagdi							
Baidya	1,010	1,053	920	846	1,103	1,023	1,053
Baishnab	983	1,037	1,000	726	935	960	1,075
Barui	1,205	1,076	945	876	1,175	1,271	1,428
Bauri	950	1,041	927	797	1,120	948	891
	1,035	1,116	919	703	1,045	1,096	1,212
Brahman							
Dhoba (Hindu)	878	1,020	941	788	966	769	914
Goala (Hindu)	932	1,053	953	739	1,055	902	899
Hari	819	1,023	893	745	912	695	848
Jogi	982	1,105	909	815	1,203	977	944
	977	1,053	965	766	1,122	985	937
Jolaha							
Kaibartta, Chasi	863	1,002	852	760	1,010	805	856
Kaibartta, Jaliya	1,001	1,051	968	816	1,138	980	1,032
Kamar (Hindu)	959	1,094	940	810	1,215	917	903
Kayastha	948	1,076	947	831	1,089	888	945
	954	1,015	974	716	981	904	1,052
Malo							
Muchi (Hindu)	971	1,093	942	864	1,105	954	930
Namasudra	875	1,028	880	845	1,069	817	799
Napit (Hindu)	973	1,046	939	794	1,235	972	903
Pod	948	1,050	945	808	1,059	901	959
Rajbansi (Hindu)	961	1,074	912	868	1,202	956	852
	942	1,139	945	738	1,040	971	798
Sidrop							
Santal (Hindu)	990	1,034	953	848	992	962	1,080
Santal (Animist)	970	1,060	938	897	1,231	1,016	786
Sutradhar	984	1,088	935	848	1,161	1,051	850
Tanti and Tatwa (Hindu)	944	1,067	928	869	999	940	897
Teli and Tili	912	990	962	811	1,014	827	955
	936	1,005	916	785	987	877	1,032
BIHAR AND ORISSA.							
Babhan							
Brahman	967	1,105	891	659	785	976	1,151
Chamar	1,000	1,050	990	787	881	1,005	1,144
Chasa	1,153	1,124	985	892	1,080	1,809	1,270
Dhanuk	1,042	1,071	1,010	860	945	1,060	1,100
	1,096	1,067	942	898	1,041	1,188	1,213
Dhobi (Hindu)							
Dhaniya	1,063	1,048	961	923	1,030	1,126	1,150
Gaura	1,141	1,100	975	874	1,086	1,292	1,269
Goala (Ahi)	1,099	1,033	977	875	1,010	1,153	1,321
Hajjam (Napit) (Hindu)	1,003	1,058	921	866	932	1,037	1,078
	1,071	1,048	937	868	950	1,178	1,205
Hajjam (Musalman)							
Jolaha	1,111	1,052	982	876	1,063	1,284	1,188
Kahar	1,123	1,054	962	888	1,015	1,323	1,233
Kalwar	1,149	1,061	925	824	1,042	1,276	1,412
Kandh (Hindu)	1,046	1,070	940	818	904	1,110	1,217
	1,057	1,117	990	846	1,070	1,079	1,115
Kandh (Animist)							
Kandu	1,040	1,039	984	932	1,182	1,047	1,039
Kayastha	1,082	1,090	919	780	915	1,181	1,274
Kawat	1,004	1,032	988	748	797	1,035	1,110
Khandayat	1,063	1,040	1,034	890	1,008	1,074	1,182
	1,104	1,052	992	889	1,006	1,148	1,333
Koiri							
Kumhar	1,021	1,075	962	820	950	1,063	1,068
Kurmi	1,012	1,064	967	985	981	1,042	1,005
Lohar (Hindu)	1,027	1,082	1,056	852	896	1,074	1,047
Manda (Hindu)	1,071	1,073	944	749	961	1,197	1,208
	1,048	913	1,053	987	1,107	1,033	1,145
Munda (Animist)							
Musbar	1,029	996	1,015	910	991	1,085	1,213
Nuoya	1,020	1,123	962	811	1,045	1,127	921
Oron (Hindu)	1,144	1,119	962	745	934	1,339	1,323
Oron (Animist)	1,021	1,099	940	928	938	1,092	1,015
	1,145	992	989	873	878	1,106	1,032

SUBSIDIARY TABLE III—contd.

Number of females per 1,000 males for certain selected castes—contd.

CASTE.	NUMBER OF FEMALES PER 1,000 MALES.						
	All ages.	0-5.	5-12.	12-15.	15-20.	20-40.	40 and over.
BIHAR AND ORISSA—contd.							
Pan (Hindu)	1,056	1,096	986	824	1,050	1,112	1,190
Pan (Animist)	1,000	1,100	988	739	1,050	1,020	931
Rajput (Hindu)	995	1,031	906	658	727	1,023	1,226
Santal (Hindu)	1,146	1,013	1,183	1,398	1,260	1,166	941
Santal (Animist)	1,008	1,006	914	1,147	1,035	1,015	1,045
Tanti and Tatwa (Hindu)	1,113	1,015	961	906	1,048	1,253	1,289
Teli and Tili (Hindu)	1,040	1,041	945	888	975	1,084	1,166
BOMBAY.							
Agri	996	1,046	964	801	982	1,029	1,005
Barvad	976	1,048	974	766	957	1,001	983
Bhil	1,013	1,092	911	894	1,194	1,032	969
Brahman	916	982	974	744	882	887	955
Koli	928	1,016	846	704	796	960	1,001
Kumbi	1,023	1,037	927	820	986	1,090	1,059
Lingayat	968	990	1,051	785	883	988	993
Lohana	857	1,017	823	752	790	836	892
Mahar, Holiya or Dhed	1,059	1,052	920	802	983	1,168	1,139
Maratha	1,034	1,056	955	738	966	1,184	1,069
BURMA.							
Arakanese	943	990	1,003	869	879	1,070	918
Chin	1,036	1,103	1,005	780	1,024	1,116	987
Kachin	1,010	1,155	873	750	1,119	1,053	1,029
Karen	1,004	1,047	1,012	1,002	1,081	1,026	897
Shan	1,023	956	968	925	1,045	1,031	1,098
Talaing	1,014	1,025	1,040	976	1,180	1,018	904
Taungtha	998	781	920	1,437	1,254	1,064	879
Wa-Palaung	1,016	970	1,189	873	933	1,051	994
C. P. AND BEHAR.							
Ahir (Hindu)	1,011	1,042	949	771	917	1,036	1,113
Ahir (Animist)	1,115	1,144	1,062	932	1,161	1,201	1,029
Baniya	935	1,037	990	724	872	891	997
Brahman	876	985	968	682	763	816	941
Chamar	1,035	1,051	945	798	996	1,080	1,095
Dhimar	1,014	1,056	955	806	1,044	1,089	1,088
Dhobi	1,040	1,055	962	808	1,107	1,057	1,121
Gond (Hindu)	1,069	1,049	981	808	982	1,105	1,156
Gond (Animist)	1,050	1,053	979	887	1,024	1,105	1,084
Kalar	1,026	1,052	983	828	956	1,036	1,107
Kanbi	987	1,024	1,015	753	1,059	1,019	916
Kurmi	1,015	1,036	945	785	968	1,022	1,187
Lodhi	1,013	993	942	761	865	1,057	1,176
Lohar	994	1,059	943	793	903	1,037	1,020
Mali	1,007	1,036	988	800	1,030	1,014	1,040
Mehra	1,025	1,030	996	847	1,135	1,072	989
Rajput	974	1,041	971	811	864	936	1,080
Teli	1,035	1,026	976	835	978	1,066	1,125
MADRAS.							
Baliya	1,004	992	1,026	825	942	1,058	1,001
Brahman (Tamil)	982	996	931	802	908	952	1,123
Brahman (Telugu)	994	916	832	656	863	1,024	1,328
Cherman	1,105	1,007	980	966	1,112	1,184	1,220
Chetti	1,132	1,026	1,018	977	1,022	1,310	1,272
Kalkolan	1,037	1,022	1,066	957	990	1,054	1,047
Kammaran	1,071	1,078	1,041	903	1,057	1,126	1,076
Kamsala	1,028	1,104	1,039	726	928	1,031	1,131
Kapu	1,034	1,056	1,028	837	887	1,109	1,056
Komati	1,053	1,038	1,022	941	1,041	1,022	1,072
Mala	1,027	980	917	894	1,179	1,150	1,006
Paraiyan	1,057	1,044	982	815	1,090	1,230	985
Shanan	1,042	1,031	1,028	915	917	1,098	1,079
Tayan	1,039	1,000	957	928	1,088	1,071	1,061
Wellala	1,017	1,028	1,033	926	883	1,065	1,034

SUBSIDIARY TABLE III—*contd.*Number of females per 1,000 males for certain selected castes—*contd.*

CASTE.	NUMBER OF FEMALES PER 1,000 MALES.						
	All Ages.	0—5.	5—12.	12—15.	15—20.	20—40.	40 and over.
N. W. P. PROVINCE.							
Ahoms							
Jugi							
Kachari (H)							
Kachari (A)							
Kalita							
Koch							
Kshatriya							
PUNJAB.							
Agarwal (Hindu)							
Ahir (Hindu)							
Arain (Musalman)							
Arora (Hindu)							
Awan							
Biloch							
Chamar (Hindu)							
Chuhra (Musalman)							
Jat (Musalman)							
Jhinwar (Musalman)							
Julaha (Hindu)							
Kanet (Hindu)							
Kashmiri (Musalman)							
Khatiri (Hindu)							
Kumhar (Hindu)							
Kumhar (Musalman)							
Lohar (Hindu)							
Lohar (Musalman)							
Machhi (Musalman)							
Mirasi (Musalman)							
Mochi (Musalman)							
Nai (Hindu)							
Nai (Musalman)							
Pathan							
Rajput (Hindu)							
Rajput (Musalman)							
Saiyid							
Sheikh							
Tarkhan (Musalman)							
Teli (Musalman)							
United Provinces.							
Agarwal							
Ahir							
Barhai							
Bhangi							
Bhar							
Brahman							
Chamar							
Dhobi							
Dhaniya							
Gaura							
Goala (Ahr)							
Hajjam (Napi)							
Hajjam (Muso)							
Jolaha							
Kabar							
Kalwar							
Kandh (Hindu)							
Kandh (Animist)							
Kandh							
Kayastha							
Kewat							
Khandayat							
Koiri							
Kumhar							
Kurmi							
Lohar (Hindu)							
Munda (Hindu)							
Munda (Animist)							
Mussahar							
Nuniya							
Oran (Hindu)							
Oran (Animist)							
BARODA STATE.							
Koli							
Kunbi—Kadwa							
Kunbi—Lewa							

SUBSIDIARY TABLE III—*contd.*Number of females per 1,000 males for certain selected castes—*concl.*

CASTE.	NUMBER OF FEMALES PER 1,000 MALES.						
	All ages.	0—5.	5—12.	12—15.	15—20.	20—40.	40 and over.
CENTRAL INDIA AGENCY.							
Baniya							
Bhil (Animist)							
Brahman							
Gond (Hindu)							
Gujar							
Rajput (Hindu)							
COCHIN STATE.							
Nuvan.							
Indian Christian							
HYDERABAD STATE.							
Brahman							
Golla							
Kapu							
Koli							
Komati							
Lingayat							
Madiga and Mang							
Mahar and Mala							
Maratha							
Munnar							
Mutras							
Sale							
Sheikh							
Telaga							
KASHMIR STATE.							
Bat							
Brahman							
MYSORE STATE.							
Peda							
Pesta							
Brahman							
Golla							
Holeya							
Kuruba							
Lingayat							
Madiga							
Sheikh							
Vakkaliga							
RAJPUTANA AGENCY.							
Brahman							
Gujar							
Jat (Hindu)							
Kumhar (Hindu)							
Mahajan (Hindu)							
Mahajan (Jain)							
Mali (Hindu)							
Meo (Musalman)							
Mina (Hindu)							
Nai (Hindu)							
Rajput (Hindu)							
Sheikh							
TRAVANCORE STATE.							
Indian Christian							
Izharan							
Nayar							
Pulayan							
Shenan							